Prof Guy-Bart Stan's Curriculum Vitae

✍ Imperial College London
Department of Bioengineering
Imperial College Centre for Synthetic Biology
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http://www.bg.ic.ac.uk/research/g.stan

Research and Work Experience

Oct 2023 - present
IP Protection, Technology Transfer and Translation, Patent Law

European Patent Office, The Hague, The Netherlands. Patent Examiner.
Patent examination in the field "Speech and Audio Processing" (G10L)
▷ *IP Protection, Technology Transfer and Dissemination, Technology Translation.*
▷ *Patent Law, Patent Filing, Prior Art Search, Patent Examination, Granting, Appeal, and Litigation.*
▷ *Speech and Audio Processing (G10L), including AI/ML for such purposes.*
▷ *Languages: English, French, German.*
▷ *Oct 2023 - present: Patent Search & Examination.*
▷ *May 2025 - present: Member of the EPO AI Task Force, helping define and develop the EPO AI strategy and tools.*
▷ *Oct 2023 - Oct 2025: EPO Academy.*

Dec 2009 - present
Systems modelling, analysis and control, Synthetic/Systems biology

Imperial College London, Department of Bioengineering, Imperial College Centre for Synthetic Biology. Lecturer (Dec 2009 - Jul 2014), Reader (Aug 2014 - May 2019), Prof (June 2019 –).
Research in synthetic and systems biology, nonlinear dynamical systems modelling, analysis and control, and machine learning applied to the optimal control of biological systems.
▷ *Oct 2023 - Sep 2026: Visiting Professor at Imperial College London.*
▷ *Dec 2009 - Sep 2023: Head of the "Control Engineering Synthetic Biology" group.*
▷ *April 2019 - April 2024: Royal Academy of Engineering Chair in Emerging Technologies for Engineering Biology.*
▷ *Oct 2018 - Sep 2023: Deputy Director of the EPSRC Centre for Doctoral Training (CDT) in BioDesign Engineering.*
▷ *Sep 2017 - Sep 2023: Co-Director of the Imperial College Centre for Synthetic Biology.*
▷ *Oct 2017 - Sep 2023: Member of the Institute of Chemical Biology Research Board.*
▷ *2015 - 2020: Awardee of an EPSRC Fellowship for Growth in Synthetic Biology.*
▷ *Oct 2016 - Oct 2019: Co-Director of Research and Member of the Department of Bioengineering Research Committee.*
▷ *Oct 2016 - Oct 2018: Elected Departmental Representative of the Faculty of Engineering Research Committee.*
▷ *Module leader and lecturer for the course "Modelling in Biology".*
▷ *Lecturer for the course "Signals and Systems".*
▷ *Lecturer for the course "Introduction to Biological Modelling and Scientific Programming in Python", part of Module 1 for the MRes in Systems and Synthetic Biology.*
▷ *2010 - 2023: Instructor, and modelling & engineering design supervisor of the very successful Imperial iGEM teams.*

July 2018 - Sep 2018
(2 months)
Synthetic Biology

Department of Biosystems Science and Engineering, ETH Zurich, Basel, Switzerland. Invited Visiting Professor.
Control Engineering applied to Synthetic Biology Analysis and Design
▷ *Invited by Prof Mustafa Khammash and Prof Martin Fussenegger.*

Aug 2015 - Sep 2015
(6 weeks)
Synthetic Biology

Massachusetts Institute of Technology, Department of Mechanical Engineering and MIT Synthetic Biology Center, Cambridge, MA, USA. Invited Visiting Professor.
Control Engineering applied to Synthetic Biology Analysis and Design
▷ *Invited by Prof Domitilla del Vecchio and Prof Jim Collins.*

July 2008 - Sep 2008
(3 months)
Systems Biology

Massachusetts Institute of Technology, Laboratory for Information and Decision Systems, Cambridge, MA, USA. Invited Visiting Scientist.
Analysis of biochemical oscillator models.
▷ *Invited by Prof Munther Dahleh. Research collaborations with Profs Alexandre Megretski and Eduardo Sontag.*

Jan 2006 - Dec 2009
(4 years)
Nonlinear dynamical systems analysis and control, Systems biology

University of Cambridge, Department of Engineering, Control Group. Research Associate with European Union FP6 Marie Curie IEF and United Kingdom EPSRC support.
Research in nonlinear dynamical systems analysis and control, systems biology, and machine learning applied to the optimal control of complex diseases.
▷ *Development of new global stability and global synchronisation methods for the analysis and synthesis of complex oscillator networks, application to the analysis of circadian oscillations (with Dr Alex A. Webb, Plant Sciences Dep.).*
▷ *Dynamical network reconstruction from data with application to biochemical network reconstruction (with Dr Jorge Gonçalves, Engineering Dep.).*
▷ *Development and application of reinforcement learning algorithms to the problem of optimal drug-scheduling for chronic-like diseases such as HIV, obesity or cancer (with Dr Damien Ernst, University of Liège).*
▷ *Co-supervisor of the Ph.D. theses of A. Hamadeh, A. Salinas-Varela, Y. Yuan, and N. Dalchau, and of six 4th year engineering graduation projects in the Control Group of the University of Cambridge.*
▷ *2008 - 2010: Lecturer for the graduate and undergraduate course "4F2: Robust Multivariable Control".*
▷ *Oct 2006 - Jan 2010: Organiser of the Control Group weekly seminars.*
▷ *Supported by EU FP6 (Marie Curie IEF) from January until December 2006 (self-written project FP6-IEF 025509 GASO) and by U.K. EPSRC from January 2007 until December 2009 (self-written project EPSRC EP/E02761X/1).*

June 2005 - Dec 2005 (6 months) R&D Coordination, Adaptive filters design

Philips Applied Technologies, Philips Leuven, Belgium. Senior DSP Engineer.
Coordination of the "Ubiquitous Communication" and "Active Noise and Echo Cancellation" projects for audio-in-car applications.
▷ *Project management; coordination of the research and development teams on these two projects.*
▷ *Design and real-time implementation of adaptive filters.*
▷ *Software (C) and DSP (Assembly) development.*

Oct 2004 - June 2005 (9 months) Nonlinear dynamical systems design and control

University of Liège, Department of Electrical Engineering, Belgium. "Assistant Extraordinaire".
Synthesis and control of networks of oscillators.
▷ *Development of numerical methods for the global analysis of limit cycles.*
▷ *Development of a new control strategy for the balancing control of the bipedal robot RABBIT.*
▷ *Research project management (author of several research proposals).*

June 2004 - Aug 2004 (3 months) Nonlinear dynamical systems control

Laboratoire d'Automatique de Grenoble - INPG-ENSIEG, CNRS-GIPSA Lab, France. Invited Visiting Ph.D. student.
Design of controllers for the oscillation balancing control of the bipedal robot RABBIT.
▷ *Analysis and control of complex mechatronic systems.*
▷ *Invited by Dr Carlos Canudas-de-Wit (Director of Research at CNRS).*

Oct 2001 - Oct 2004 (3 years) Nonlinear dynamical systems analysis and design

University of Liège, Department of Electrical Engineering, Belgium. Research fellow with the Belgian National Fund for Scientific Research ("Aspirant FNRS").
Global stability analysis and synthesis of oscillators and networks of oscillators.
▷ *Development of a new framework for the global stability analysis and synthesis of limit cycle oscillations in oscillators and networks of oscillators.*
▷ *Ph.D. research, graduate courses, academic projects, research internship at INPG-ENSIEG (France).*
▷ *Project management (co-supervisor and examiner of four 5th year electrical engineering graduation projects).*
▷ *Publication management (reviewer for several scientific papers and conferences).*

Oct 2000 - Oct 2001 (1 year) Signal processing and acoustics

University of Liège, Department of Electrical Engineering, Belgium. Research fellow with the Belgian National Fund for Scientific Research ("Aspirant FNRS").
Impulse response measurement, head related transfer function measurement, sound spatialisation, audio virtual reality.
▷ *Development and implementation of a new impulse response measurement method, significantly increasing the quality of the impulse response measurement (by up to 30 dB).*
▷ *Digital signal processing, adaptive signal processing, image and speech processing, real-time implementation on DSPs.*

Membership of Professional Bodies and Networks

RAE Chair in Emerging Technologies — Royal Academy of Engineering Chair in Emerging Technologies for Engineering Biology, April 2019 – April 2024.

FRSB — Fellow of the Royal Society of Biology since February 2020.

EBLC Science and Technology Sub-Group — Member of the Engineering Biology Leadership Council, Science and Technology Sub-Group since September 2018.

EPSRC Fellow — EPSRC Fellow for Growth, January 2015 - March 2020.

CEng — Engineering Council Chartered Engineer since April 2014.

IET — Member of the IET since 2011.

IEEE — Member of the IEEE since 2006.

ICCDDS — Member of the Imperial College Centre in Drug Discovery Science since October 2017.

ICICB — Member of the Imperial College Institute of Chemical Biology since September 2017.

EPSRC Peer Review College — EPSRC Peer Review College Member since April 2014.

iGEM Software Track Europe — Committee member and organiser of the iGEM Software Track for the European Region, 2011 - 2012.

SBOL — Member of the Synthetic Biology Open Language developer community since July 2010.

SynBioStandards — Member of the Synthetic Biology SynBioStandards network, 2011-2013.

RoSBNet — Member of the Synthetic Biology RoSBNet network, 2009-2013.

New-ACE — Member of the EPSRC funded New-ACE network, 2008-2012.

Teaching Experience

2010 - 2023
(18 hours, each first term)

Imperial College London, Department of Bioengineering. **Modelling in Biology**, Module leader and Lecturer.
Course in the 3rd year undergraduate Bioengineering curriculum, ≈ **200 students**.
▷ *Course design, preparation, and lecturing.*
▷ *Matlab dry lab exercises and assignments design and supervision.*
▷ *Assessed courseworks design.*
▷ *Exam questions and cribs preparation, exam marking.*

2014 - 2023
(15 hours, each first term)

Imperial College London, Department of Bioengineering. **Signals and Systems**, Lecturer.
Course in the 2nd year undergraduate Bioengineering curriculum, ≈ **200 students**.
▷ *Course design, preparation and lecturing.*
▷ *Exam questions and cribs preparation, exam marking.*

2010 - 2023
(10 hours, each first term)

Imperial College London, Department of Bioengineering and Division of Molecular Biosciences, Department of Life Sciences. **Introduction to Biological Modelling and Scientific Programming in Python**, Lecturer.
Postgraduate course for the MRes in Systems and Synthetic Biology, ≈ **35 students**.
▷ *Course design, preparation, and lecturing.*
▷ *Python dry lab exercises design and supervision.*

2008 - 2010 lent term
(2 x 1 term, 2 x 7 hours)

University of Cambridge, Department of Engineering, Control Group. **Robust Multivariable Control, Part II (4F2/2): Design of Multivariable Systems (Dynamic Programming, $\mathcal{H}_2$ and $\mathcal{H}_\infty$ Robust Optimal Control)**, Lecturer.
Course in the 4th year undergraduate Engineering curriculum and in the graduate curriculum (Ph.D. students and Postdocs), ≈ **20 students**.
▷ *Course design, preparation, and lecturing.*
▷ *Exam questions and cribs preparation.*

2002 - 2003
(1 semester, 30 hours)

University of Liège, Department of Electrical Engineering, Belgium. **Analysis of Systems and Introduction to their Synthesis**, Teaching assistant.
30 hours course by Prof Rodolphe Sepulchre + 30 hours by Guy-Bart Stan in the 4th year Engineering curriculum, ≈ **60 students**.
▷ *Tutorials preparation and supervision.*
▷ *Help in exam questions design and marking.*

2001 - 2003
(2 x 1 semester, 2 x 30 hours)

University of Liège, Department of Electrical Engineering, Belgium. **Signals and Systems**, Teaching assistant.
30 hours course by Prof Rodolphe Sepulchre + 30 hours by Guy-Bart Stan in the 3rd year Engineering curriculum, ≈ **80 students**.
▷ *Tutorials preparation and supervision.*
▷ *Help in exam questions design and marking.*

July 2002
(2 weeks, 15 hours)

University of Liège, Department of Electrical Engineering, Belgium. **BEST Summer School on Signal Processing**, Teaching assistant.
15 hours course by Prof Jacques Verly + 15 hours by Guy-Bart Stan, ≈ **25 students**.
▷ *Tutorials preparation and supervision.*
▷ *Labs preparation: Real-time signal processing on the Motorolla 56002 DSP.*

27/1/2002 - 3/2/2002
(1 week, 15 hours)

University Chouaib Doukkali, Faculty of Sciences, El Jadida, Morocco. **Nonlinear Systems Theory and Applications**, Teaching assistant.
15 hours invited postgraduate course by Prof Rodolphe Sepulchre + 15 hours by Guy-Bart Stan, ≈ **25 students**.
▷ *Tutorials preparation and supervision.*

2000 - 2002
(2 x 1 semester, 2 x 30 hours)

University of Liège, Department of Electrical Engineering, Belgium. **Integrated Engineering of Sound and Image Processing**, Teaching assistant.
30 hours course by Prof Jean-Jacques Embrechts + 30 hours by Guy-Bart Stan in the 5th year Engineering curriculum, ≈ **35 students**.
▷ *Tutorials preparation and supervision.*
▷ *Labs preparation and supervision: Real-time signal processing on the Motorolla 56002 DSP.*
▷ *Help in exam questions design and marking.*

1999 - 2000 (1 semester, 30 hours)
University of Liège, Department of Electrical Engineering, Belgium. **General Electronics**, Teaching assistant.
30 hours course by Prof Willy Legros (Rector of the University of Liège) + 30 hours by Guy-Bart Stan in the 3rd year Engineering curriculum, ≈ **80 students**.
▷ *Tutorials/Labs preparation and supervision.*

1998 - 1999 (1 semester, 30 hours)
University of Liège, Department of Electrical Engineering, Belgium. **Numerical Analysis**, Teaching assistant.
30 hours course by Prof François-Xavier Litt + 30 hours by Guy-Bart Stan in the 2nd year Engineering curriculum, ≈ **100 students**.
▷ *Tutorials/Labs preparation and supervision.*

In February 2015, March 2018, March 2019, May 2020, and June 2023 I was nominated for the Imperial Student Academic Choice Award for Outstanding Teaching.

Supervisory Experience

PostDocs
2010 - present

Imperial College London, Department of Bioengineering and Imperial College for Synthetic Biology. PostDocs supervision.

PostDoc research projects supervision, conference and journal publications management, PostDoc long-term career development.

▷ *September 2022 - March 2025:* **Dr Kathakali Sarkar**, *project RAE CiET 1819\5, "Accelerating Engineering Biology: Efficient Engineering of Reliable and High-Performance Biosystems".*

▷ *December 2021 - June 2022:* **Dr Abhilash Patel**, *project RAE CiET 1819\5, "Accelerating Engineering Biology: Efficient Engineering of Reliable and High-Performance Biosystems".*

▷ *June 2021 - June 2024:* **Dr Eszter Csibra**, *project RAE CiET 1819\5, "Accelerating Engineering Biology: Efficient Engineering of Reliable and High-Performance Biosystems".*

▷ *Dec 2020 - Dec 2022:* **Dr Giansimone Perrino**, *project BBSRC BB/T011408/1, "Synthetic microbial communities for the production of limonene derived products" (computational part).*

▷ *Dec 2017 - Sep 2021:* **Dr Wooli Bae**, *project EPSRC EP/P02596X/1, "Genetically encoded nucleic acid control architectures" (experimental part).*

▷ *Oct 2018 - May 2021:* **Dr Tomislav Plesa**, *project EPSRC EP/P02596X/1, "Genetically encoded nucleic acid control architectures" (theoretical part).*

▷ *Oct 2018 - June 2021:* **Dr Eszter Csibra**, *project EPSRC EP/M002187/1, "EPSRC Fellowship for Growth: Systems and Control Engineering Framework for Robust and Efficient Synthetic Biology".*

▷ *Feb 2018 - July 2021:* **Dr Zoltan Tuza**, *project EU H2020 FET-OPEN RIA grant 766840 COSY-BIO, "Control Engineering of Biological Systems for Reliable Synthetic Biology Applications".*

▷ *Feb 2018 - Oct 2018:* **Dr Juan Kuntz**, *project EPSRC EP/M002187/1, "EPSRC Fellowship for Growth: Systems and Control Engineering Framework for Robust and Efficient Synthetic Biology".*

▷ *March 2017 - Sep 2020:* **Dr Nicolas Kylilis**, *project EPSRC EP/P009352/1, "A novel, fast and efficient resource recycling system for improving the performance of engineered bacteria".*

▷ *Feb 2015 - July 2018:* **Dr Marios Tomazou**, *project EPSRC EP/M002187/1, "EPSRC Fellowship for Growth: Systems and Control Engineering Framework for Robust and Efficient Synthetic Biology".*

▷ *March 2015 - April 2016:* **Dr Carlos Bricio**, *project EPSRC EP/K020617/1, "*In vivo *integral feedback control for robust synthetic biology" (co-supervision with Dr Tom Ellis and Dr Karen Polizzi).*

▷ *Nov 2014 - Jan 2015:* **Dr Marios Tomazou**, *project EPSRC EP/I032223/1, "Control-engineering inspired design tools for synthetic biology" (co-supervision with Dr Karen Polizzi and Prof Mauricio Barahona).*

▷ *Jan 2013 - June 2016:* **Dr Francesca Ceroni**, *project EPSRC EP/J021849/1, "Engineered burden-based feedback for robust and optimised synthetic biology" (co-supervision with Dr Tom Ellis). For the period Oct 2016 - Sep 2019, Dr Ceroni is now a Lecturer in the Department of Chemical Engineering.*

▷ *Apr 2013 - March 2016:* **Dr Jordan Ang**, *project EPSRC EP/K020617/1, "*In vivo *integral feedback control for robust synthetic biology" (co-supervision with Dr Karen Polizzi).*

▷ *June 2012 - Sep 2014:* **Dr Aivar Sootla**, *project EPSRC EP/J014214/1, "Data-based optimal control of synthetic biology gene circuits" and project EPSRC EP/G036004/1, Centre for Synthetic Biology and Innovation, Science and Innovation award. For the period Oct 2014 - Sep 2017, Dr Aivar Sootla is a FNRS Research Fellow in the Department of Electrical Engineering and Computer Science at the University of Liege, Belgium.*

▷ *May 2012 - Dec 2014:* **Dr James Arpino**, *project EPSRC EP/I032223/1, "Control-engineering inspired design tools for synthetic biology" (co-supervision with Dr Karen Polizzi and Prof Mauricio Barahona).*

▷ *Aug 2012 - Nov 2013:* **Dr Ollie Wright**, *project DSTL-BBSRC BB/J019720/1, "Engineered security systems for environmental synthetic biology" (co-supervision with Dr Tom Ellis).*

▷ *Oct 2010 - Sep 2013:* **Dr Diego Oyarzún**, *project EPSRC EP/G036004/1, Centre for Synthetic Biology and Innovation, Science and Innovation award. For the period Oct 2013 - Sep 2016, Dr Oyarzún has been an Imperial College Junior Research Fellow in the Department of Mathematics at Imperial College London.*

PhD students
2009 - present

Imperial College London, Department of Bioengineering and Imperial College Centre for Synthetic Biology. PhD students supervision.

Idea formulation and structuring; conference and journal publications management.

▷ *July 2023 - March 2027:* **Robert Lever**, *"Xceed SMART: Autoregulating CHO cells which sense cell density and recombinant burden, in order to fine tune recombinant output" (co-supervision with Dr Francesca Ceroni and Prof Karen Polizzi), industry fully funded PhD studentship by Lonza.*

▷ *Oct 2023 - Sep 2027:* **Maria Portela**, *"BACTERIA-ON-A-CHIP: Microfluidic chemostats to decipher the responsiveness of bacterial communities" (co-supervision with Dr Claire Stanley), funded by an Imperial College President Scholarship.*

▷ *Oct 2023 - Sep 2027:* **Timon Schneider**, *"Full sequence design of functional chromosomes by AI" (co-supervision with Prof Tom Ellis), funded by the EPSRC CDT in BioDesign Engineering.*

▷ *Oct 2023 - Sep 2027:* **Livia Soro**, *"" (co-supervision with Prof Tom Ellis), funded by an EPSRC DTP.*

▷ *Feb 2023 - Jan 2027:* **Zehui Li**, *"Predict, Interpret, Generate: Deep Learning Approaches to Genomic Sequence Analysis with a Case Study on Context-Aware Mammalian Promoter Engineering". Funded by the AI-4-EB consortium (BBSRC BB/W013770/1) and a Department of Bioengineering PhD studentship.*

▷ *Oct 2022 - Sep 2026:* **Daniel Boros**, *"A molecular device for tuneable evolution" (co-supervision with Dr Jose Jimenez), funded by the EPSRC CDT in BioDesign Engineering.*

▷ *Oct 2021 - Sep 2025:* **Harman Mehta**, *"Engineering and control of synthetic microbial communities for next-generation biotechnology" (co-supervision with Dr Rodrigo Ledesma-Amaro), funded by an Imperial College President Scholarship,* **successful viva on 4 July 2025**.
▷ *Oct 2021 - Sep 2025:* **Lisa Doetsch'**, *"icRNA: in vivo circular RNAs for efficient expression and control of genes and polyproteins" (co-supervision with Dr Thomas Ouldridge), funded by the EPSRC CDT in BioDesign Engineering.*
▷ *Oct 2021 - Sep 2025:* **Kate Collins**, *"Microfluidic platforms for the engineering of continuously-operating, synthetic nucleic acid- based systems", (co-supervision with Dr Thomas Ouldridge), funded by the EPSRC CDT in BioDesign Engineering.*
▷ *Oct 2021 - Sep 2025:* **Perrine Dalby**, *"Engineering Orthogonal Expression Machineries – a novel approach to improve recombinant protein production in E. coli" (co-supervision with Dr Jose Jimenez), funded by the EPSRC CDT in BioDesign Engineering.*
▷ *Oct 2020 - Sep 2024:* **Léa Bernier**, *"BACTERIA-ON-A-CHIP: deciphering the responsiveness of bacteria using microfluidic chemostats" (co-supervision with Dr Claire Stanley), funded by a Department of Bioengineering PhD studentship.*
▷ *Oct 2019 - Sep 2023:* **Andreas Hadjimitsis**, *"Optogenetic-enabled 3D bioproduction in a hydrogel", (co-supervision with Dr Connor Myant), funded by the Leverhulme Doctoral Scholarship Programme in Cellular Bionics,* **successful viva on 10 May 2024**.
▷ *Oct 2019 - Sep 2023:* **Albert Fabregas Flavia**, *"Building tools and technologies for self-regulated nitrogen fixation in plant-associated bacteria", funded by a Faculty of Engineering Zero-Pollution PhD Scholarship via EPSRC,* **successful viva on 18 March 2024**.
▷ *Oct 2019 - Dec 2025:* **William Beardall**, *"Information and Uncertainty in Sequence-Level Prediction for Genetic Component Engineering" (co-supervision with Prof Tom Ellis), funded by the EPSRC CDT in BioDesign Engineering,* **successful viva on 9 December 2025**.
▷ *Oct 2019 - Sep 2023:* **Eliza Atkinson**, *"Engineering division of labour in Yarrowia lipolytica to relieve the metabolic burden of polysaccharide degradation" (co-supervision with Dr Rodrigo Ledesma-Amaro), funded by the EPSRC CDT in BioDesign Engineering.*
▷ *Oct 2018 - Sep 2022:* **Borut Lampret**, *"Selective Gene Expression in Hydrogel Suspended E. coli through Optogenetics by Spatiotemporally Controlled Light for the Purposes of Additive Manufacturing" (co-supervision with Dr Connor Myant), funded by the Leverhulme Doctoral Scholarship Programme in Cellular Bionics,* **successful viva on 13 February 2023**.
▷ *Oct 2017 - Jan 2022:* **Duncan Ingram**, *"When Synthetic Biology Fails: A Modular Framework for Modelling Genetic Stability in Engineered Cell Populations" (co-supervision with Prof Mark Isalan), funded by a Wellcome Trust PhD as part of the Theoretical Systems Biology and Bioinformatics Programme at Imperial College,* **successful viva on 7 April 2022**.
▷ *Oct 2017 - Jan 2022:* **Alice Boo**, *"Towards Engineering Bacterial Consortia Using RNA-based Genetic Controllers", funded by a Department of Bioengineering PhD studentship,* **successful viva on 9 March 2022**.
▷ *Oct 2017 - Sep 2021:* **Javier Cabello**, *"Handhold-mediated strand displacement: a mechanism for non-equilibrium and catalytic templating" (co-supervision with Dr Thomas Ouldridge), funded by a Royal Society PhD studentship to Dr Thomas Ouldridge,* **successful viva on 10 March 2022**.
▷ *Oct 2016 - Sep 2020:* **Ismael Mullor-Ruiz**, *"Development of a framework for designing nucleic acid-based, out-of-equilibrium catalytic reaction networks" (co-supervision with Dr Thomas Ouldridge), funded by a B-DTP studentship,* **successful viva on 1 June 2021**.
▷ *Oct 2015 - Dec 2020:* **Barnabas Walker**, *"Towards RNA Delivery via Bacterial Secretion Systems" (co-supervision with Dr Karen Polizzi and Prof Paul Freemont), funded by an MRC-EPSRC DTP Imperial Studentship,* **successful viva on 22 January 2021**.
▷ *Oct 2015 - Oct 2020:* **Haris Mallick**, *"Engineering a Feedback-based Synthetic Gene Circuit for Targeted Continuous Evolution of a Gene in E. coli" (co-supervision with Dr Geoff Baldwin), funded by a BBSRC DTP Imperial Studentship,* **successful viva on 18 February 2021**.
▷ *Oct 2015 - Sep 2019:* **Ari Dwijayanti**, *"Engineering standardised and modular biological controllers for efficient design and easy implementation in synthetic genetic circuits" (co-supervision with Dr Geoff Baldwin),* **successful viva on 13 January 2020**.
▷ *Oct 2013 - Sep 2018:* **Matthew Haines**, *"A novel in vitro selection method to aid in the development of ribozyme-based riboswitches" (co-supervision with Dr Geoff Baldwin), funded by a BBSRC DTP Imperial Studentship,* **successful viva on 11 January 2019**.
▷ *Oct 2012 - Oct 2017:* **Juan Kuntz**, *"Deterministic approximation schemes with computable errors for the distributions of Markov chains" (co-supervision with Prof Mauricio Barahona), funded by a Department of Bioengineering BBSRC PhD studentship,* **successful viva on 17 January 2018**.
▷ *Oct 2011 - Oct 2015:* **Felix Jonas**, *"Intra- and intercellular burden distribution of Saccharomyces cerevisiae under ER stress" (co-supervision with Dr Karen Polizzi),* **successful viva on 1 February 2016**.
▷ *Oct 2011 - Oct 2015:* **Wei Pan**, *"Sparse Inference of Nonlinear Dynamical Systems from Time Series Data", funded by Microsoft PhD Scholarship, Dorothy Hodgkin Postgraduate Award, and Department of Bioengineering Industrial PhD studentship,* **successful viva on 30 November 2015**.
▷ *Oct 2010 - Oct 2014:* **Marios Tomazou**, *"Towards Light-Based Dynamic Control of Synthetic Biological Systems" (co-supervision with Prof Mauricio Barahona and Dr Karen Polizzi),* **successful viva on 26 November 2014**.
▷ *Oct 2010 - Oct 2013:* **Rhys Algar**, *"Understanding, characterising and modelling the interactions between synthetic genetic circuits and their host chassis" (co-supervision with Dr Tom Ellis), funded by the Centre for Synthetic Biology and Innovation,* **successful viva on 12 December 2013**.

▷ *Oct 2009 - July 2013:* **Neave O'Clery**, *"Node Dynamics on Graphs: Dynamical Heterogeneity in Consensus, Synchronisation and Final Value Approximation for Complex Networks" (co-supervision with Prof Mauricio Barahona),* **successful viva on 26 July 2013**.

PhD students Jan 2006 - Dec 2011

University of Cambridge, Department of Engineering, Control Group. Ph.D. theses co-supervision.

Co-supervisor of Ph.D. theses with Dr Jorge Gonçalves: Idea formulation and structuring; Ph.D. supervision; conference and journal publications management.

▷ *2008 - 2011:* **Ye Yuan**, *"Decentralised Network Prediction and Reconstruction Algorithms".*

▷ *2006 - 2010:* **Abdullah O. Hamadeh**, *"Constructive robust synchronization in networked control systems".*

▷ *2006 - 2009:* **Adrian A. Salinas-Varela**, *"Semidefinite programming-based analysis of continuous-time piecewise affine systems".*

▷ *2006 - 2008:* **Neil Dalchau**, *"Mathematical Modelling of Circadian Signalling in Arabidopsis".*

Research Assistants 2017 - present

Imperial College London, Department of Bioengineering and Imperial College Centre for Synthetic Biology. Research Assistants supervision.

Idea formulation and structuring; supervision; conference and journal publications management.

▷ *Nov 2017 - Dec 2019:* **Albert Fabregas-Flavia**, *Imperial President's Excellence Fund for Frontier Research, "A novel "true 3D" bio-manufacturing platform unlocking new classes of functional materials and structures with broad applications".*

iGEM teams 2010, 2011, 2013, 2014, 2016

Imperial College London, Department of Bioengineering. *iGEM* supervisor.

Instructor for the "International Genetically Engineering Machine" (*iGEM*) competition.

▷ **Joint lead instructor** *with Dr Karen Polizzi of the* **2016 Imperial iGEM team (project "E.colibrium")***: World Champion (Undergraduate Grand Prize Winners, 1^{st} worldwide amongst 297 teams), "Best Foundational Advance Project", "Best Education and Public Engagement", "Best New Basic Part", "Best Poster", and "Best Wiki" awards.*

▷ **Modelling supervisor** *for the* **2014 Imperial iGEM team (project "Aqualose")***: 1^{st} runner-up (MIT Giant Jamboree finalist, 2^{nd} worldwide amongst 245 teams),"Best Manufacturing Project" and "Best Parts Collection" awards, and "Policy and Practices" Commendation.*

▷ **Modelling supervisor** *for the* **2013 Imperial iGEM team (project "Plasticity")***: 2^{nd} runner-up (MIT World Jamboree finalist, 3^{nd} worldwide amongst 194 teams), the "Best Manufacturing Project" award at the MIT World Jamboree and the "Best Engineered BioBrick" award at the European region iGEM championship.*

▷ **Modelling supervisor** *for the* **2011 Imperial iGEM team (project "Auxin")***: 1^{st} runner-up (MIT World Jamboree finalist, 2^{nd} worldwide amongst 158 teams), European region Grand Winner, "Best Poster" and "iGEMers" award at the World Jamboree, and "Best Wiki" award and "Safety" Commendation at the European Jamboree.*

▷ **Modelling supervisor** *for the* **2010 Imperial iGEM team (project "Parasight")***: MIT World Jamboree finalist (5^{th} worldwide amongst 128 teams), "Best Human Practices Advance", "Best Wiki" (tie with Cambridge's iGEM team), and "iGEMers" awards.*

MRes students 2010 - present

Imperial College London, Department of Bioengineering and Imperial College Centre for Synthetic Biology. MRes co-supervision.

Co-supervisor of Masters in Research (MRes) research projects in Systems and Synthetic Biology: Idea formulation and structuring; MRes project supervision.

▷ *2022-2023:* **Daniel Boros**, *"A Molecular Device for Tuneable Evolution", co-supervision with Dr Jose Jimenez.*

▷ *2022-2023:* **Shiyu Yu**, *"Optogenetic control of yeast gravity", co-supervision with Prof Tom Ellis.*

▷ *2022-2023:* **Siwat Chang**, *"Building an optogenetic toolbox for cybergenetic feedback control", co-supervision with Prof Tom Ellis.*

▷ *2021-2022:* **Lisa Doetsch**, *"Towards efficient engineering of circular RNA of any length in vitro and in vivo with the Tornado system", co-supervision with Dr Thomas Ouldridge.*

▷ *2021-2022:* **Kate Collins**, *"Microfluidic platforms for the engineering of continuously-operating, synthetic nucleic acid-based systems", co-supervision with Dr Thomas Ouldridge.*

▷ *2021-2022:* **Perrine Dalby**, *"Design, engineering, and analysis of viability, growth and bioproduction impact of synthetic ribosomal RNAs in yeast", co-supervision with Prof Patrick Cai.*

▷ *2021-2022:* **Yi Shi**, *"Systematic Characterisation of Optogenetic Modules for Regulating Escherichia coli Gene Expression – Towards Building a Cybergenetic Feedback Circuit for Cellular Burden Control", co-supervision with Prof Tom Ellis.*

▷ *2021-2022:* **Karen Irawan**, *"Engineering and characterising new terminators for synthetic biology", co-supervision with Prof Geoff Baldwin.*

▷ *2021-2022:* **Emma Watts**, *"Bacillus subtilis spore surface display of polyethylene terephthalate- degrading leaf and branch compost cutinase", co-supervision with Dr Jose Jimenez.*

▷ *2021-2022:* **Pedro Lovatt Garcia**, *"The effect of labour division on the potential for polyethylene terephthalate bioremediation", co-supervision with Dr Jose Jimenez.*

▷ *2020-2021:* **Zhenhua Wu**, *"Designing and building of an enzyme-free DNA-based controller with complex dynamic behaviour", co-supervision with Dr Thomas Ouldridge.*

▷ *2020-2021:* **Xin Luo**, *"In-vivo production of multi-stranded complexes for RNA circuits", co-supervision with Dr Thomas Ouldridge.*

▷ *2019-2020:* **Eliza Atkinson**, *"Division of labour in the substrate utilisation of Yarrowia lipolytica", co-supervision with Dr Rodrigo Ledesma-Amaro.*

▷ *2019-2020:* **William Beardall**, *"Deep Bayesian Active Learning for RNA Design", co-supervision with Prof Tom Ellis.*

▷ *2019-2020:* **Danyn Patel**, *"Regulation of genetic expression by circularization and linearization of mRNA", co-supervision with Dr Rodrigo Ledesma-Amaro.*

▷ *2019-2020:* **Zhi (Darren) Seet**, *"Engineering Optical Control of Protease Activity", co-supervision with Dr Karen Polizzi.*

▷ *2018-2019:* **Alicia Climent Catala**, *"Collective control of RNA transcription using RNA polymerase inhibitory aptamers", co-supervision with Dr Thomas Ouldridge.*

▷ *2018-2019:* **Shivang Joshi**, *"In vivo monitoring of transcriptional capacity for host-aware RNA synthetic biology", co-supervision with Dr Tom Ellis.*

▷ *2017-2018:* **Margaret Hicks**, *"Forward engineering the quorum sensing input/output function", co-supervision with Dr Diego Oyarzún.*

▷ *2017-2018:* **Matthew French**, *"Burden-induced feedback control for increased reliability in synthetic biology", co-supervision with Dr Tom Ellis.*

▷ *2017-2018:* **Alexander Lewis**, *"Orthogonal communication channels for synthetic consortia designs", co-supervision with Dr Karen Polizzi.*

▷ *2016-2017:* **Albert Flavia Fabregas**, *"A novel system for the automatic regulation and tuning of protein degradation rates", co-supervision with Dr Tom Ellis.*

▷ *2016-2017:* **Jingyi Zhu**, *"mRNA-based circuits for faster, cheaper and portable synthetic biology", co-supervision with Dr Karen Polizzi.*

▷ *2016-2017:* **Federica Cella**, *"Uncovering the impact of microRNAs on cellular burden", co-supervision with Dr Velia Siciliano.*

▷ *2016-2017:* **Vasily Shenshin**, *"Population control of co-cultured microorganisms using RNA regulation", co-supervision with Dr Karen Polizzi, Prof Richard Kitney, and Prof Paul Freemont.*

▷ *2016-2017:* **Brooke Rothschild-Mancellini**, *"Biosensing the best designs: a new way to optimise and evolve synthetic biology constructs", co-supervision with Dr Tom Ellis.*

▷ *2016-2017:* **Alexander Duggan**, *"A Streptomyces cell-free system for synthetic tetracycline biosynthesis", co-supervision with Prof Paul Freemont.*

▷ *2015-2016:* **Haris Mallick**, *"Genetic Circuits for the Feedback Control of Directed Evolution", co-supervision with Dr Geoff Baldwin.*

▷ *2015-2016:* **Abi Fafolou**, *"CRISPR/Cas9-based metabolic engineering of Chinese hamster ovary cells", co-supervision with Dr Karen Polizzi.*

▷ *2015-2016:* **Jane Odoi**, *"Development of a whole-cell computational model of* E. coli *for efficient synthetic biology design", co-supervision with Dr Tom Ellis.*

▷ *2014-2015:* **Yuzheng Wu**, *"Using populations of engineered cells to regulate extracellular chemical concentrations", co-supervision with Dr Karen Polizzi.*

▷ *2013-2014:* **Matthew Haines**, *"Engineering biological robustness through feedback control", co-supervision with Dr Geoff Baldwin.*

▷ *2013-2014:* **Lai Hung**, *"Protein Detection by whole-cell based biosensor device", co-supervision with Dr Karen Polizzi.*
▷ *2013-2014:* **Lewis Tanner**, *"Generating an engineered protease biosensor for rapid detection of schistosoma parasites", co-supervision with Prof Paul Freemont.*
▷ *2012-2013:* **Hristina Ivanova**, *"Design and construction of artificial cells using bottom up approaches" co-supervision with Dr Oscar Ces.*
▷ *2012-2013:* **Mitchell Duffy**, *"Engineering biological robustness through feedback control" co-supervision with Dr Geoff Baldwin.*
▷ *2011-2012:* **Hannah Somani**, *"Towards a solar biorefinery for the conversion of CO_2 to chemicals and fuels" co-supervision with Dr Travis Bayer.*
▷ *2011-2012:* **Bob Pepin**, *"Engineering populations of cells with a stochastic switch", co-supervision with Dr Vahid Shahrezaie and Dr Travis Bayer.*
▷ *2011-2012:* **Charubutr Asavaroengchai**, *"Exploring the possibility of optically controlled gene expression", co-supervision with Dr Karen Polizzi.*
▷ *2011-2012:* **Matthew O'Reilly**, *"Programmable self-purification of yeast for biofuel production", co-supervision with Dr Tom Ellis.*
▷ *2011-2012:* **Axel Nystrom**, *"Programming cells with light for the production of liquid fuels", co-supervision with Dr Travis Bayer.*
▷ *2010-2011:* **Rhys Algar**, *"Setting the standard for characterising the interactions between a synthetic gene circuit and its chassis cell", co-supervision with Dr Tom Ellis.*
▷ *2010-2011:* **Royah Vaezi**, *"Artificial cell-cell communication/symbiosis: Provision of glutamine to mammalian cells by* B. subtilis*", co-supervision with Dr Karen Polizzi.*

UG, MEng and MSc students 2010 - present

Imperial College London, Department of Bioengineering. 4th year UG and MSc project supervision.

Supervisor of UG and MSc Bioengineering projects:Idea formulation and structuring; project supervision.

▷ *2022-2023:* **Wei Shi (Alex) Sim** *(UG, MEng), "Analysis and design of lean biomolecular controllers in synthetic biology".*

▷ *2022-2023:* **Miro Moffett, Martina Torce, Pierre Le Floch, Prashanth Ramasamy, Ka Ang, Na Young Jin** *(Y3 Group Project), "Acoustic Quality Metrics and Objective Quality Score from Impulse Response Measurements of Acoustic Systems".*

▷ *2021-2022:* **Kirill Sechkar** *(UG, MEng), "Modelling and Simulation of Biomolecular Controllers for Indirect Regulation of Gene Expression via Resource Competition Couplings".*

▷ *2020-2021:* **Yuecheng Hong** *(MSc), "Labware Recognition and Tracking".*

▷ *2020-2021:* **Yong Shen Tan** *(UG, MEng), "Developing Liquid Handling Protocols for an Opentrons OT-2".*

▷ *2020-2021:* **Marco Corrao** *(UG, MEng), "Autosampler for Turbidostats under the supervision".*

▷ *2020-2021:* **Alexander McKinnon** *(UG, MEng), "Modelling cell behaviour during 3D bioprinting".*

▷ *2019-2020:* **Krithika Balaji, Gabrielle Johnston, Megan Allerton, Tommy Chen, Alexander McKinnon, Marcella Iswanto Carrasquero, Jain Shivali** *(Y3 Group Project), "The Acoustic Suite: An Impulse Response Measurement Tool".*

▷ *2019-2020:* **Samuel Martin Frias** *(UG, MEng), "Data-driven automated building of biological models", Sam was awarded* ***"Best Year 4 MEng Final Year Project Presentation"*** *by the Department of Bioengineering.*

▷ *2019-2020:* **Alexandra Bosman** *(UG, MEng), "Data-driven automated building of biological models".*

▷ *2018-2019:* **Alex Dack** *(UG, MEng), "Controller non-negativity enhances the accessible range of chemical reaction networks: The shifted integral molecular controller (SIMC)", Alex's Final Year MEng Report is being used as a prototypical* ***"exceptionally good report"*** *by the Department of Bioengineering.*

▷ *2018-2019:* **Turan Hasan, Benjamin Jones, Ryan Wong, Gustave Roux de Bezieux, Shri-Ishvarya Rajamoorthy, Ioana Filipas, Felix Royer** *(Y3 Group Project), "The Acoustic Suite: An Impulse Response Measurement Tool".*

▷ *2018-2019:* **Xiran Zhao** *(MSc), "Synthetic feedback control systems for improved robustness and performance of host-aware synthetic biology constructs using CRISPR-Cas".*

▷ *2018-2019:* **Aicha Tine** *(UG, MEng), "Comparing and implementing state-of-the-art Optimal Experimental Design methods on Turbidostats".*

▷ *2017-2018:* **Peter Sarvari** *(UG, MEng), "Translation models that incorporate slow codons and resource limitation in E. Coli".*

▷ *2017-2018:* **Bence Halpern** *(UG, MEng), "Bayesian Identification of Genetic Regulatory Network's Motif".*

▷ *2016-2017:* **Carys Moller** *(UG, MEng), "Optimal synthetic biology designs for simultaneous increase in productivity and growth of engineered bacterial cells".*

▷ *2016-2017:* **Carter Teal** *(UG, MEng), "Development of a whole-cell computational model of E.coli for efficient synthetic biology design".*

▷ *2016-2017:* **Jonathan Li** *(UG, MEng), "RNA-based feedback control for faster, cheaper and portable synthetic biology".*

▷ *2014-2015:* **Peemtat Utsahajit** *(MSc, co-supervision with Dr Reiko Tanaka), "Design of anti-HIV therapies: a modelling approach".*

▷ *2013-2014:* **Isuru Goonatalike** *(UG, MEng, co-supervision with Dr Tom Ellis), "Pattern formation - getting yeast to grow in fractals with synthetic biology".*

▷ *2013-2014:* **Mihails Delmans** *(UG, 3rd year project, co-supervision with Dr Tom Ellis), "Constructing and testing synthetic biology designs in secure plasmids".*

▷ *2012-2013:* **Efi Athieniti** *(UG, MEng, co-supervision with Dr Reiko Tanaka), "Design of anti-HIV therapies: a modelling approach".*

▷ *2012-2013:* **Theraphat Owlarn** *(MSc, co-supervision with Dr Reiko Tanaka), "Design, simulation and analysis of an effective insulin control system for diabetic patients".*

▷ *2011-2012:* **Juan Kuntz** *(UG, MEng), "Time-scale separation in metabolic networks".*

▷ *2011-2012:* **George Qian** *(UG, MEng, co-supervision with Dr Reiko Tanaka), "Modelling the secret mechanism of effector T-cell in their battle against HIV(: Can they suppress HIV replication?)".*

▷ *2011-2012:* **Rajat Jain** *(UG, MEng, co-supervision with Dr Aldo Faisal and Dr Luke Dickens), "Investigation of how the reward structure of co-operative games affects the information required to encourage emergent co-operation".*

▷ *2011-2012:* **Keshava Murthy** *(UG, MEng, co-supervision with Dr Aldo Faisal and Dr Luke Dickens), "Reverse Engineering Parameters of Human Reinforcement Learning for the Diagnosis of Neurodegenerative Diseases".*

▷ *2011-2012:* **Jayue Nina Zhu** *(UG, BEng, co-supervision with Dr Tom Ellis), "Taking gene expression out of context".*

▷ *2010-2011:* **Marie Bessadi** *(MSc, co-supervision with Dr Reiko Tanaka), "Modelling approaches for the design of anti-HIV therapies".*

▷ *2010-2011:* **Qing (Angela) Yang** *(UG, MEng), "Investigating modularity and fan-out for the design of synthetic biology systems from the interconnection of devices".*

▷ *2010-2011:* **Holly Phillips** *(UG, MEng, co-supervision with Dr Aldo Faisal), "At the core of the robot: Machine-based vs human reinforcement learning for robotic control (2)".*

▷ *2010-2011:* **Nikhil Howai** *(UG, MEng, co-supervision with Dr Aldo Faisal), "At the core of the robot: Machine-based vs human reinforcement learning for robotic control (1)".*

▷ *Apr 2010 - June 2010:* **Nuri Purswani**, *Imperial College London, (Master in Bioinformatics and Systems Biology, Department of Life Sciences, Division of Molecular Biosciences), "Comparison of different methods for biochemical network reconstruction from data".*

Visiting students 2010 - present

Imperial College London, Department of Bioengineering. Visiting students supervision.
Supervisor of visiting students in my group: Idea formulation and structuring; project supervision.
▷ *28/03/2022-19/08/2022:* **Jérémie Marlhens**, *École Normale Supérieure de Lyon (MSc in Biology), Ecole Centrale de Lyon (Engineering cycle).*
▷ *01/11/2021-31/05/2022:* **Henri Faure**, *ETH Zurich (MSc in Mechanical Engineering (with a focus in robotics and AI)).*
▷ *04/02/2019-11/08/2019:* **Esteban Lebrun**, *Université d'Evry Val D'Essonne (Master 2 in Systems and Synthetic Biology).*
▷ *10/4/2017-17/10/2017:* **Joaquin Gutierrez-Mena**, *Ludwig-Maximillians Universitat Munchen (MSc in Biology).*
▷ *7/7/2016-7/10/2016:* **Ahmed Zaid**, *University of Cambridge (UROP student).*
▷ *16/4/2015-15/7/2015:* **Rémi Sieskind**, *École Normale Supérieure of Cachan, France (Interdisciplinary Approach of Life Sciences Masters student).*
▷ *21/6/2013-5/7/2013:* **Fabio Baldissera**, *PhD student at Universidade Federal de Santa Catarina, Brazil.*
▷ *1/3/2012-31/7/2012:* **Jean-Baptiste Lugagne**, *INP Grenoble, France (UROP student, co-supervised with Dr Diego Oyarzún), "A control-theoretic approach for quantifying noise propagation in genetic regulation of metabolism".*
▷ *15/9/2011-14/12/2011:* **Alejandro Vignoni**, *University of Valencia, Spain (visiting Ph.D. student, co-supervised with Dr Diego Oyarzún), "Hybrid control design for synthetic cell-to-cell communication circuits".*
▷ *1/7/2011-31/12/2011:* **Gabriel Bosque Chacòn**, *University of Valencia, Spain (Leonardo Da Vinci Programme, co-supervised with Dr Travis Bayer), "Controlling metabolic pathways using external control inputs".*
▷ *2/2/2011-14/3/2011:* **Marit Hoffmeyer-Zlotnik**, *University of Bremen, Germany (UROP student, co-supervised with Dr Diego Oyarzún), "One-to-all genetic control for metabolic demands".*
▷ *June 2010 - Aug 2010:* **Taylor Southwick**, *Brigham Young University, Utah, USA (visiting undergraduate student) "Assessing model and information quality in biochemical network reconstruction".*

Tesi di laurea student Sep 2009 - June 2010

University of Cambridge, Department of Engineering, Imperial College London, Department of Bioengineering. Tesi di laurea co-supervision.
External supervisor of a "Tesi di laurea specialistica in Ingegneria dell'automazione" (Univ. of Pisa, Italy): Idea formulation and structuring; project supervision.
▷ *June 2010:* **Stefano Falasca***: "Cooperative control of 3D mobile agents with limited sensing capabilities".*

UG final year students 2007 - 2010

University of Cambridge, Department of Engineering, Control Group. Engineering graduation projects co-supervision and assessment.
Co-supervisor and examiner of six final year (4th year) engineering graduation projects: Idea formulation and structuring; project supervision; project reports and presentations assessment and marking.
▷ *2009 - 2010:* **Sang Han**, *"Network reconstruction with applications to biology and finance".*
▷ *2009 - 2010:* **Mengmeng Wang**, *"How plants keep track of time: understanding circadian rhythms".*
▷ *2008 - 2009:* **Daniel McDuff and Kevin Fan**, *"Stock market modelling and portfolio optimisation".*
▷ *2007 - 2008:* **Yoyo Li**, *"Competition dynamics in a fund management system".*
▷ *2007 - 2008:* **Emma Lewis**, *"Data-driven control: a comparison between system identification and reinforcement learning based control".*

UG final year students 2001-2003

University of Liège, Department of Electrical Engineering, Belgium. Engineering graduation projects co-supervision and assessment.
Co-supervisor and examiner of four final year (5th year) engineering graduation projects: Idea formulation and structuring; project supervision; project reports and presentations assessment and marking.
▷ *2002 - 2003:* **Alain Hirtzig**, *"Virtual Dolby Digital sur DSP".*
▷ *2002 - 2003:* **Christophe Lemort**, *"Implémentation d'un décodeur AC-3 sur Simulink".*
▷ *2001 - 2002:* **Johan Van Hoye**, *"Implémentation d'un annulateur des trajets croisés pour un système de reproduction transaural".*
▷ *2001 - 2002:* **Olivier Knodt**, *"Attributs de localisation au moyen des HRTF".*

Academic and Scientific Mentor

Dec 2016 - present

Imperial College, Department of Bioengineering. Academic and Scientific Mentor for Dr Thomas Ouldridge.

Sep 2020 - present

Imperial College, Department of Life Sciences. Academic and Scientific Mentor for Dr Jose Jimenez.

Academic Awards and Funded Research Projects

Feb 2024 - Feb 2029 (5 years)
Imperial College, Department of Bioengineering. **Co-I** at Imperial (Lead Institution) on the **UKRI Engineering Biology Missions Hub Grant BB/Y008510/1, "Engineering Biology Hub for Microbial Foods"**.
Total Value Awarded: £14M. Total value awarded to Imperial: £11.262M

July 2023 - June 2027 (4 years)
Imperial College, Department of Bioengineering. **Lead PI** at Imperial on the **Lonza Biologics fully funded industry PhD studentship for Mr Robert Lever on the project "Xceed SMART: Autoregulating CHO cells which sense cell density and recombinant burden, in order to fine tune recombinant output"**.
Total Value Awarded: £337k

March 2024 - March 2030 (6 years)
Imperial College, Department of Bioengineering. **Lead Co-I** at Imperial on the **Oxford-Imperial-Bristol EPSRC Programme Grant EP/Y014073/1, "EEBio: Efficient Engineering and Control of Predictable and Reliable Biosystems"**.
Total Value Awarded: £8.315M. Total value awarded to Imperial: £2.61M

Sep 2023 - Sep 2026 (3 years)
Imperial College, Department of Bioengineering. **Co-I** at Imperial (lead institution) on the **Horizon Europe EIC 2022 Path-Finder Challenges project, grant reference 101115317, "NEO: Next Generation Molecular Data Storage"**.
Total Value Awarded: 3.76M EUR. Total value awarded to Imperial: 1.44M EUR

Feb 2022 - Feb 2025 (3 years)
Imperial College, Department of Bioengineering. **PI** at Imperial (lead institution) on the **Engineering Biology Transition Award, grant BB/W013770/1, "21EBTA: EB-AI Consortium for Bioengineered Cells & Systems (AI-4-EB)",** `https://www.imperial.ac.uk/ukri-ai-engineering/`.
Total Value Awarded: £1.5M.

Jan 2020 - Jan 2023 (3 years)
Imperial College, Department of Bioengineering. Project partner and **Co-I** at Imperial (lead institution) on the **EU H2020 ERA CoBioTech 2019 project SyCoLim, grant BB/T011408/1, "Synthetic microbial communities for the production of limonene-derived products"**.
Total Value Awarded: 1.1M EUR. Total value awarded to Imperial: £579k.

April 2019 - March 2029 (10 years)
Imperial College, Department of Bioengineering. **Royal Academy of Engineering Chair in Emerging Technologies in Engineering Biology, grant CiET 1819\5**.
Total Value Awarded: £2.7M.

Oct 2019 - Oct 2027 (8 years)
Imperial College, Department of Bioengineering. **Deputy Director and lead Co-I** at Imperial (lead institution) for the **EPSRC Centre for Doctoral Training (CDT) in BioDesign Engineering**, grant EP/S022856/1.
Total Value Awarded: £6.671M.

Oct 2018 - Oct 2021 (36 months)
Imperial College, Department of Bioengineering. Project partner and **Co-I** at Imperial on the **EU H2020 CSA BIOTEC-01-2018 H2020-NMBP-TR-IND-2018-2020 grant SEP-210491758 BioRoboost 2018-2020, "Fostering Synthetic Biology standardisation through international collaboration"**.
Total Value Awarded: 2M EUR. Total value awarded to Imperial: 102k EUR.

Oct 2017 - March 2021 (42 months)
Imperial College, Department of Bioengineering. Project partner and **PI** at Imperial on the **EU H2020 FET-OPEN RIA COSY-BIO 2016-2017, grant 766840, "Control Engineering of Biological Systems for Reliable Synthetic Biology Applications"**.
Total Value Awarded: 3M EUR. Total value awarded to Imperial: 570k EUR.

Oct 2017 - Sep 2021 (48 months)
Imperial College, Department of Bioengineering. **PI** on the **EPSRC grant EP/P02596X/1, "Genetically Encoded Nucleic Acid Control Architectures"**.
Value awarded: £640k.

Oct 2017 - Sep 2019 (24 months)
Imperial College, Department of Bioengineering. **PI** on the **President Excellence Fund for Frontier Research, "3D Biosynthetic Printing: A novel "true 3D" bio-manufacturing platform unlocking new classes of functional materials and structures with broad applications"**.
Value awarded: £250k.

Feb 2017 - Aug 2020 (42 months)
Imperial College, Department of Bioengineering. **PI** on the **EPSRC grant EP/P009352/1, "A novel, fast and efficient resource recycling system for improving the performance of engineered bacteria"**.
Value awarded: £450k.

Feb 2015 - March 2020 (5 years)
EPSRC Fellowship for Growth: Building UK Leadership in Engineering, **EPSRC grant EP/M002187/1, "EPSRC Fellowships for Growth: Systems and Control Engineering Framework for Robust and Efficient Synthetic Biology"**.
Value awarded by EPSRC: £1M. Ranked 1^{st} among four funded Fellowships in Synthetic Biology.

Aug 2014 - Jul 2015 (12 months)
Imperial College, Department of Life Sciences and Department of Bioengineering, U.K. **Co-I** on the **BBSRC grant BB/L027852/1, "A DNA Synthesis and Construction Foundry for Synthetic Biology @ Imperial College"**.
Total value awarded: £2.1M.

Oct 2015 - Sep 2019 (4 years)
Imperial College, Department of Life Sciences and Department of Bioengineering, U.K. **BBSRC Ph.D. studentship** with Geoff Baldwin and **Guy-Bart Stan** as supervisors.
Value: Full PhD fees and bursary + Research Training Support Grant amounting to £5k per annum.

Oct 2013 - Sep 2018 (60 months)
Imperial College, Department of Bioengineering and Imperial College Centre for Synthetic Biology, U.K. **Co-I** on the **EPSRC grant EP/L011573/1, "SynBiCITE - an Imperial College led Innovation and Knowledge Centre (IKC) in Synthetic Biology"**.
Total value awarded by EPSRC/BBSRC: £5M, with a further £5M to be awarded midpoint.

Apr 2013 - Apr 2016 (36 months)
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **PI** on the **EPSRC grant EP/K020617/1, "*In vivo* integral feedback control for robust synthetic biology"**, in collaboration with King's College London.
Total value awarded: £410k, Value awarded to Imperial: £375k.

Jan 2013
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **Co-I** on the **EPSRC grant EP/K030760/1, "Small items of research equipment at Imperial College London"**.
Total value awarded to Imperial: £432k, Value awarded to CSynBI: £20k.

Dec 2012
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **Co-I** with James Murray and Alfred Rutherford on the **Imperial Industrial Biotechnology Hub project, "Construction of a stratified bioreactor with a flue and syn gas source for the study and optimal control of microbial consortia in artificial laminated layers"**.
Value awarded: £8k.

Jan 2013 - Jul 2016 (42 months)
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **Co-I** on the **EPSRC grant EP/J021849/1, "Engineered burden-based feedback for robust and optimised synthetic biology"**.
Value awarded: £430k.

June 2012 - Sep 2013 (14 months)
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **PI** on the **EPSRC first grant project EP/J014214/1, "Data-based optimal control of synthetic biology gene circuits"**.
Value awarded: £100k. Project ranked "Outstanding" by 4 out of 4 reviews.

Sep 2012 - Nov 2013 (14 months)
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **Co-I** on the **DSTL-BBSRC-EPSRC-MRC Joint Synthetic Biology Initiative, BBSRC grant BB/J019720/1, "Engineered security systems for environmental synthetic biology"**.
Value awarded: £120k.

June 2012 - June 2017 (60 months)
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **Co-I** on the **EPSRC grant EP/J02175X/1, "An infrastructure for platform technology in synthetic biology"**, in collaboration with Univ. Cambridge, Univ. Newcastle, Univ. Edinburgh, King's College London.
Total value awarded: £5M.

Oct 2012 - Sep 2015 (36 months)
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **PI** on **BBSRC Department of Bioengineering Ph.D. studentship (awarded to Juan Kuntz)**.

Dec 2011 - June 2015 (42 months)
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **Co-I** on **EPSRC project EP/I032223/1, "Control-engineering inspired design tools for synthetic biology"**, in collaboration with Univ. Oxford, and Univ. Cambridge.
Total value awarded: £1.1M. Value awarded to Imperial College: £430k.

Oct 2011 - Sep 2015 (48 months)
Imperial College, Department of Bioengineering and Centre for Synthetic Biology and Innovation, U.K. **PI** on a **Dorothy Hodgkin Postgraduate Award (EP/J500628/1)**, a **Microsoft Research Ph.D. scholarship (MSR 2011-042)**, and a **Department of Bioengineering Industrial studentship for the project "Automatic robust output maximisation of arbitrary synthetic biological circuits *in vivo*"**.
Total value awarded: £120k.

Oct 2010 - Sep 2013 (36 months)
Imperial College, Centre for Synthetic Biology and Innovation, U.K. **PI** on a **CSynBI Ph.D. studentship (awarded to Rhys Algar with Guy-Bart Stan and Tom Ellis as co-supervisors)**.

Jan 2007 - Jan 2010 (36 months)
University of Cambridge, U.K. **Named Research Associate** on the **EPSRC grant EP/E02761X/1, "Global stability and robustness analysis of oscillators with application to biology and robotics"**.
Value awarded by EPSRC: £300k. Project written by Dr Stan, ranked "Outstanding" by 4 out of 4 reviews.

2009, 2010
Inclusion in Who's Who in the World 2009 (26th Ed.), 2010 (27th Ed.).
Marquis Who's Who.

June 2007
University of Cambridge, U.K. **International Travel Grant from the Royal Academy of Engineering, grant ITG C7-253**.
Used for presentation and attendance at the 26th IEEE American Control Conference (IEEE-ACC 2007).

Jan 2006 - Dec 2006 (12 months)
University of Cambridge, U.K. EU FP6 **Marie Curie Intra-European Fellow**, **PI** on **EU-IEF project 025509 GASO, "Global Analysis and Synthesis of Oscillations"**.
Project average review score: 86.9%. Value awarded by EU FP6: 73k EUR.

Sep 2000 - Sep 2004 (4 years)
Belgium. **Research fellow with the Belgian National Fund for Scientific Research ("Aspirant FNRS")**.
Value awarded by FNRS: 80k EUR salary (with tax exemption).

2000
Inclusion in 2000 Outstanding Scholars of the 21st Century, First Edition.
International Biographical Centre, Cambridge, England.

1999 - 2000 (1 year)
University of Liège, Belgium. **"Bourse d'encadrement Pisart" (Pisart teaching grant)**.
Merit-based, one year scholarship.

Nov 1995
University of Liège, Belgium. **Gelblum-Larmoyeux-Loukatchevsky Grant**.
Merit-based grant, awarded exceptionally by the Jury of the Fernand Pisart grant for a student taking the engineering entrance examination with an average score $> 94\%$.

June 30th, 1995
Collège Saint-Benoit Saint-Servais, Liège, Belgium. "Prix de langue néerlandaise".
Dutch Language Award, awarded by Georges Theunis, Ministre d'État belge.

Refereed Full Papers (* indicates corresponding author(s))

Nano Letters 2025 Samia Bakhtawar, Francesca Smith, Aditya Sengar, **Guy-Bart Stan**, John Goertz, Molly Stevens, Thomas E. Ouldridge, Wooli Bae, *Overcoming the speed limit of four-way DNA branch migration with bulges in toeholds*, Nano Letters, Vol. 25, Issue 35, pp. 13772–13779, September 2025, doi:10.1021/acs.nanolett.5c03063.

Nat Chemistry 2025 Javier Cabello Garcia, Rakesh Mukherjee, Wooli Bae, **Guy-Bart Stan**, Thomas E. Ouldridge, *Information propagation through enzyme-free catalytic templating of DNA dimerization with weak product inhibition*, Nature Chemistry, Vol. 17, pp. 1179–1187, June 2025, doi:10.1038/s41557-025-01831-x.

ACS SynBio 2025 Harman Mehta, Jose Ignacio Jimenez, Rodrigo Ledesma-Amaro*, **Guy-Bart Stan***, *Investigating The Potential of Division of Labour in Synthetic Bacterial Communities for the Production of Violacein*, ACS Synthetic Biology, Vol. 4, Issue 7, June 2025, doi:10.1021/acssynbio.5c00120.

BMC Methods 2024 Lea S. Bernier, Aislinn Estoppey, Saskia Bindschedler, **Guy-Bart Stan**, Pilar Junier, Claire E. Stanley, *Microfluidic platform for microbial spore germination studies in multiple growth conditions*, BMC Methods, Vol. 1, Art. number: 12, 2024, doi:10.1186/s44330-024-00012-5.

Nature Communications 2024 Kirill Sechkar, Harrison Steel, Giansimone Perrino*, **Guy-Bart Stan***, *A coarse-grained bacterial cell model for resource-aware analysis and design of synthetic gene circuits*, Nature Communications, Vol. 15, Art. number: 1981, 2024, doi:10.1038/s41467-024-46410-9.

OUP Bioinformatics 2023 Eszter Csibra, **Guy-Bart Stan***, *Parsley: a web app for parsing data from plate readers*, OUP Bioinformatics, Vol. 39, Issue 12, 2023, doi:10.1093/bioinformatics/btad733.

Nature Communications 2023 Duncan Ingram, **Guy-Bart Stan***, *Modelling genetic stability in engineered cell populations*, Nature Communications, Vol. 12, Art. number: 3471, 2023, doi:10.1038/s41467-023-38850-6.

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Nature Biotechnology News and Views 2018 Marios Tomazou, **Guy-Bart Stan**, *Portable gene expression guaranteed*, Nature Biotechnology News and Views invited article about the paper "Constant gene expression at any copy number using feedforward stabilized promoters", T.H. Segall-Shapiro, E. D. Sontag, and C. A. Voigt, Nature Biotechnology, Vol. 36, Issue 4, 2018, pp. 313-314.

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BBF RFC 2013 Jacqueline Quinn, Jacob Beal, Swapnil Bhatia, Patrick Cai, Joanna Chen, Kevin Clancy, Nathan Hillson, Michal Galdzicki, Akshay Maheshwari, Umesh P, Matthew Pocock, Cesar Rodriguez, **Guy-Bart Stan**, Drew Endy, *Synthetic Biology Open Language Visual (SBOL Visual), version 1.0.0*, BBF RFC #93, 2013, doi:1721.1/78249

BBF RFC 2012 Michal Galdzicki, Mandy L. Wilson, Cesar A. Rodriguez, Matthew R. Pocock, Ernst Oberortner, Laura Adam, Aaron Adler, J. Christopher Anderson, Jacob Beal, Yizhi Cai, Deepak Chandran, Douglas Densmore, Omri A. Drory, Drew Endy, John H. Gennari, Raik Grünberg, Timothy S. Ham, Nathan J. Hillson, Jeffrey D. Johnson, Allan Kuchinsky, Matthew W. Lux, Curtis Madsen, Goksel Misirli, Chris J. Myers, Carlos Olguin, Jean Peccoud, Hector Plahar, Darren Platt, Nicholas Roehner, Evren Sirin, Trevor F. Smith, **Guy-Bart Stan**, Alan Villalobos, Anil Wipat, and Herbert M. Sauro, *Synthetic Biology Open Language (SBOL) Version 1.1.0*, BBF RFC #87, 2012, doi:1721.1/73909

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Wiley 2021 Eliza Atkinson, Alice Boo, Huadong Peng, **Guy-Bart Stan**, Rodrigo Ledesma-Amaro, *Principles, Tools and Applications of Synthetic Consortia towards Microbiome Engineering* to appear in *"Principles in Microbiome Engineering"*, Wiley, 2022, Eds.: Matthew Wook Chang.

Springer 2020 Aivar Sootla, **Guy-Bart Stan**, Damien Ernst, *Solving Optimal Control Problems for Monotone Systems Using the Koopman Operator* published in *The Koopman Operator in Systems and Control, part of Lecture Notes in Control and Information Sciences*, Springer, 2020, Eds.: Alexandre Mauroy, Igor Mezic, Yoshihiko Susuki.

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Refereed Conference Papers (* indicates corresponding author(s))

NeurIPS 2025 Zehui Li, Vallijah Subasri, Yifei Shen, Dongsheng Li, Wentao Gu, **Guy-Bart Stan**, Yiren Zhao, Caihua Shan, *Omni-DNA: A Genomic Model Supporting Sequence Understanding, Long-context, and Textual Annotation*, In Proceedings of the 39th Conference on Neural Information Processing Systems (NeurIPS 2025), San Diego Convention Center, USA, 2-7 December, 2025.

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CDC 2023 Abhilash Patel*, **Guy-Bart Stan***, *Exploiting resource constraints for controlling biomolecular circuits*, In Proceedings of the 62nd IEEE Conference on Decision and Control (IEEE-CDC 2023), Marina Bay Sands, Singapore, 13-15 December, 2023 (7 pages).

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ACC 2022 Giansimone Perrino, **Guy-Bart Stan***, *Robust set-point regulation of gene expression using resource competition couplings in mammalian cells*, In Proceedings of the 2022 American Control Conference (ACC 2022), Atlanta Marriott Marquis, Atlanta, Georgia, USA, June 6-10, 2022.

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ACC 2015 Aivar Sootla, Diego Oyarzún, David Angeli, **Guy-Bart Stan***, *Shaping Pulses to Control Multi-Stable Biological Systems*, In Proceedings the 2015 American Control Conference (ACC 2015), Palmer House Hilton, Chicago, IL, USA, July 1-3, 2015 (6 pages).

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IFAC 2014 Wei Pan, Aivar Sootla, **Guy-Bart Stan***, *Distributed Reconstruction of Nonlinear Networks: An ADMM Approach*, In Proceedings of the 19th IFAC World Congress, Cape Town, South Africa, August 24-29, 2014 (6 pages).

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ACC 2007 **Guy-Bart Stan***, Abdullah Hamadeh, Rodolphe Sepulchre, and Jorge Gonçalves, *Output synchronization in networks of cyclic biochemichal oscillators*, In Proceedings of the 26th American Control Conference (ACC 2007), New York City, NY, USA, July 11-13, 2007, (6 pages). *Best paper in session award.*

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SEED 2024 Harman Mehta, **Guy-Bart Stan**, Jose Jimenez, Rodrigo Ledesma-Amaro, *Investigating the Potential of Division of Labour in Synthetic Bacterial Communities for Bioproduction*, 11th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Signia Hilton, Atlanta, Georgia, USA, 24 June - 27 June, 2024.

SEED 2024 Daniel Boros, Ayushi Katdare, **Guy-Bart Stan**, Jose Jimenez, *Site Directed in-Vivo Mutagenesis with Retron Assisted Continous Evolution*, 11th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Signia Hilton, Atlanta, Georgia, USA, 24 June - 27 June, 2024.

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YRLS 2023 Lea Bernier, Pilar Junier, **Guy-Bart Stan**, Claire Stanley, *Spores-on-a-Chip: Deciphering the responsiveness of bacteria using microfluidic chemostats*, 14th International Conference for Young Researchers in Life Sciences (YRLS), Sorbonne University, Paris, 11-13 July, 2023.

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SEED 2023 Lisa Doetsch, Wooli Bae, Tom Ouldridge, **Guy-Bart Stan**, *Circular RNA As a Platform for Gene Expression Control in Synthetic Biology and Therapeutics*, 10th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Hilton Los Angeles/Universal City Hotel, Los Angeles, California, USA, 30 May - 2 June, 2023.

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SBUK 2022 Eszter Csibra, **Guy-Bart Stan**, *Absolute quantification for any fluorescent protein using universal calibrants*, Synthetic Biology UK 2022 (SBUK 2022), Newcastle University, Newcastle upon Tyne, UK, 7-8 November, 2022. **Best Talk Award**.

SBUK 2022 Andreas Hadjimitsis, Borut Lampret, Albert Fabregas-Flavia, Connor Myant, **Guy-Bart Stan**, *Optogenetic-enabled 3D bioprinting in a cell-supporting hydrogel*, Synthetic Biology UK 2022 (SBUK 2022), Newcastle University, Newcastle upon Tyne, UK, 7-8 November, 2022.

SBUK 2022 Kirill Sechkar, Giansimone Perrino, **Guy-Bart Stan**, *A resource-aware bacterial cell model for designing biomolecular controllers that regulate gene expression via resource competition couplings*, Synthetic Biology UK 2022 (SBUK 2022), Newcastle University, Newcastle upon Tyne, UK, 7-8 November, 2022.

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BioMedEng 2022 Lea Bernier, Pilar Junier, **Guy-Bart Stan**, Claire Stanley, *Bacteria-on-a-Chip: Deciphering the responsiveness of bacteria using microfluidic chemostats*, Biomedical Engineering Conference (BioMedEng), UCL, London, 8-9 September, 2022.

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SEED 2022 Alice Boo, Rodrigo Ledesma-Amaro, **Guy-Bart Stan**, *Burden-Driven Multicellular Control Feedback for Microbial Consortia*, 9th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Crystal Gateway Marriott, Arlington, VA, USA, 2-5 May, 2022.

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DNA 27 Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Rapid DNA four-way branch migration with a bulge in the toeholds*, 27th International Conference on DNA Computing and Molecular Programming, Department of Physics, University of Oxford, UK, 13-17 September, 2021.

DNA 27 Ismael Mullor-Ruiz, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Active Circuits of Duplex Catalysts (ACDC): An experimental framework for designing nucleic acid-based, out-of-equilibrium catalytic reaction networks*, 27th International Conference on DNA Computing and Molecular Programming, Department of Physics, University of Oxford, UK, 13-17 September, 2021.

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EMBO workshop 2021 Duncan Ingram, **Guy-Bart Stan**, *Predicting mutation rates of synthetic constructs from their nucleotide sequence*, Predicting Evolution EMBO International Workshop, Online, 14-16 June, 2021.

SEED 2021 Eszter Csibra, **Guy-Bart Stan**, *Beyond Fluorescein: Use of Fluorescent Protein Calibrants for Direct and Absolute Quantification of Protein Production in Synthetic Biology*, 8th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Online, 15-17 June, 2021.

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SCCS 2021 Zoltan Tuza, **Guy-Bart Stan**, *ODE composer — a versatile software tool to compose ODE models from time-series data*, Conference on Scaling Cascades in Complex Systems (SCCS), part of the "Learning governing equations of dynamical systems from data: algorithms and applications mini symposium", Online, 1-3 March 2021.

mSBW 2020 Timothy Frei, Federica Cella, Fabiana Tedeschi, Joaquin Gutierrez Mena, **Guy-Bart Stan**, Velia Siciliano, Mustafa Khammash, *Addressing Gene Expression Burden in Mammalian Cells*, Virtual International Mammalian Synthetic Biology Workshop, 7-8 December, 2020.

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FDN 2020 Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *In situ generation of RNA complexes for synthetic molecular strand displacement circuits in autonomous systems*, 4th Functional DNA Nanotechnology Workshop, Vila Celimontana, Rome, Italy, 7-9 October, 2020.

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FDN 2020 Javier Cabello-Garcia, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Handhold-mediated strand displacement: a nucleic acid-based reaction to implement far-from-equilibrium templating*, 4th Functional DNA Nanotechnology Workshop, Vila Celimontana, Rome, Italy, 7-9 October, 2020.

DNA 26 Tomislav Plesa, **Guy-Bart Stan**, Thomas Ouldridge, Wooli Bae, *Robust control of biochemical reaction networks via stochastic morphing*, 26th International Conference on DNA Computing and Molecular Programming, Virtual Event, 14-17 September, 2020.

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IWBDA 2020 Tomislav Plesa, **Guy-Bart Stan**, Thomas Ouldridge, Wooli Bae *Robust control of biochemical reaction networks via stochastic morphing*, 12th International Workshop on BioDesign Automation, Online Event, 3-5 July, 2020.

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Max Bergmann 2020 Javier Cabello-Garcia, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Handhold-mediated strand displacement: a DNA-based mechanism to generate out-of-equilibrium assemblies through templated reactions*, Max Bergmann Symposium 2020, Dresden, Germany, 11-12 May, 2020.

FNANO 2020 Javier Cabello-Garcia, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Handhold-mediated strand displacement: a DNA-based mechanism to generate out-of-equilibrium complexes through templated reactions*, 17th Annual Conference on Foundations of Nanoscience, Snowbird Cliff Lodge, Utah, USA, 5-9 April, 2020.

Winter q-Bio 2020 Duncan Ingram, Mark Isalan, **Guy-Bart Stan**, *Modelling the mutation and selection of synthetic constructs in E. coli*, 8th Annual Winter q-Bio International conference, Hilton Waikoloa Village, Hawaii, USA, 12-18 February, 2020.

Microbiome Engineering 2019 Alice Boo, Rodrigo Ledesdma-Amaro, **Guy-Bart Stan**, *An Investigation into Ratiometric Control for Synthetic Ecosystems*, 2nd International Conference on Microbiome Engineering, Joseph B. Martin Conference Center, Boston, USA, 2-4 December, 2019.

ICSB 2019 Zoltan Tuza, **Guy-Bart Stan**, *A Framework for Building Models for Biomolecular Systems from Experimental Data Automatically*, 20th International Conference on Systems Biology (ICSB 2019), Okinawa Institute of Science and Technology Graduate School, Okinawa, Japan, 1-5 November, 2019.

Physics Meets Biology 2019 Javier Cabello-Garcia, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Introducing handhold-mediated strand displacement: A new template-catalysed reaction for DNA nanotechnology*, Physics Meets Biology 2019, University of Oxford, Oxford, U.K., 9-11 September, 2019.

Physics Meets Biology 2019 Ismael Mullor-Ruiz, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Implementation of information transduction networks in reversible DNA reactions*, Physics Meets Biology 2019, University of Oxford, Oxford, U.K., 9-11 September, 2019.

BioMedEng 2019 Javier Cabello-Garcia, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Introducing handhold-aided strand displacement: a new template-catalysed reaction for DNA nanotechnology*, BioMedEng19, Imperial College London, U.K., 5-6 September, 2019.

DNA 25 Tomislav Plesa, Thomas Ouldridge, **Guy-Bart Stan**, *Robust control of reaction networks via stochastic morphing*, 25th International Conference on DNA Computing and Molecular Programming, University of Washington, Seattle, USA, 5-9 August, 2019.

DNA 25 Wooli Bae, Thomas Ouldridge, **Guy-Bart Stan**, *Autonomous in situ generation of multi-stranded RNA complexes for synthetic molecular circuits*, 25th International Conference on DNA Computing and Molecular Programming, University of Washington, Seattle, USA, 5-9 August, 2019.

IWBDA 2019 Zoltan Tuza, **Guy-Bart Stan**, *Estimating Biologically Relevant Network Structures from Time-series Data*, 11th International Workshop on BioDesign Automation, University of Cambridge, Cambridge, U.K., 8-10 July, 2019.

IWBDA 2019 Goksel Misirli, Jake Beal, Thomas Gorochowski, **Guy-Bart Stan**, Anil Wipat, Chris Myers *SBOL Visual Ontology*, 11th International Workshop on BioDesign Automation, University of Cambridge, Cambridge, U.K., 8-10 July, 2019.

IWBDA 2019 Duncan Ingram, Mark Isalan, **Guy-Bart Stan**, *Mutation of synthetic constructs in E. coli*, 11th International Workshop on BioDesign Automation, University of Cambridge, Cambridge, U.K., 8-10 July, 2019. **Best Poster Award**.

SEED 2019 Nicolas Kylilis, **Guy-Bart Stan**, *Autonomously Controlled and Host-Aware Recombinant Gene Expression through Plasmid Copy Number Modulation*, 6th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), New York Hilton, NY, USA, 23-27 June, 2019.

NANTECH 19 Javier Cabello-Garcia, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Introducing handhold-mediated strand displacement: A new template-catalysed reaction for DNA nanotechnology*, NANTECH 2019, Aalto University, Espoo, Finland, 27-29 May, 2019.

NSIBW 2019 Zoltan Tuza, **Guy-Bart Stan**, *Identifying Evoked Cortical Responses Using Block-Sparse Bayesian Learning*, Nonlinear System Identification Benchmarks Workshop, Eindhoven University of Technology, Eindhoven, The Netherlands, 10-12 April, 2019.

AIChE 2018 Nicolas Kylilis, Zoltan A. Tuza, **Guy-Bart Stan**, Karen Polizzi, *Tools for Engineering Coordinated System Behaviour in Synthetic Microbial Consortia*, 2018 American Institute of Chemical Engineers (AIChE) Annual Meeting, David L. Lawrence Convention Center, Pittsburgh, PA, USA, 28 Oct - 2 Nov, 2018.

DNA 24 Wooli Bae, Thomas Ouldridge, **Guy-Bart Stan**, *Autonomous generation of multi-stranded RNA complexes for synthetic molecular circuits*, 24th International Conference on DNA Computing and Molecular Programming, Shandong Normal University, China, 8-12 October, 2018.

BioMedEng 2018 Wooli Bae, Thomas Ouldridge, **Guy-Bart Stan**, Thomas Ouldridge, *Development of synthetic molecular circuits based on RNA*, Imperial College London, U.K., 6-7 September, 2018.

BioMedEng 2018 Ismael Mullor-Ruiz, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Design and development of DNA-based push-pull networks*, Imperial College London, U.K., 6-7 September, 2018.

BioMedEng 2018 Javier Cabello-Garcia, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Introducing handhold-aided strand displacement*, Imperial College London, U.K., 6-7 September, 2018.

SEED 2018 Marios Tomazou, Mauricio Barahona, Karen Polizzi, **Guy-Bart Stan**, *Computational Re-Design of Synthetic Genetic Oscillators for Independent Amplitude and Frequency Modulation*, 5th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), JW Marriott Scottsdale Camelback Inn Resort & Spa, Scottsdale, AZ, USA, 3-7 June, 2018.

SEED 2018 Nicolas Kylilis, **Guy-Bart Stan**, *A translational controller for robustly maintaining protein production yields under culture conditions perturbations*, 5th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), JW Marriott Scottsdale Camelback Inn Resort & Spa, Scottsdale, AZ, USA, 3-7 June, 2018.

SEED 2018 Olivier Borkowski, Carlos Bricio, Michaela Murgiano, **Guy-Bart Stan**, and Tom Ellis, *Cell-Free Prediction of Protein Expression Costs for Growing Cells*, 5th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), JW Marriott Scottsdale Camelback Inn Resort & Spa, Scottsdale, AZ, USA, 3-7 June, 2018.

SEED 2018 Robert Sidney Cox III, Curtis Madsen, James McLaughlin, Nicholas Roehner, Bryan Bartley, Swapnil Bhatia, Tramy Nguyen, Mike Bissell, Kevin Clancy, Thomas Gorochowski, Raik Gruenberg, Augustin Luna, Nicolas Le Novere, Matthew Pocock, Herbert M. Sauro, John T. Sexton, **Guy-Bart Stan**, Jeffrey J. Tabor, Christopher A. Voigt, Zach Zundel, Chris J. Myers, Jacob Beal and Anil Wipat, *Synthetic Biology Open Language Visual 2.0*, 5th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), JW Marriott Scottsdale Camelback Inn Resort & Spa, Scottsdale, AZ, USA, 3-7 June, 2018.

SEED 2018 Francesca Ceroni, Alice Boo, Simone Furini, Tom Gorochowski, Olivier Borkowski, Yaseen Ladak, Ali Awan, Charlie Gilbert, **Guy-Bart Stan**, Tom Ellis, *Understanding and exploiting the host cell response to burden for more robust and predictable gene expression*, 5th "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), JW Marriott Scottsdale Camelback Inn Resort & Spa, Scottsdale, AZ, USA, 3-7 June, 2018.

mSBW 2018 Federica Cella, Joaquin Gutierrez Mena, **Guy-Bart Stan**, Velia Siciliano, *Impact of microRNAs on Cellular Burden*, 5th International Mammalian Synthetic Biology Workshop (mSBW 5.0), Martin Conference Center, Harvard Medical School, Boston, MA, USA, 5-6 May, 2018.

SEED 2017 Marios Tomazou **Guy-Bart Stan**, *Engineering Autoregulation in Enzymatic Degradation Based Systems for Robust Dynamics and Improved Host Capacity*, 2017 Synthetic Biology: Engineering, Evolution & Design (SEED 2017), Hyatt Regency, Vancouver, Canada, 20-23 June 2017.

SEED 2016 Francesca Ceroni, **Guy-Bart Stan**, Tom Ellis, *Understanding and Exploiting the Host Cell Response to Burden for More Robust and Predictable Gene Expression*, 3rd "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Hilton Chicago, IL, USA, 18-21 July, 2016.

SEED 2016 Marios Tomazou, **Guy-Bart Stan**, *Protease-Based Feedback for Overcoming Growth Rate and Enzymatic Queueing Limitations*, 3rd "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Hilton Chicago, IL, USA, 18-21 July, 2016.

SEED 2015 Marios Tomazou, Jordan Ang, **Guy-Bart Stan**, *Realising Efficient and Robust Synthetic Biology Systems Using Systems and Control Engineering*, 2nd "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Boston Park Plaza, MA, USA, 10-13 June, 2015.

SEED 2015 Francesca Ceroni, **Guy-Bart Stan**, Tom Ellis, *Resource allocation and whole cell response in heterologous gene expression*, 2nd "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Boston Park Plaza, MA, USA, 10-13 June, 2015.

SEED 2015 Edward Hancock, **Guy-Bart Stan**, James Arpino, Antonis Papachristodoulou, *Simplified Mechanistic Models of Gene Regulation for Analysis and Design*, 2nd "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Boston Park Plaza, MA, USA, 10-13 June, 2015.

SEED 2015 Jacqueline Quinn, Aaron Adler, Jacob Beal, Swapnil Bhatia, Yizhi Cai, Joanna Chen, Kevin Clancy, Robert Sidney Cox III, Michal Galdzicki, Nathan Hillson, Akshay Maheshwari, James McLaughlin, Chris Myers, Umesh P, Matthew Pocock, Cesar Rodriguez, Larisa Soldatova, **Guy-Bart Stan**, Mandy Wilson, Anil Wipat, Herbert M Sauro, *SBOL Visual: Standard Schematic Diagrams for Synthetic Genetic Constructs*, 2nd "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Boston Park Plaza, MA, USA, 10-13 June, 2015.

SEED 2014 Diego Oyarzún, Jean-Baptiste Lugagne, **Guy-Bart Stan**, *Noise propagation in synthetic gene circuits for metabolic control*, 1st "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Manhattan Beach Marriott, Manhattan Beach, CA, USA, 14-17 July, 2014.

SEED 2014 James Arpino, Edward Hancock, Marios Tomazou, Ye Yuan, Mariano Beguerisse, Jorge Gonçalves, Mauricio Barahona, Karen M. Polizzi, **Guy-Bart Stan**, Antonis Papachristodoulou, *Control Engineering Inspired Design Tools for Synthetic Biology*, 1st "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Manhattan Beach Marriott, Manhattan Beach, CA, USA, 14-17 July, 2014.

SEED 2014 Jordan Ang, Karen Polizzi, **Guy-Bart Stan**, David McMillen, *Design and analysis of extracellular chemical concentration regulation using integral feedback control in a population of engineered cells*, 1st "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Manhattan Beach Marriott, Manhattan Beach, CA, USA, 14-17 July, 2014.

SEED 2014 Francesca Ceroni, Marta Garcia-Bellmunt, **Guy-Bart Stan**, Tom Ellis, *Host cell response to synthetic biology: a deeper look for more robust and optimised designs*, 1st "Synthetic Biology: Engineering, Evolution & Design" conference (SEED), Manhattan Beach Marriott, Manhattan Beach, CA, USA, 14-17 July, 2014.

AIChE 2013 Karen Polizzi, James Arpino, Edward Hancock, James Anderson, Ye Yuan, Jorge Goncalves, Mauricio Barahona, **Guy-Bart Stan**, Antonis Papachristodoulou, *Control Engineering Inspired Design Tools for Synthetic Biology*, 2013 AIChE Annual Meeting, Hilton San Francisco Union Square, San Francisco, CA, USA, 3-8 November, 2013.

Q-Bio 2013 Diego Oyarzún, Jean-Baptiste Lugagne, **Guy-Bart Stan**, *Noise in enzymatic reactions under feedback*, 7th Q-Bio Conference, Centre for Nonlinear Studies at Los Alamos National Laboratory, New Mexico, USA, August 7-10, 2013.

ICSB 2013 Felix Jonas, Karen Polizzi, **Guy-Bart Stan**, *A system biology approach to population heterogeneity during Endoplasmic Reticulum stress adaptation*, 14th International Conference on Systems Biology (ICSB 2013), Tivoli Congress Centre, Copenhagen, Denmark, 30 Aug - 3 Sep, 2013.

IWBDA 2013 Michal Galdzicki, Ernst Oberortner, Matthew Pocock, Jacqueline Quinn, Mandy Wilson, Evan Appleton, Bryan Bartley, Jacob Beal, Swapnil Bhatia, Robert Cox, Raik Grünberg, Goksel Misirli, Nicholas Roehner, Larisa Soldotova, **Guy-Bart Stan**, Doug Densmore, Chris J. Myers, Herbert Sauro, Anil Wipat, *Recent Advances in the Synthetic Biology Open Language*, International Workshop on Bio-Design and Automation, Imperial College London, London, UK, July 12-13, 2013.

IWBDA 2013 Jacqueline Quinn, Jacob Beal, Swapnil Bhatia, Patrick Cai, Joanna Chen, Kevin Clancy, Robert Sidney Cox, Michal Galdzicki, Nathan Hillson, Akshay Maheshwari, Chris Myers, Umesh P, Matthew Pocock, Cesar Rodriguez, Herbert Sauro, Larisa Soldatova, **Guy-Bart Stan**, Mandy Wilson, Drew Endy, *Synthetic Biology Open Language Visual: An Open-Source Graphical Notation for Synthetic Biology*, International Workshop on Bio-Design and Automation, Imperial College London, London, UK, July 12-13, 2013.

FOSBE 2012 Vasu Chetty, Julius Adebayo, Andrew Mathis, Desiree DeMille, Stewart Morley, Tamil Anthonymuthu, Ye Yuan, Jorge Gonçalves, Julianne Grose, John Prince, **Guy-Bart Stan**, Sean Warnick, In-silico *Robust Reconstruction of the Per-Arnt-Sim Kinase Pathway using Dynamical Structure Functions*, International Conference on Foundations of Systems Biology in Engineering, Oct 21-25, 2012, Tsuruoka, Japan.

MMMS 2012 Diego Oyarzún, **Guy-Bart Stan**, *Synthetic gene circuits for metabolic control*, International Conference on Mathematical Modeling of Microbiological Systems, Marburg, Germany, July, 1-5, 2012.

enGENEious 2012 Diego Oyarzún, **Guy-Bart Stan**, *Foundational theory in genetic circuit design for metabolic control*, Flash Talk, enGENEious: Evolving Life for Future Technologies, Christ Church College, University of Oxford, June 25-26, 2012.

EFB 2012 Alejandro Vignoni, Diego Oyarzún, Jesus Picó, **Guy-Bart Stan**, *Population-level control of heterologous protein production in bacteria*, Applied Synthetic Biology in Europe Conference (European Federation of Biotechnology), Barcelona, Spain, February, 6-8, 2012.

BioEng 2011 Kim H. Parker, Jordi Alastruey, **Guy-Bart Stan**, *The Usefulness of Reservoir-Excess Pressure in the Analysis of Arterial Pressure Waveforms*, Bioengineering 11, The School of Engineering & Materials Science, Queen Mary, University of London, London, September 12-13, 2011.

Phys Fluid Mech 2011 Kim H. Parker, Jordi Alastruey, **Guy-Bart Stan**, *The Usefulness of Reservoir-Excess Pressure in the Analysis of Arterial Pressure Waveforms*, Physiological Fluid Mechanics: The Cardiovascular System, Brunel University, Uxbridge, UK, July 14-15, 2011.

CNS 2011 Holly Phillips, Nikhil Howai, **Guy-Bart Stan**, Aldo Faisal, *The implied exploration-exploitation trade-off in human motor learning*, Twentieth Annual Computational Neuroscience Meeting, Royal Institute of Technology, Stockholm, Sweden, 23-28 July, 2011.

IWBDA 2011 Michal Galdzicki, Cesar Rodriguez, Herbert Sauro, Laura Adam, J. Christopher Anderson, Deepak Chandran, Douglas Densmore, Drew Endy, John H. Gennari, Raik Gruenberg, Timothy Ham, Matthew Lux, Akshay Maheshwari, Barry Moore, Chris J. Myers, Jean Peccoud, Nicholas Roehner, **Guy-Bart Stan**, Mandy Wilson, *Evolution of SBOL: design information exchange standard*, International Workshop on Bio-Design and Automation, San Diego Convention Centre, San Diego, CA, USA, June 6-7, 2011.

ICSB 2010 Neil Dalchau, Katharine E. Hubbard, Fiona C. Robertson, Carlos T. Hotta, Helen M. Briggs, **Guy-Bart Stan**, Jorge M. Gonçalves, Alex A.R. Webb, *Correct biological timing in Arabidopsis requires multiple light signaling pathways*, 11th International Conference on Systems Biology, Edinburgh, U.K., 11-14 October, 2010

ERNSI 2010 Ye Yuan, **Guy-Bart Stan**, Jorge Gonçalves, *Biological network reconstruction from noisy input-output data*, 2010 ERNSI System Identification Workshop, Pembroke College, Cambridge UK, 27-29 September, 2010.

STAB 2008 **Guy-Bart Stan**, *Global analysis of oscillations: a dissipativity approach*, 10th E.S. Pyatnitskiy International Workshop on Stability and Oscillations of Nonlinear Control Systems, The Institute of Control Sciences of the Russian Academy of Sciences, Moscow, Russia, 3-6 June, 2008.
Invited by Dr Ivan Barabanov.

ZIF 2007 **Guy-Bart Stan**, *Global stability analysis and synthesis of oscillations*, "Mathematical Stability Analysis in Biomechanics and Robotics" Symposium, Zentrum für Interdisziplinäre Forschung (ZIF), Universität Bielefeld, Germany, 15-17 February, 2007.
Invited by Prof Peter Giesl.

DSP Conf. 2005 René Derkx, Kees Janse, Marie-Bernadette Gennotte, **Guy-Bart Stan**, Dimitri Warnez, and Jean-Pierre Jallet, *In-car speech communication*, 4th Philips Conference on Digital Signal Processing, Koningshof Veldhoven, The Netherlands, 15-16 November, 2005.

DSP Conf. 2005 Dimitri Warnez, Marie-Bernadette Gennotte, Jean-Pierre Jallet, **Guy-Bart Stan**, René Derkx, Kees Janse, and Sebastiaan de Bont, *Speech communication and sound field control in the car*, 4th Philips Conference on Digital Signal Processing, Koningshof Veldhoven, The Netherlands, 15-16 November, 2005.

Benelux Meeting 2005 **Guy-Bart Stan**, and Rodolphe Sepulchre, *Dissipativity theory for oscillator analysis*, 24th Benelux Meeting on Systems and Control, Houffalize, Belgium, 22-24 March, 2005.

Benelux Meeting 2004 **Guy-Bart Stan**, and Rodolphe Sepulchre, *Feedback mechanisms for global oscillations*, 23rd Benelux Meeting on Systems and Control, Heilvort, The Netherlands, 19-21 March, 2004.

Dyn. and Comp. Workshop 2003 **Guy-Bart Stan**, and Rodolphe Sepulchre, *A simple winner-take-all network as an illustration of the prisoners dilemma*, 7th Workshop on Dynamics and Computation, *Iterated Games and Computation*, Royal Academy of Sciences, Brussels, Belgium, 27-28 October, 2003.

Benelux Meeting 2003 **Guy-Bart Stan**, and Rodolphe Sepulchre, *Input-output tools for the analysis of limit cycles*, 22nd Benelux Meeting on Systems and Control, Lommel, Belgium, 19-21 March, 2003.

Benelux Meeting 2002 **Guy-Bart Stan**, and Rodolphe Sepulchre, *Passivity as a tool for the analysis of limit cycles*, 21st Benelux Meeting on Systems and Control, Veldhoven, The Netherlands, 19-21 March, 2002.

Benelux Meeting 2001 **Guy-Bart Stan**, and Rodolphe Sepulchre, *Comparison of different impulse response measurement techniques in electroacoustics*, 20th Benelux Meeting on Systems and Control, Houffalize, Belgium, 26-28 March, 2001.

Invited Talks

BSM 2024

Guy-Bart Stan, *Engineering and Control of Living Cells and Synthetic Communities*, Opening Keynote Lecture "In the Spotlight", Belgian Society for Microbiology (BSM) Annual Symposium 2024, Milestones in Microbiology, Royal Academy of Belgium, Palace of the Academies, Brussels, Belgium, 8 March 2024.
Invited by Prof Eveline Peeters, Vrije Universiteit Brussel, Belgium.

Royal Academy of Engineering Critical Conversations 2023

Guy-Bart Stan, *Critical Conversations on Engineering Biology: "Engineering biology – a critical technology for a critical time?"*, Invited Speaker to a Critical Conversations Fireside Chat with Dr Hayaatun Sillem CBE, CEO of the Royal Academy of Engineering, 26 September 2023. The event was broadcast live and recorded (see `https://raeng.org.uk/events/2023/september/engineering-biology-a-critical-technology-for-a-critical-time`)
Invited by Dr Hayaatun Sillem, CEO of the Royal Academy of Engineering.

Royal Academy of Belgium 2023

Guy-Bart Stan, *Engineering and Control of Living Cells and Synthetic Communities*, Invited Talk as part of the Scientific Advisory Board of the Belgian Company Syngulon, Royal Academy of Belgium, Palace of the Academies, Brussels, Belgium, 5 May 2023.
Invited by Dr Philippe Gabant and Mr Guy Hélin.

Imperial Centre for Advanced Therapeutics 2022

Guy-Bart Stan, *Engineering and Control of Robust and High-Performance Living Cells*, Cross-Faculty Bridging Seminar series, Imperial College Centre for Advanced Therapeutics, Online, 1 December 2022.
Invited by Dr Nicoletta Charolidi.

Lonza Research Forum 2022

Guy-Bart Stan, *Engineering and Control of Robust and High-Performance Living Cells*, Lonza Research Forum, Online, 14 November 2022.
Invited by Dr Marc Feary and Mr Robert Lever.

Future of AI and EB 2022

Guy-Bart Stan, *Artificial Intelligence for Bioengineered Cells & Systems*, The Future of AI and Engineering Biology, Alan Turing Institute, British Library, London, 26 August 2022.
Invited by Prof Chris Barnes, Dr Thomas Gorochowski, and Dr Diego Oyarzun.

BioDesign Eng CDT Industry Day 2021

Guy-Bart Stan, *Efficient Engineering of Reliable and High-Performance Bacterial Cells*, BioDesign Engineering Centre for Doctoral Training (CDT) Industry Day, Online, 23 September 2022.
Invited by Prof Geoff Baldwin.

BioDesign Eng CDT Industry Day 2021

Guy-Bart Stan, *Efficient Engineering of Reliable and High-Performance Bacterial Cells*, BioDesign Engineering Centre for Doctoral Training (CDT) Industry Day, Online, 10 September 2021.
Invited by Prof Geoff Baldwin.

OJO BE SynBio Workshop 2019

Guy-Bart Stan, *Control Engineering Synthetic Biology: Improving Robustness and Performance of Engineered Biological Systems*, OJO BE Synthetic Biology Workshop (Doctoral School Inter-University Initiative), Rega Institute, KUL, Belgium, 16-17 September 2019.
Invited by Prof Vitor Pinheiro.

Bristol BioDesgin Institute 2019

Guy-Bart Stan, *Increasing the Robustness and Performance of Engineered Bacterial Systems*, Bristol BioDesign Institute, University of Bristol, 15 May, 2019.
Invited by Dr Thomas Gorochowski.

SynBIC 2019

Guy-Bart Stan, *Control of Biological Systems*, Synthetic Biology Society at Imperial (SynBIC), Imperial College London, 12 March, 2019.
Invited by Jeremy Guntoro (SynBIC).

Nature Conference 2018

Guy-Bart Stan, *Sensing and Reacting to Unnatural Gene Expression: Towards Host-Aware Synthetic Biology*, Nature Conference "Resource allocation in natural and unnatural systems", Shanghai Institute of Plant Physiology and Ecology, Chinese Academy of Sciences, Shanghai Jiao Tong University, East China University of Science and Technology, Shanghai, China, October 15-17, 2018.
Invited Plenary Speaker by Chuanfu An (Nature Communications Associate Editor).

CCTA 2018

Guy-Bart Stan, *Improved performance and robustness in living cells through design and realisation of de novo biomolecular feedbacks*, 2018 IEEE Conference on Control Technology and Applications, The Scandic Hotel Copenhagen, Copenhagen, Denmark, August 21-24, 2018.
Invited by Prof Mustafa Khammash.

D-BSSE, ETH Zurich, 2018

Guy-Bart Stan, *Sensing and Reacting to Unnatural Gene Expression: Towards Host-Aware Synthetic Biology*, Department of Biosystems Science and Engineering, ETH Zurich, 16 July, 2018
Invited by Prof Mustafa Khammash.

SEB 2018 **Guy-Bart Stan**, *Host-Aware Synthetic Biology: Sensing and Reacting to Unnatural Gene Expression*, Quantitative Synthetic Biology Session, Society for Experimental Biology's Annual Meeting, Firenze Fiera Congress and Exhibition Centre, Florence, Italy, 3-6 July, 2018.
Invited by Prof Christian Fleck.

SynBIC 2018 **Guy-Bart Stan**, *Engineering Biology for Improved Robustness and Performance*, Synthetic Biology Society at Imperial (SynBIC), Imperial College London, 5 March, 2018.
Invited by Charlie Keyzor (SynBIC).

Bioengineering Departmental Seminar 2018 **Guy-Bart Stan**, *Best-in-class tools for improved productivity*, Department of Bioengineering Seminar, Imperial College London, 7 February 2018.
Invited by the Equality and Departmental Culture Committee of the Department of Bioengineering.

MBI International Workshop 2017 **Guy-Bart Stan**, *Design of* de novo *biomolecular feedbacks for improved performance and robustness in living cells*, Invited Speaker, Control of Cellular and Molecular Systems International Workshop, Mathematical Biosciences Institute, The Ohio State University, Columbus, Ohio, USA, 2-6 October, 2017.
Invited by Prof Mustafa Khammash.

UK-East Africa Synthetic Biology Workshop 2017 **Guy-Bart Stan**, *Open Source Software and Computer Aided Design in Synthetic Biology* and *iGEM: an Educational and Research Platform for Young Synthetic Biologists from around the World*, Invited Speaker, Workshop to establish UK-East-African collaborations in practical synthetic biology, Laico Hotel, Nairobi, Kenya, 15-17 March, 2017
Invited by Dr Benson Kinyagia (NACOSTI) and Prof. Paul Freemont.

SynBIC 2017 **Guy-Bart Stan**, *What I cannot control, I do not understand: Engineering dynamic control systems in E. coli*, Synthetic Biology Society at Imperial (SynBIC), Imperial College London, 7 March, 2017.
Invited by SynBIC.

ESPCI Gulliver seminar 2017 **Guy-Bart Stan**, *Shared resources and biomolecular feedback considerations for engineering of bacterial cells with improved robustness and performance*, Invited Seminar Speaker, Gulliver seminar, École supérieure de physique et de chimie industrielles de la ville de Paris (ESPCI), Paris, France, 6 February, 2017
Invited by Prof Yannick Rondelez and Dr Vincent Démery.

IET SynBio 2016 **Guy-Bart Stan**, *Better, Faster, Stronger: Shared resources and biomolecular feedback considerations for better engineering of bacterial cells*, Invited Plenary Speaker, The IET/SynbiCITE Engineering Biology Conference: Synthetic Biology for manufacturing the bioeconomy, IET London, Savoy Place, 13-15 December 2016.
Invited by the IET.

FOSBE 2016 **Guy-Bart Stan**, *Control engineering meets synthetic biology: shared resources and feedback considerations for better engineering of bacterial cells*, Opening Plenary Speaker, 6th International Conference Foundations of Systems Biology in Engineering, FOSBE 2016, Otto-von-Guericke University and the Max Planck Institute in Magdeburg, Germany, October 9-12, 2016.
Invited by Dr Eva Balsa-Canto, IPC Chair, and Dr Kristel Bernaerts, IPC Co-Chair.

Newcastle 2016 **Guy-Bart Stan**, *Designing smarter synthetic biology systems: de novo biomolecular feedback and shared resources considerations for better engineering of bacterial cells*, Centre for Synthetic Biology and Bioexploitation, School of Computing Science and Centre for Bacterial Cell Biology, Newcastle University, July 19, 2016.
Invited by Prof Natalio Krasnogor.

CompuGene 2016 **Guy-Bart Stan**, *Designing smarter synthetic biology systems: de novo biomolecular feedback and shared resources considerations for engineered bacterial cells*, CompuGene Seminar Series, Technische Universität Darmstadt (Germany), July 7, 2016.
Invited by Profs Beatrix Suess and Heinz Koeppl.

Sheffield 2016 **Guy-Bart Stan**, *Design and realisation of biomolecular feedbacks in bacteria for improved robustness, performance and genetic stability*, Advanced Biomanufacturing Centre, Department of Chemical & Biological Engineering University of Sheffield, June 8, 2016.
Invited by Prof David James and Dr Karen Wood.

IET 2016 **Guy-Bart Stan**, *Foundational methods and automatic cellular control techniques for synthetic biology*, IET/SynbiCITE Engineering Biology Workshop, IET London, Savoy Place, 5 April 2016.

Warwick 2016 **Guy-Bart Stan**, *Improving Robustness and Performance of Engineered Cells via Biomolecular Feedback Design in a Whole-Cell Context*, School of Engineering, University of Warwick, March 18, 2016.
Invited by Dr Vishwesh Kulkarni and Prof Declan Bates.

Cambridge Synthetic Biology Society 2016 **Guy-Bart Stan**, *Synthetic biology design and control: taking into account shared cellular resources*, Cambridge University Synthetic Biology Society, March 3, 2016.
Invited Inaugural Talk, Invited by Atti English.

KTN-DSTL SynBio Robotics and Automation 2016 **Guy-Bart Stan**, *Control, Robotics and Automation in Synthetic Biology*, Automation and robotics for synthetic biology workshop, Manchester Institute of Biotechnology, February 25, 2016.
Invited by Dr Andy Boyce.

Edinburgh 2016 **Guy-Bart Stan**, *Design and control of synthetic biology systems at the whole-cell level*, Centre for Synthetic and Systems Biology, Kings Buildings Campus, University of Edinburgh, January 22, 2016.
Invited by Dr Filippo Menolascina and Dr Yizhi (Patrick) Cai.

Sackler Meeting 2015 **Guy-Bart Stan**, *System-Level Design and Control of Cells: Improving Performance of Engineered Cells with de novo Biomolecular Feedbacks*, **Selected Plenary Speaker** for the "Raymond and Beverly Sackler USA-UK meeting: Scientific Forum on Trends in Synthetic Biology and Gain of Function Research, and Regulatory Implications", co-organised by the Royal Society and the US National Academy of Sciences, Chicheley Hall, Chicheley, U.K., November 15-17, 2015.
Invited by Dr Franck Fourniol.

Paris ENS 2015 **Guy-Bart Stan**, *System-Level Design and Control of Cells: Considerations to Engineer Cells with Better Performance*, **Selected Plenary Speaker** at the "Design, Optimization and Control in Systems and Synthetic Biology" international workshop, École Normale Supérieure, Paris, France, November 12-13, 2015.
Invited by Dr Gregory Batt.

Imperial Alumni Event Beijing 2015 **Guy-Bart Stan**, *Programming and Controlling Life*, **Selected Plenary Speaker** for an Invited Talk at the Imperial Alumni Event, Beijing, China, 12 September 2015. The Imperial Alumni Event was organised and lead by Imperial College's President Office and is personally with Prof Alice Gast, President of Imperial College London.
Invited by Imperial College President's Office.

World Economic Forum, Summer Event 2015 **Guy-Bart Stan**, *Programming and Controlling Life*, **Selected Plenary Speaker** for an Invited Talk at the World Economic Forum in Dalian, China, 9-11 September 2015. The Imperial relationship with the World Economic Forum is led from the President's office and is personally with Prof Alice Gast, President of Imperial College London.
Invited by Imperial Tech Foresight.

BBN Technologies 2015 **Guy-Bart Stan**, *Systems and Control Engineering of Cells for Robust and Efficient Synthetic Biology: Feedback Considerations to Engineer Cells with Better Performance*, BBN Technologies, Cambridge, MA, USA, September 3, 2015.
Invited by Dr Jacob Beal.

MIT MechE 2015 **Guy-Bart Stan**, *Systems and Control Engineering of Cells for Robust and Efficient Synthetic Biology: Feedback Considerations to Engineer Cells with Better Performance*, MIT Department of Mechanical Engineering, Del Vecchio's Group Seminar, Massachusetts Institute of Technology, Cambridge, MA, USA, August 25, 2015.
Invited by Prof Domitilla del Vecchio.

MIT Synthetic Biology Center 2015 **Guy-Bart Stan**, *Systems and Control Engineering of Cells for Robust and Efficient Synthetic Biology: Feedback Considerations to Engineer Cells with Better Performance*, MIT Synthetic Biology Center, Massachusetts Institute of Technology, Cambridge, MA, USA, August 13, 2015.
Invited by Prof Tim Lu.

Microbial Engineering Forum 2015 **Guy-Bart Stan**, *Systems and Control Engineering of Cells for Robust and Efficient Synthetic Biology: Feedback Considerations to Engineer Cells with Better Performance*, Microbial Engineering Forum, Imperial College London, June 17, 2015.
Invited by Dr Patrik Jones.

Paris-Diderot 2015 **Guy-Bart Stan**, *Systems and control engineering for robust and efficient synthetic biology: feedback considerations to engineer cells with higher genetic stability*, Laboratoire Matière et Systèmes Complexes, University Paris-Diderot, Paris, France, June 8, 2015.
Invited by Dr Pascal Hersen.

Ecology and Evolution Seminar Series 2015
Guy-Bart Stan, *Systems and control engineering for robust and efficient synthetic biology: feedback considerations to engineer cells with higher genetic stability*, Ecology and Evolution Seminar Series, Imperial College London, Silwood Park Campus, February 20, 2015.
Invited by Dr Oliver Windram.

EPSRC Fellowship Inaugural Lecture 2014
Guy-Bart Stan, invited **Plenary Speaker, Inaugural Lecture**, *EPSRC Fellowships for Growth: Systems and Control Engineering Framework for Robust and Efficient Synthetic Biology*, Prince Philip House, London, July 29, 2014.
Invited by Dr Richard Gunn.

Evry 2014
Guy-Bart Stan, *Taking a Systems and Control Engineering Approach in Synthetic Biology*, invited **Plenary Speaker**, "Advances in Systems and Synthetic Biology: Modelling Complex Biological Systems in the Context of Genomics", Evry'14 Thematic Research School, Genopole, Evry, France, March 24-28, 2014.
Invited by Prof François Kepes.

DSTL 2014
Ollie Wright, **Guy-Bart Stan**, Tom Ellis, *Engineered security systems for environmental synthetic biology*, Interdisciplinary Joint Synthetic Biology Initiative Presentation Day, DSTL Headquarters, Porton Down, Salisbury, February 5, 2014.
Invited by Simeon Springer.

SEB 2014
Guy-Bart Stan, *Systems and feedback control engineering approaches to synthetic biology*, invited **Plenary Speaker**, "SEB Symposium for Synthetic Biology", Society for Experimental Biology (SEB), Charles Darwin House, London, January 8-10, 2014.
Invited by Prof John Love.

Warwick 2013
Guy-Bart Stan, *Synthetic gene circuits for robust metabolic control: design constraints and noise propagation*, invited **Plenary Speaker**, "Towards Next Generation Synthetic Biology" international workshop, University of Warwick, UK, November 21-22, 2013.
Invited by Prof Orkun Soyer.

Sheffield 2013
Guy-Bart Stan, *Control of Synthetic Biology Systems: Model-Based and Data-Driven approaches*, Departmental seminar, Department of Automatic Control & Systems Engineering, University of Sheffield, UK, October 23, 2013.
Invited by Dr Paul Trodden.

Franco-British SynBio Symposium 2013
Guy-Bart Stan, *Synthetic gene circuits for robust metabolic control: a systems and control engineering approach*, invited **Plenary Speaker**, Franco-British bilateral symposium on synthetic biology, French Embassy in London, Residence of France, Kensington Palace Gardens, London, UK, October 17-18, 2013.
Invited by Claire Mouchot.

SB6.0 2013
Guy-Bart Stan, *Control Engineering Synthetic Biology*, invited **Plenary Speaker**, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology. Imperial College London, UK, July 9-11, 2013.

GARNet 2013
Guy-Bart Stan, *Taking a Forward-Engineering Approach to the Design of Synthetic Biology Systems*, invited **Plenary Speaker**, GARNet Synthetic Biology Workshop, University of Nottingham, UK, May 21-22, 2013.
Invited by Dr Ruth Bastow and Dr Charis Cook.

Valencia 2013
Guy-Bart Stan, *Design, Optimisation and Control in Systems and Synthetic biology*, invited **Plenary Speaker**, "XI Simposio cea de Ingeniería de Control: Automática y Biología celular: una combinación emergente", Universitat Politècnica de Valencia, Valencia, Spain, April 10-11, 2013.
Invited by Prof Jesús Andrés Picó Marco.

Reading 2013
Guy-Bart Stan, *Taking a Systems Control Approach in Biology: exogenous and endogenous control of biological systems*, Departmental seminar, Department of Mathematics and Statistics, University of Reading, March 20th, 2013.
Invited by Dr Marcus Tindall.

Exeter 2012
Guy-Bart Stan, *Design constraints for engineered robust genetic control of metabolic networks*, invited **Plenary Speaker**, "Respecting Complexity: New Methods and Concepts for a More Robust Synthetic Biology" international workshop, University of Exeter, December 13-14, 2012.
Invited by Prof Ken Haynes.

Paris ENS 2012
Guy-Bart Stan, *Taking a Systems Control Approach in Biology*, invited **Plenary Speaker**, "Design, optimization and control in systems and synthetic biology" international workshop, École Normale Supérieure, Paris, June 11-12, 2012.
Invited by Dr Grégory Batt.

CSynBI SynBio Forum 2012 **Guy-Bart Stan**, *Modelling and Control for Synthetic Biology*, Synthetic Biology Forum, Imperial College, Department of Bioengineering, Centre for Synthetic Biology and Innovation, London, U.K., May 17th, 2012.

Exeter 2012 **Guy-Bart Stan**, *Taking a Systems Control Approach in Biology: exogenous data-based optimal control of synthetic gene circuits*, invited **Plenary Speaker**, "Robustness in Biology and Engineering" workshop, University of Exeter, March 16th, 2012.
Invited by Dr Orkun Soyer.

Imperial College Bioeng 2012 **Guy-Bart Stan**, *Taking a Systems Control Approach in Biology*, Imperial College London, Departmental seminar, Department of Bioengineering, March 7th, 2012.
Invited by Dr Massimo Marenzana and Dr Carsten Mehring.

U. Oxford 2012 **Guy-Bart Stan**, *Data-based optimal control of biological systems*, University of Oxford, Departmental seminar, Department of Engineering Science, January 30th, 2012.
Invited by Dr Antonis Papachristodoulou.

SBOL workshop 2012 **Guy-Bart Stan**, *Design exchange standards in synthetic biology*, 6th Synthetic Biology Open Language (SBOL) workshop, Foege Building, University of Washington, Seattle, WA, USA, January 5-6, 2012.
Invited by Prof Herbert Sauro

CCBI 2011 **Guy-Bart Stan**, *Data-based optimal control of biological systems*, invited **Plenary Speaker**, Cambridge Computational Biology Institute Annual Symposium, September 29th, 2011.
Invited by Dr Gos Micklem.

CSynBI visit by Imperial College Rector 2011 **Guy-Bart Stan**, *Modelling applied to Synthetic Biology*, talk given for the visit of the Centre for Synthetic Biology and Innovation by Prof Sir Keith O'Nions, Rector of Imperial College London, July 1st, 2011.

CSynBI workshop at LSE 2011 **Guy-Bart Stan**, *The role of modelling in adopting a forward-engineering approach to the design of synthetic biology systems*, invited **Plenary Speaker**, CSynBI Workshop, Historical, Social and Philosophical Aspects of Modelling and their implications for synthetic biology, London School of Economics, June 28th, 2011.
Invited by Prof Nikolas Rose.

BCANM "Making it Real" 2011 **Guy-Bart Stan**, *Taking a Systems Control Approach in Synthetic Biology*, Bristol Centre for Applied Nonlinear Mathematics (BCANM), Departmental seminar, Engineering Mathematics Department, University of Bristol, February 11th, 2011.
Invited by Prof Mario di Bernardo and Dr Mathieu Desroches.

SBOL workshop 2011 **Guy-Bart Stan**, *Efforts in developing standards and CAD tools for Synthetic Biology at Imperial College London: The SynBIS Information System*, 4th Synthetic Biology Open Language (SBOL) workshop, The Inn at Virginia Tech, Blacksburg, Virginia, USA, January 7-10, 2011.
Invited by Prof Herbert Sauro and Michal Galdzicki.

Autumn SSB Symposium 2010 **Guy-Bart Stan**, *Taking a Systems Control Approach in Synthetic Biology*, invited **Plenary Speaker**, Autumn Symposium of the Institute of Systems and Synthetic Biology, Imperial College, London, U.K., November 10-11, 2010.
Invited by Prof Richard Kitney.

CSynBI Industry Day 2010 **Guy-Bart Stan**, *Modelling Synthetic Biology*, Centre for Synthetic Biology and Innovation Industry Day, Imperial College, Department of Bioengineering, London, U.K., June 8th, 2010.

Imperial College Biomaths 2010 **Guy-Bart Stan**, *Clinical-data-based optimal Structured Treatment Interruption strategies for HIV: a reinforcement learning approach*, Biomathematics seminar series, Imperial College, Departmental seminar, Department of Mathematics, London, U.K., March 8th, 2010.
Invited by Dr Vahid Shahrezaei.

CSynBI SynBio Club 2010 **Guy-Bart Stan**, *Developing a registry of standard, composable models*, Synthetic Biology Club, Imperial College, Department of Bioengineering, Centre for Synthetic Biology and Innovation, London, U.K., March 3rd, 2010.

KTK Stuttgart 2009 **Guy-Bart Stan**, *Clinical-data-based optimal Structured Treatment Interruption strategies for HIV: a reinforcement learning approach*, Kolloquium Technische Kybernetik, Institute for Systems Theory and Automatic Control, University of Stuttgart, Germany, November 17th, 2009.
Invited by Prof Christian Ebenbauer.

U. Kent 2009 **Guy-Bart Stan**, *A vision for bridging the gaps between engineering and biological sciences*, University of Kent, Canterbury, U.K., September 2nd, 2009.
Invited by Prof Sarah Spurgeon, Head of the School of Engineering and Digital Arts.

U. Liège 2008 **Guy-Bart Stan**, *Improving collective behaviour coordination and consensus with predictive mechanisms*, Departmental seminar, Department of Electrical Engineering, Univ. of Liège, Belgium, November 29th, 2008.
Invited by Prof Rodolphe Sepulchre.

Hamilton Institute 2008 **Guy-Bart Stan**, *Global analysis and synthesis of networks of oscillators: a dissipativity approach*, The Hamilton Institute, National University of Ireland Maynooth, Ireland, June 25th, 2008.
Invited by Dr Mark Verwoerd and Prof Rick Middleton.

U. Cambridge 2007 **Guy-Bart Stan**, *Clinical data based optimal STI strategies for HIV: a reinforcement learning approach*, University of Cambridge, Department of Engineering, Machine Learning Group, U.K., November 21st, 2007.
Invited by Dr Carl Edward Rasmussen.

U. Southampton 2007 **Guy-Bart Stan**, *Clinical data based optimal STI strategies for HIV: a reinforcement learning approach*, University of Southampton, Departmental seminar, Department of Electronics and Computer Science, ISIS group, U.K., October 18th, 2007.
Invited by Dr Ivan Markovsky.

Supelec 2007 **Guy-Bart Stan**, *Global analysis and synthesis of limit cycles: a dissipatitivity approach*, Laboratoire des Signaux et Systèmes, Supelec, Gif-sur-Yvette, France, May 25th, 2007.
Invited by Dr Romeo Ortega.

UCLouvain SESAME 2007 **Guy-Bart Stan**, *Clinical data based optimal STI strategies for HIV: a reinforcement learning approach*, Université Catholique de Louvain (UCL), Departmental seminar, SESAME, Louvain-la-Neuve, Belgium, April 17th, 2007.
Invited by Dr Pierre-Antoine Absil.

U. Groningen 2006 **Guy-Bart Stan**, *Global analysis and synthesis of limit cycles: a dissipativity approach*, University of Groningen, Departmental seminar, Department of Mathematics, The Netherlands, October 19th, 2006.
Invited by Prof Arjan Van der Schaft.

Imperial College London 2006 **Guy-Bart Stan**, *Global analysis and synthesis of limit cycles: a dissipativity approach*, Imperial College London, Department of Engineering, Power Systems and Control Group, U.K., October 11th, 2006.
Invited by Prof George Weiss.

TU Eindhoven 2006 **Guy-Bart Stan**, *Global analysis and synthesis of limit cycles: a dissipativity approach*, Eindhoven University of Technology, Department of Industrial Design, Designed Intelligence group, The Netherlands, September 1st, 2006.
Invited by Prof G.W.M. Rauterberg.

U. Cambridge 2006 **Guy-Bart Stan**, *Global analysis and synthesis of limit cycles: a dissipativity approach*, University of Cambridge, Departmental seminar, Department of Engineering, U.K., May 18th, 2006.
Invited by Dr Andrea Lecchini-Visintini.

U. Liège 2001 **Guy-Bart Stan**, *Recurrent networks and reinforcement learning*, University of Liège, Belgium, November 19th, 2001.

U. Liège 2001 **Guy-Bart Stan**, *Dynamic programming*, University of Liège, Belgium, June 6th, 2001.

U. Liège 2001 **Guy-Bart Stan**, *Optimal control of discrete systems*, University of Liège, Belgium, April 19th, 2001.

ITA Aachen 2000 **Guy-Bart Stan**, *Implementation and comparison of different impulse response measurement techniques*, Institut für Technische Akustik, Aachen, Germany, November 24th, 2000.
Invited by Prof Michael Vorländer.

ABAV 2000 **Guy-Bart Stan**, *Implémentation et comparaison de différentes méthodes d'obtention de la réponse impulsionnelle d'un espace acoustique pour l'auralisation*, Association Belge des Acousticiens (ABAV), Liège, Belgium, May 25th, 2000.
Invited by Prof Jean-Jacques Embrechts.

Posters

Next-Gen SynBio 2024 Eszter Csibra, **Guy-Bart Stan**, *Absolute protein counting across the visible spectrum*, 5th Next-Generation Synthetic Biology Conference, Ghent, Belgium, 10-11 December 2024.

SBUK 2024 Eszter Csibra, **Guy-Bart Stan**, *Absolute protein counting across the visible spectrum*, Synthetic Biology UK Conference 2024, Hinxton Hall, Cambridge, U.K., 27-28 November 2024.

Biocontrol Workshop 2024 Eszter Csibra, **Guy-Bart Stan**, *Absolute protein counting across the visible spectrum*, Workshop on Control of Biological Systems, Online, 13 November 2024.

IMSE EngBio 2024 Kathakali Sarkar, Eszter Csibra, Francesca Ceroni, and Rodrigo Ledesma Amaro, **Guy-Bart Stan**, *A dual-function bacterial secretion tool derived from a natural translational regulator*, IMSE Engineering Biology Symposium, Imperial College London, 28 June 2024.

Cell mimicry 2022 Javier Cabello-Garcia, Rakesh Mukherjee, **Guy-Bart Stan**, Thomas Ouldridge, *Enzyme-free catalytic templating of DNA complexes with reduced product inhibition*, Cell mimicry: bottom-up engineering of life, Royal Society, London, U.K., 7-8 November 2022.

EIMC 2021 Lea Bernier, Pilar Junier, **Guy-Bart Stan**, Claire Stanley, *BACTERIA-ON-A-CHIP: Deciphering the responsiveness of bacteria using microfluidic chemostats*, Emerging Investigators in Microfluidics Conference (EIMC), Online, 20-21 July, 2021.

Microbiology Society Annual Conference 2021 Eszter Csibra, **Guy-Bart Stan**, *Beyond fluorescein: Use of fluorescent protein calibrants for direct and absolute quantification of protein production in synthetic biology*, Microbiology Society 2021 Annual Conference, Microbial biotechnology session, Online, 26-30 April, 2021.

Workshop on SynBioNanotech 2021 Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *In situ generation of RNA complexes for synthetic molecular strand displacement circuits in autonomous system*, Workshop on Nucleic Acids, Synthetic Biology and Artificial Cells, Online, 29-31 March, 2021.

Workshop on SynBioNanotech 2021 Javier Cabello Garcia, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Enzyme-free autonomous catalytic templating of DNA complexes far-from- equilibrium*, Workshop on Nucleic Acids, Synthetic Biology and Artificial Cells, Online, 29-31 March, 2021.

Synthetic Biology UK 2019 Alice Boo, Wooli Bae, Rodrigo Ledesma-Amaro, **Guy-Bart Stan**, *An Investigation into Ratiometric Control for Synthetic Ecosystems*, Synthetic Biology UK Conference, University of Warwick, 9-10 December, 2019. **Best Poster Award**.

Control Engineering Synthetic Biology Workshop 2019 Alice Boo, Rodrigo Ledesma-Amaro, **Guy-Bart Stan**, *An Investigation into Ratiometric Control for Synthetic Ecosystems*, International Workshop on Control Engineering and Synthetic Biology, Worcester College, University of Oxford, U.K., 9-11 September, 2019.

Control Engineering Synthetic Biology Workshop 2019 Alicia Climent-Catala, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Collective control of transcription using RNA polymerase inhibitory aptamers*, International Workshop on Control Engineering and Synthetic Biology, Worcester College, University of Oxford, U.K., 9-11 September, 2019.

Control Engineering Synthetic Biology Workshop 2019 Shivang Joshi, **Guy-Bart Stan**, *A novel dBroccoli RNA reporter-based monitor to quantify in vivo transcriptional capacity in Escherichia coli*, International Workshop on Control Engineering and Synthetic Biology, Worcester College, University of Oxford, U.K., 9-11 September, 2019.

Control Engineering Synthetic Biology Workshop 2019 Nicolas Kylilis, **Guy-Bart Stan**, *Autonomously controlled and host-aware recombinant gene expression through plasmid copy number modulation*, International Workshop on Control Engineering and Synthetic Biology, Worcester College, University of Oxford, U.K., 9-11 September, 2019.

Control Engineering Synthetic Biology Workshop 2019 Ismael Mullor-Ruiz, Wooli Bae, **Guy-Bart Stan**, Thomas Ouldridge, *Implementation of information transduction networks in reversible DNA reactions*, International Workshop on Control Engineering and Synthetic Biology, Worcester College, University of Oxford, U.K., 9-11 September, 2019.

IWBDA 2019 Duncan Ingram, Mark Isalan, **Guy-Bart Stan**, *Mutation of synthetic constructs in E. coli*, 11th International Workshop on BioDesign Automation, University of Cambridge, Cambridge, U.K., 8-10 July, 2019. **Best Poster Award**.

INCOME 2018 Zoltan Tuza, **Guy-Bart Stan**, *Computing Biologically Relevant CRN Structures Using Time-Series Data*, Integrative Collaborative Modelling in Systems Medicine, Bernried, Lake Starnberg, Germany, 15-19 October, 2018.

Synthetic Biology UK 2018 Alice Boo, Rodrigo Ledesma-Amaro, **Guy-Bart Stan**, *An Investigation on the Construction of Synthetic Ecosystems*, Synthetic Biology UK Conference, University of Bristol, 19-20 November, 2018. **Runner-Up for Best Poster Award**.

Synthetic Biology UK 2018 Duncan Ingram, Mark Isalan, **Guy-Bart Stan**, *Improving synthetic construct design in E. coli: a new algorithm for sequence annotation*, Synthetic Biology UK Conference, University of Bristol, 19-20 November, 2018.

Synthetic Biology UK 2017 Olivier Borkowski, Carlos Bricio Garberi, Michaela Murgiano, **Guy-Bart Stan**, Tom Ellis *Cell-free prediction of protein expression costs for growing cells*, Synthetic Biology UK Conference, Manchester Conference Centre, Manchester, 27-18 November, 2017.

Synthetic Biology UK 2017 Nicolas Kylilis, **Guy-Bart Stan**, Karen M. Polizzi, *Tools for engineering synthetic consortia with coordinated system behaviour*, Synthetic Biology UK Conference, Manchester Conference Centre, Manchester, 27-18 November, 2017.

Control Engineering Synthetic Biology Workshop 2017 Vasily A. Shenshin, Marius Rebmann, Kealan Exley, Paul S. Freemont, Richard I. Kitney, **Guy-Bart Stan**, Karen M. Polizzi, *Population control of co-cultured microorganisms using RNA regulation*, International Workshop on Control Engineering and Synthetic Biology, Royal Academy of Engineering, Prince Philip House, London, 17-18 July, 2017.

Control Engineering Synthetic Biology Workshop 2017 Olivier Borkowski, **Guy-Bart Stan**, Tom Ellis, *Prediction of host-circuit interactions using cell lysate*, International Workshop on Control Engineering and Synthetic Biology, Royal Academy of Engineering, Prince Philip House, London, 17-18 July, 2017.

Control Engineering Synthetic Biology Workshop 2017 Ismael Mullor-Ruiz, **Guy-Bart Stan**, Thomas Ouldridge, *Design and development of DNA-based Push-Pull reaction networks*, International Workshop on Control Engineering and Synthetic Biology, Royal Academy of Engineering, Prince Philip House, London, 17-18 July, 2017.

SB 7.0 2017 Ari Dwijayanti, Marko Storch, **Guy-Bart Stan**, Geoff Baldwin, *Making sense of antisense RNA: Engineering modular antisense RNAs for predictable gene silencing*, The Seventh International Meeting on Synthetic Biology (SB 7.0), National University of Singapore, Singapore, 13-16 June, 2017.

SB 7.0 2017 Matthew Haines, Diego Oyarzún, **Guy-Bart Stan**, Geoff Baldwin, *A decoupled and automatable in vitro selection for ribozyme engineering*, The Seventh International Meeting on Synthetic Biology (SB 7.0), National University of Singapore, Singapore, 13-16 June, 2017.

Imperial College Engineering Biology Showcase 2017 Matthew Haines, Diego Oyarzún, **Guy-Bart Stan**, Geoff Baldwin, *A decoupled and automatable in vitro selection for ribozyme engineering*, Imperial College London Engineering Biology Showcase, Imperial College, London, 6 June, 2017.

Synthetic Biology UK 2016 Marios Tomazou, **Guy-Bart Stan**, *Protease-based feedback for overcoming growth rate and enzymatic queueing limitations*, UK Synthetic Biology Conference 2016, Dynamic Earth, Edinburgh, UK, 14-16 November, 2016.

Synthetic Biology UK 2015 Francesca Ceroni, Rhys Algar, **Guy-Bart Stan**, Tom Ellis, *Host cell response to heterologous gene expression in Synthetic Biology*, UK Synthetic Biology Conference 2015, Kingsway Hall Hotel, London, UK, 1-3 September, 2015 (Poster and Selected Flash Presentation).

DSTL 2014 Ollie Wright, **Guy-Bart Stan**, Tom Ellis, *OMG, GMO: Intrinsic biosafety for the here and now*, Interdisciplinary Joint Synthetic Biology Initiative Presentation Day, DSTL Headquarters, Porton Down, Salisbury, February 5, 2014.

IPISB 2013 Diego Oyarzún, Jean-Baptiste Lugagne, **Guy-Bart Stan**, *Molecular noise in metabolic reactions under transcriptional regulation*, Workshop on Information, probability and inference in systems biology (IPISB), Edinburgh, UK, July 15-17, 2013.

IPISB 2013 Aivar Sootla, Natalja Strelkowa, Damien Ernst, Mauricio Barahona, **Guy-Bart Stan**, *Data-based optimal control of gene regulatory networks*, Workshop on Information, probability and inference in systems biology (IPISB), Edinburgh, UK, July 15-17, 2013.

IPISB 2013 Wei Pan, Tom Ellis, **Guy-Bart Stan**, *Convex Relaxation for Model Selection*, Workshop on Information, probability and inference in systems biology (IPISB), Edinburgh, UK, July 15-17, 2013.

SB6.0 2013 Jordan Ang, David McMillen, Karen Polizzi, **Guy-Bart Stan**, *Using populations of engineered cells to regulate extracellular chemical concentrations*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Aivar Sootla, Natalja Strelkowa, Damien Ernst, Mauricio Barahona, **Guy-Bart Stan**, *Data-based optimal control of gene regulatory networks*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Diego Oyarzún, **Guy-Bart Stan**, *Dynamic regulation of metabolic pathways with synthetic gene control circuits*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Wei Pan, Tom Ellis, **Guy-Bart Stan**, *Convex Optimisation for Automatic Reconstruction and Design of Biochemical Reaction Networks*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Marios Tomazou, **Guy-Bart Stan**, Karen Polizzi, Mauricio Barahona, *Towards light based dynamic control of synthetic biological networks*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Oliver Wright, **Guy-Bart Stan**, Tom Ellis, *OMG GMO: intrinsic biosafety for the here and now*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Francesca Ceroni, **Guy-Bart Stan**, Tom Ellis, *Stressed-out by too much work. The cellular response to synthetic biology*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Rhys Algar, **Guy-Bart Stan**, Tom Ellis, *Synthetic Biology - a heavy burden to bear?*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 James Arpino, Edward Hancock, Ye Yuan, **Guy-Bart Stan**, Karen Polizzi, Antonis Papachristodoulou, *Control Engineering Inspired Design Tools for Synthetic Biology*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Felix Jonas, **Guy-Bart Stan**, Karen Polizzi, *Population Heterogeneity during Adaptation*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Michal Galdzicki, Matthew Pocock, Mandy Wilson, Ernst Oberortner, Jackie Quinn, Aaron Adler, Bryan Bartley, Jacob Beal, Swapnil Bhatia, Deepak Chandran, Joanna Chen, Douglas Densmore, Drew Endy, John H. Gennari, Raik Gruenberg, Jennifer Hallinan, Nathan Hillson, Cassie Huang, Jeffrey Johnson, Goksel Misirli, Chris J. Myers, Jean Peccoud, Hector Plahar, Cesar A. Rodriguez, Nicholas Roehner, Evren Sirin, **Guy-Bart Stan**, Anil Wipat, Fusun Yaman, Herbert M. Sauro, *The Synthetic Biology Open Language Standard: Sharing Design Information in Synthetic Biology*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

SB6.0 2013 Jacqueline Quinn, Jacob Beal, Swapnil Bhatia, Patrick Cai, Joanna Chen, Kevin Clancy, Robert Sidney Cox, Michal Galdzicki, Nathan Hillson, Akshay Maheshwari, Chris Myers, Umesh P, Matthew Pocock, Cesar Rodriguez, Herbert Sauro, Larisa Soldatova, **Guy-Bart Stan**, Mandy Wilson, Drew Endy, *Synthetic Biology Open Language Visual: An Open-Source Graphical Notation for Synthetic Biology*, BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology, Imperial College London, UK, July 9-11, 2013.

Decision-Making in Nature 2013 Aivar Sootla, Natalja Strelkowa, Damien Ernst, Mauricio Barahona, **Guy-Bart Stan**, *Regulation and reference tracking in gene regulatory networks based on reinforcement learning*, Workshop on Decision Making in Nature, Imperial College London, UK, May 2-4, 2013.

Decision-Making in Nature 2013 Wei Pan, **Guy-Bart Stan**, *Reconstruction of Complex Dynamical Networks*, Workshop on Decision Making in Nature, Imperial College London, UK, May 2-4, 2013.

EMBO workshop 2012 Felix Jonas, **Guy-Bart Stan**, Karen Polizzi, *Controlled ER inheritance is sufficient to explain UPR dynamics during inositol starvation*, EMBO Course, Workshops and Conference series: The Physiology of the Endoplasmic Reticulum (ER): Function and Dysfunction, Melia Golf Vichy Catalan Hotel, Caldes de Malavella, Girona, Spain, October 15-19, 2012.

Microsoft Research 2012 Wei Pan, Ye Yuan, **Guy-Bart Stan**, *Reconstruction of Complex Dynamical Networks*, Microsoft Research Summer School 2012, Microsoft Research, Cambridge, U.K., July 2-6, 2012.

enGENEious 2012 Diego Oyarzún, **Guy-Bart Stan**, *Foundational theory in genetic circuit design for metabolic control* enGENEious: Evolving Life for Future Technologies, Christ Church College, University of Oxford, June 25-26, 2012.

enGENEious 2012 Rhys Algar, Tom Ellis, **Guy-Bart Stan**, *Understanding and predicting the interactions between a synthetic gene circuit and its chassis cell* enGENEious: Evolving Life for Future Technologies, Christ Church College, University of Oxford, June 25-26, 2012.

RoSBNet 2011 Natalja Strelkowa, **Guy-Bart Stan**, Damien Ernst, Mauricio Barahona, *Control Strategies for Genetic Networks*, 3^{rd} RoSBNet Synthetic Biology Workshop 2011, St Anne's College, University of Oxford, July 20-22, 2011.

RoSBNet 2011 Diego Oyarzún, **Guy-Bart Stan**, *Transcriptional control circuits for metabolic demands*, 3^{rd} RoSBNet Synthetic Biology Workshop 2011, St Anne's College, University of Oxford, July 20-22, 2011.

RoSBNet 2011 Marios Tomazou, Karen Polizzi, **Guy-Bart Stan**, Mauricio Barahona, *Towards Light Based Dynamic Control of Synthetic Biological Systems*, 3^{rd} RoSBNet Synthetic Biology Workshop 2011, St Anne's College, University of Oxford, July 20-22, 2011.

RoSBNet 2011 Rhys Algar, **Guy-Bart Stan**, Tom Ellis *Too much synthetic biology? Quantifying and modelling device-imposed burden on E.coli chassis*, 3^{rd} RoSBNet Synthetic Biology Workshop 2011, St Anne's College, University of Oxford, July 20-22, 2011.

SB 5.0 2011 Michal Galdzicki, Laura Adam, J. Christopher Anderson, Deepak Chandran, Douglas Densmore, Drew Endy, John H. Gennari, Raik Gruenberg, Timothy Ham, Matthew Lux, Akshay Maheshwari, Barry Moore, Chris J. Myers, Jean Peccoud, Cesar A. Rodriguez, Nicholas Roehner, **Guy-Bart Stan**, Mandy Wilson, Herbert M. Sauro, *Synthetic Biology Open Language: A standardized information exchange framework for synthetic biologists*, the Fifth International Meeting on Synthetic Biology (SB 5.0), Stanford University, Stanford, USA, June 15-17, 2011.

SB 5.0 2011 Richard Kitney, **Guy-Bart Stan**, Dineka Khurmi, Vinod Tek, Christopher Hirst, *A web-based Information System for Synthetic Biology (SynBIS)*, the Fifth International Meeting on Synthetic Biology (SB 5.0), Stanford University, Stanford, USA, June 15-17, 2011.

Genopole 2010 Rhys Algar, Tom Ellis, **Guy-Bart Stan**, *Too much synthetic biology? Quantifying and modelling device-imposed burden on E.coli chassis*, International Conference on Synthetic Biology: "Bottom-up, Top-Down and Cell-Free approaches, Intellectual Property Issues", Genopole, Evry, France, December 15-16, 2010.

RoSBNet 2010 Neil Dalchau, Katharine E. Hubbard, Carlos T. Hotta, Fiona C. Robertson, Helen M. Briggs, **Guy-Bart Stan**, Jorge M. Gonçalves, Alex A.R. Webb, *Correct biological timing in Arabidopsis requires multiple light signaling pathways*, 2^{nd} RoSBNet Synthetic Biology Workshop 2010, St Anne's College, University of Oxford, July 12-14, 2010.

RoSBNet 2010 Natalja Strelkowa, **Guy-Bart Stan**, Damien Ernst, Mauricio Barahona, *Application of optimal feedback control to genetic networks*, 2^{nd} RoSBNet Synthetic Biology Workshop 2010, St Anne's College, University of Oxford, July 12-14, 2010.

CSynBI 2009 Ye Yuan, **Guy-Bart Stan**, Jorge Gonçalves, *Biological network reconstruction from data*, Autumn Symposium of the Institute of Systems and Synthetic Biology, Imperial College Business School, London, November 11-12, 2009. **3rd prize for the best poster award.**

Wellcome Trust 2009 Ye Yuan, **Guy-Bart Stan**, Jorge Gonçalves, *Biological network reconstruction from data*, Joint Cold Spring Harbor Laboratory/Wellcome Trust Conference, "Engineering Principles in Biological Systems", Wellcome Trust Genome Campus, Hinxton, U.K., October 14-16, 2009.

Microsoft Research 2009 Adrian A. Salinas-Varela, **Guy-Bart Stan**, Jorge Gonçalves *Analysis of piecewise linear feedback systems*, Microsoft Research Summer School 2009, Microsoft Research, Cambridge, U.K., 29 June - 3 July, 2009.

IAP 2003 **Guy-Bart Stan**, *Input-output tools for the analysis of limit cycles*, Study day of the Inter-University Attraction Poles (IAP), ESAT, KUL, Heverlee, Belgium, May 8th, 2003.

Panels, Editorial Boards, Events Organisation, Journal, Conference, and Grant Reviews

Advisory Boards

1. Feb 2023 – Feb 2024: Scientific Advisor to EdenBio Ltd., `https://eden.bio`.
2. Oct 2017 – March 2024: Member of the Institute of Chemical Biology Research Board.
3. Oct 2020 – Oct 2022: International Member of the External Advisory Board for the EU "HORIZON 2020 – 2nd OPPORTUNITY" project OPPORTUNITY/0916/MSCA/0021: "Cellular processes and resources allocation in the fast-growing bacterium *V. natriegens* and their application for the design of efficient synthetic microbial strains (SpeedyMicrobesSYNBIO)".
4. 2013 – 2016: Primary Academic Member of the External Advisory Board for the ≈1.6M EPSRC project EP/I031642/1: "ROADBLOCK: Towards Programmable Defensive Bacterial Coatings & Skins".

IEEE CSS Technical Committee Member

Member of the IEEE Control Systems Society Technical Committee on "Systems and Synthetic Biology" since Jan 2015. `http://systems-biology.ieeecss.org/tc-systems-biology/tc-members`.
Invited by Prof Bayu Jayawardhana.

International Program Committee member

International Program Committee member for conferences: "2nd IFAC Conference on Analysis and Control of Chaotic Systems, Chaos09", Queen Mary, University of London, 22-24 June, 2009.
"6th International Workshop on Bio-Design Automation (IWBDA 2014)", Boston, USA, 11-12 June, 2014.
"7th International Workshop on Bio-Design Automation (IWBDA 2015)", Seattle, USA, 20-21 Aug, 2015.
"8th International Workshop on Bio-Design Automation (IWBDA 2016)", Newcastle, U.K., 16-18 Aug, 2016.
"6th International Conference Foundations of Systems Biology in Engineering (IFAC FOSBE 2016)", Otto-von-Guericke University and the Max Planck Institute, Magdeburg, Germany, 9-12 Oct 2016.

Athena Swan Workgroup

Member of the Departmental Athena Swan Self-Assessment Team, 2015-2019. Over this period the Department of Bioengineering was awarded successively Bronze and Silver status.

EDCC Committee

Member of the Equality and Departmental Culture Committee, 2015-2019.

Panel member

1. Member of the selection and interviewing panel for two Lecturer positions in "Mathematical Modelling of Biological Phenomena", Department of Bioengineering, Imperial College London, Nov 2011.
2. Member of the Scientific Committee for Work Package 3 ("Community Building") of the European Research Area Network on Synthetic Biology (ERASynBio Twinning programme), EU FP7, 2012-2013.
3. Coordinator for Work Package W2b, "Standards and CAD for Synthetic Biology" of the project EPSRC EP/J02175X/1, "An infrastructure for platform technology in synthetic biology", 2012-2017.
4. EPSRC Engineering Grand Challenges Retreat, Ettington Chase, Stratford-on-Avon, 7-8 May, 2014.
5. Member of the selection and interviewing panel for four Lecturer/Senior Lecturer positions in the Department of Bioengineering, Imperial College London, Nov 2015 – Feb 2016.

Conferences, workshops and invited sessions

1. Organiser of the invited session "Control Theory in Synthetic Biology", 51st IEEE Conference on Decision and Control (IEEE-CDC 2012), Maui, Hawaii, USA, 10-13 December, 2012.
2. Co-organiser of the international workshop "Synthetic biology: containment and release of engineered micro-organisms", Council Room, King's College London, Strand Campus, London, 29 April, 2013.
3. Organiser (with Prof Antonis Papachristodoulou and Dr Edward Hancock) of the international workshop "A workshop on Control Engineering and Synthetic Biology", Worcester College, Oxford, 10-12 September, 2014.
4. Organiser (with Dr Karen Polizzi, Dr Claire Maris and Dr Jordan Ang) of the international workshop "On the Prospects for Controllable Cell-Based Therapies", City University London, 22-23 February, 2016.
5. Organiser of the invited session "Systems and Control Engineering for Synthetic Biology", 15th European Control Conference (ECC 2016), Aalborg, Denmark, June 29 - July 1, 2016.
6. Organiser (with Prof Antonis Papachristodoulou and Dr Filippo Menolascina) of the 2nd International Workshop on "Control Engineering and Synthetic Biology: What next", Royal Academy of Engineering, London, 17-18 July 2017.
7. Organiser (with Dr Geoff Baldwin) of the Launch of the expanded Imperial College Centre for Synthetic Biology, Imperial College London, 7 December 2018).
8. Organiser (with Prof Antonis Papachristodoulou and Dr Harrison Steel) of the "3rd International Workshop on Control Engineering and Synthetic Biology", Worcester College, Oxford, 9-11 September 2019.
9. Organiser (with Dr Thomas Ouldridge) of the "Online Workshop on Nucleic Acids, Synthetic Biology and Artificial Cells", Online, 29-31 March 2021.
11. Organiser (with Prof Geoff Baldwin) of the "AI-4-SynBio International Symposium", Online, 24 March 2022.

Chairman

Session chair at conferences: 24th Benelux Meeting on Systems and Control, Session "Mechanical Systems II", Houffalize, Belgium, 22-24 March, 2005; 2nd RoSBNet Synthetic Biology Workshop, St Anne's College, University of Oxford, Oxford, U.K., 12-14 July, 2010; 49th Conference on Decision and Control (IEEE CDC 2010), Session "Biological and Biomedical Systems II", Atlanta, Georgia, USA, 15-17 December, 2010; 12th European Control Conference (ECC 2013), Session "Genetic Regulatory Systems", ETH Zurich, Switzerland, 17-19 July, 2013. IET/SynbiCITE Engineering Biology Conference, The IET, Savoy Place, London, U.K., 13-15 December, 2016.

Editorial Boards	Invited Associate Editor for IET Engineering Biology since November 2016. Invited Associate Editor for the journal "Frontiers in Bioengineering and Biotechnology, Synthetic Biology" since July 2022.
Journal papers reviewer	Reviewer for international journal papers (about 10 reviews per year): "Cell", "Cell Systems", "IEEE Transactions on Automatic Control", "Automatica", "IEEE Transactions on Circuits and Systems", "Systems and Synthetic Biology Journal", "PLoS ONE", "International Journal of Control", "International Journal of Robust and Nonlinear Control", "Industrial & Engineering Chemistry Research", "IEEE/ASME Transaction on Mechatronics", "Physics Letter A", "Journal of the Royal Society Interface", "ACS Synthetic Biology", "Frontiers in Bioengineering and Biotechnology, Synthetic Biology".
Conference papers reviewer	Reviewer for international conference papers (about 10 reviews per year): "IEEE Conference on Decision and Control (CDC)", "European Control Conference (ECC)", "American Control Conference (ACC)", "International Federation of Automatic Control (IFAC)".
Funding bodies reviewer	Reviewer of proposals for various funding bodies including EPSRC, BBSRC, Wellcome Trust, "Agence Nationale de la Recherche" (French National Research Agency), and USAF AFMC AFOSR/RTD.
Ph.D. theses advisory committee member	**1.** International expert and advisory committee member for the Ph.D. thesis of Mr Jean-Baptiste Lugagne, "*Long-term and real-time control of gene expression in bacteria*", University Paris-Diderot, Paris, France, 2012-2015 (supervisors: Dr Gregory Batt and Dr Pascal Hersen). **2.** International expert and advisory committee member for the Ph.D. thesis of Mrs Eleni Karamasioti, "*Computational Prediction of DNA Hybridization Dynamics for Synthetic Biology Applications*", Department of Biosystems Science and Engineering, ETH Zurich, Switzerland, 2014-2017 (supervisor: Prof Jorg Stelling). **3.** International expert and advisory committee member for the Ph.D. thesis of Mrs Eline Bijman, "*Mathematical models to analyze and control cellular variability across generations*", Department of Biosystems Science and Engineering, ETH Zurich, Switzerland, 2020-2023 (supervisor: Prof Jorg Stelling).
Ph.D. theses examiner	**1.** External examiner for the Ph.D. thesis of Mr Jannis Uhlendorf, "*Real-time feedback control of gene expression*", University Paris-Diderot, Paris, France, 19 April, 2013 (supervisor: Dr Gregory Batt). **2.** External examiner for the Ph.D. thesis of Mrs Laura Trotta, "*Analysis of performance and robustness of biological switches: local tools for non-local dynamical phenomena*", University of Liège, Belgium, 16 September, 2013 (supervisor: Prof Rodolphe Sepulchre). **3.** External examiner for the Ph.D. thesis of Mrs Chiara Fracassi, "*Analysis and control of transcription regulatory networks in mammalian cells*", Telethon Institute of Genetics and Medicine (TIGEM), Naples, Italy, 12 January, 2015 (supervisor: Dr Diego di Bernardo). **4.** Internal examiner for the Ph.D. thesis of Mrs Elena Martinez-Klimova, "*Synthetic biology approaches to the metabolic engineering of Geobacillus thermoglucosidans for isobutanol production*", Imperial College London, 12 February, 2015 (supervisor: Dr Tom Ellis). **5.** Internal examiner for the Ph.D. thesis of Mrs Anastasia Sylaidi, "*Principles of sensorimotor control and learning in complex motor tasks*", Imperial College London, 23 November, 2015 (supervisor: Dr Aldo Faisal). **6.** External examiner for the Ph.D. thesis of Mr Anet Anelone, "*A Study of the Synergies Between Control Mechanisms in the Immune System and the Variable Structure Control Paradigm*", University of Kent, 20 December, 2016 (supervisors: Prof Sarah Spurgeon, OBE, and Dr Xinggang Yan). **7.** External examiner for the Ph.D. thesis of Mr Nils Giordano, "*Microbial growth control in changing environments*", University Grenoble Alpes, Grenoble, France, 23 March, 2017 (supervisors: Profs Hidde de Jong and Johannes Geiselmann). **8.** Internal examiner for the Ph.D. thesis of Mr Abhishek Deshpande,, "*Beyond the two-state model of switching in biology and computation*" Imperial College London, 4 June, 2018 (supervisors: Dr Thomas Ouldridge, Dr Nick Jones, Dr Manoj Gopalkrishnan). **9.** External examiner for the Ph.D. thesis of Mrs Paulina Julita Kanigowska, "*Automation-aided High-throughput Technologies for Synthetic Biology*" University of Edinburgh, 2 November, 2018 (supervisors: Profs Christopher French and Patrick Yizhi Cai). **10.** Internal examiner for the Ph.D. thesis of Mr Charles Motraghi, "*Developing a lactate-inducible transgene expression system for use in Chinese hamster ovary cells*", Imperial College London, 17 January, 2019 (supervisors: Drs Karen Polizzi and Cleo Kontoravdi). **11.** Internal examiner for the Ph.D. thesis of Mr Hamid Soleimani, "*Hardware Realisation of Nonlinear Dynamical Systems for and from Biology*" Imperial College London, 2 May, 2019 (supervisor: Prof Emmanuel Drakakis). **12.** Internal examiner for the Ph.D. thesis of Mrs Sarah Johnson, "*Immune Reactions in Lymph Nodes and Ovarian Cancer*", Imperial College London, 7 June, 2019 (supervisor: Prof James Moore). **13.** External examiner for the Ph.D. thesis of Mrs Eleni Karamasioti, "*Computational Prediction of DNA Hybridization Dynamics for Synthetic Biology Applications*", ETH Zurich, 18 June, 2019 (supervisor: Prof Jorg Stelling).

14. External examiner for the Ph.D. thesis of Mr Vittorio Bartoli, "*Tuneable Synthetic Genetic Devices: Stay Tuned*", University of Bristol, 19 June, 2020 (supervisors: Dr Thomas Gorochowski and Prof Diego di Bernardo).
15. External examiner for the Ph.D. thesis of Mr Ruud Stoof, "*Spatial modelling of transcription dynamics in bacterial gene regulatory networks*", University of Newcastle, Online, 30 October, 2020 (supervisors: Dr Angel Goni Moreno and Prof Anil Wipat).
16. Internal examiner for the Ph.D. thesis of Kenneth Walker, "*Biofabricated cellulose materials through synthetic biology*", Imperial College London, 10 June, 2021 (supervisor: Prof Thomas Ellis).
17. External expert reviewer for the Ph.D. thesis of Mrs Sara Napolitano, "*Analysis and control of biomolecular networks by microfluidics*", University of Naples, Federico II, 24 June 2021 (supervisors: Prof Diego di Bernardo).
18. Internal examiner for the Ph.D. thesis of Lucie Studena, "*Synthetic Microbial Communities and Multiplexed Metabolic Tuning by CRISPRai for Enhanced Bioproduction*", Imperial College London, 22 August, 2022 (supervisor: Prof Rodrigo Ledesma-Amaro).
19. External expert reviewer for the Ph.D. thesis of Mr Iacopo Ruolo, "*Elucidation of TFEB nuclear translocation dynamics in human cells by means of Quantitative Modelling and Microfluidics*", University of Naples, Federico II, 20 February 2023 (supervisors: Prof Diego di Bernardo).
20. External examiner for the Ph.D. thesis of Mrs Eline Bijman, "*Mathematical models to analyze and control cellular variability across generations*", ETH Zurich, Switzerland, 12 March, 2024 (supervisor: Prof Jorg Stelling).
21. External examiner for the Ph.D. thesis of Mr Armin Zand, "*Control Theoretic Approaches toward Designing Robust Biocontrollers and Biomolecular Feedback Systems*", ETH Zurich, 1 December, 2025 (supervisor: Prof Mustafa Khammash).

M.Phil. examiner — External examiner for the M.Phil. thesis of Mr Aman Sinha, "*Distributed Gaussian Process Regression in Networked Systems*", University of Cambridge, 6 October 2014 (supervisor: Dr Glenn Vinnicombe).

Visiting Scholars

Aug 2021 - Aug 2022 — Prof Mary Dunlop, visiting Professor from Boston University, Boston, USA, visiting from 1 August 2021 until 31 July 2022.

June - Aug 2013 — Prof Jesus Pico, visiting Professor from Polytechnic University of Valencia, Spain, visiting from 1 June 2013 until 31 August 2013.

Participation to National and International Conferences

Designer Biology 2019	Designer Biology International Conference, Newcastle University, 31 July - 2 August, 2019.
SynbiTECH 2019	SynbiTECH 2019, Queen Elizabeth II Centre, Westminster, London, U.K., 24-25 June, 2019.
Closing the Loop Workshop 2018	Workshop "Closing the Loop", John McIntrye Conference Centre, Edinburgh, 22-23 February, 2018.
SynBio UK 2017	Synthetic Biology UK 2017, Manchester Conference Centre, UK, 27-28 November 2017.
MBI International Workshop 2017	Control of Cellular and Molecular Systems International Workshop, Mathematical Biosciences Institute, The Ohio State University, Columbus, Ohio, USA, 2-6 October, 2017.
Control Engineering Synthetic Biology Workshop 2017	International Workshop on Control Engineering and Synthetic Biology, Royal Academy of Engineering, Prince Philip House, London, 17-18 July 2017.
SynBioBeta 2017	SynBioBeta London, Queens Tower Room and Great Hall, Imperial College London, 4-5 April, 2017.
UK-East Africa Synthetic Biology Workshop 2017	Workshop to establish UK-East-African collaborations in practical synthetic biology, Laico Hotel, Nairobi, Kenya, 15-17 March, 2017.
Royal Society 2017	International Workshop "Synthetic Biology — does industry get it?", The Royal Society, 6-9 Carlton House Terrace, London, UK, 8 February, 2017.
IET SynBio 2016	The IET/SynbiCITE Engineering Biology Conference: Synthetic Biology for manufacturing the bioeconomy, IET London, Savoy Place, 13-15 December 2016.
Synthetic Biology UK 2016	UK Synthetic Biology Conference 2016, Dynamic Earth, Edinburgh, UK, 14-16 November 2016.
FOSBE 2016	6th International Conference Foundations of Systems Biology in Engineering, FOSBE 2016, Otto-von-Guericke University and the Max Planck Institute in Magdeburg, Germany, October 9-12, 2016.
Doing Engineering 2016	Doing Engineering: An Experimental Workshop, George Square Campus, Dugald Stewart Building, University of Edinburgh, invited by Dr Jane Calvert and Dr Pablo Schyfter (Engineering Life project), 3 June, 2016.
SynBioBeta 2016	SynBioBeta London, Queens Tower Room and Great Hall, Imperial College London, 6-7 April, 2016.
IET 2016	IET/SynbiCITE Engineering Biology Workshop, IET London, Savoy Place, 5 April 2016.
KTN-DSTL SynBio Robotics and Automation 2016	Automation and robotics for synthetic biology workshop, Manchester Institute of Biotechnology, February 25, 2016.
Sackler Meeting 2015	"Raymond and Beverly Sackler USA-UK meeting: Scientific Forum on Trends in Synthetic Biology and Gain of Function Research, and Regulatory Implications", co-organised by the Royal Society and the US National Academy of Sciences, Chicheley Hall, Chicheley, U.K., November 15-17, 2015.
Paris ENS 2015	"Design, Optimization and Control in Systems and Synthetic Biology" international workshop, École Normale Supérieure, Paris, France, November 12-13, 2015.
Synthetic Biology Congress 2015	2nd Annual Synthetic Biology Congress, Radisson Blu Edwardian, Heathrow, 20-21 October 2015.

5th UK-Korea Joint Symposium	5th UK-Korea Joint Symposium, Radisson Blu Edwardian, Heathrow, 19 October 2015.
Imperial Alumni Event Beijing 2015	Imperial Alumni Event, Beijing, China, 12 September 2015.
World Economic Forum, Summer Event 2015	World Economic Forum in Dalian, China, 9-11 September 2015.
UK SynBio Roadmap Refresh	UK Synthetic Biology Roadmap Refresh Workshop, Macdonald Burlington Hotel, Birmingham, 16 June 2015.
NPL and LGC visit 2015	Visit of the National Physical Laboratory and the LGC, Teddington, 11 May 2015.
SynBioBeta 2015	SynBioBeta London, Queens Tower Room, Imperial College London, 22-23 April, 2015.
EPSRC Grand Challenge Workshop 2014	EPSRC Grand Challenge Workshop, Etc. venues, London, 19 November, 2014.
UK-US Synthetic Biology Summit 2014	UK-US Synthetic Biology Summit: Creating an Environment to Support Investment and Innovation in Synthetic Biology, Joint Meeting organized by the UK Synthetic Biology Leadership Council and the US National Academies' Forum on Synthetic Biology, Imperial College London, 28-29 October, 2014.
Engineering Key Grant Holders Workshop 2014	Engineering Key Grant Holders Workshop, Alexandra House, Swindon, 23-24 September, 2014.
Control Eng Syn Bio Workshop Oxford 2014	A workshop on Control Engineering and Synthetic Biology, Worcester College, Oxford, 10-12 September, 2014.
Repair Ecologies Workshop 2014	Repair Ecologies Workshop, Studio Alexandra Daisy Ginsberg, Department of Bioengineering, Imperial College London, June 23, 2014.
EPSRC Grand Challenges 2014	EPSRC Engineering Grand Challenges Retreat, Ettington Chase, Stratford-on-Avon, 7-8 May, 2014.
SynBioBeta 2014	SynBioBeta London, Queens Tower Room, Imperial College London, April 3, 2014.
SynBiCITE IKC 2014	SynBiCITE IKC Meeting, Clore Lecture Theatre, Imperial College London, April 2, 2014.
Flowers Consortium 2014	Flowers Consortium Meeting (with members of the International Advisory Board), Clore Lecture Theatre, Imperial College London, April 1, 2014.
Evry 2014	Evry'14 Thematic Research School, Genopole, Evry, France, March 24-28, 2014.
SynBioSec 2014	Flowers Consortium Workshop on "Synthetic Biology and Biosecurity: Challenging the Myths", The River Room, King's College London, Strand Campus, February 28, 2014.
DSTL 2014	Interdisciplinary Joint Synthetic Biology Initiative Presentation Day, DSTL Headquarters, Porton Down, Salisbury, February 5, 2014.
SEB 2014	"SEB Symposium for Synthetic Biology", Society for Experimental Biology (SEB), Charles Darwin House, London, January 8-10, 2014.
Warwick 2013	"Towards Next Generation Synthetic Biology" international workshop, University of Warwick, UK, November 21-22, 2013.

Franco-British SynBio Symposium 2013	Franco-British bilateral symposium on synthetic biology, French Embassy in London, Residence of France, Kensington Palace Gardens, London, UK, October 17-18, 2013.
GloverFest 2013	2nd Workshop on Control of Uncertain Systems: Modelling, Approximation and Design (GloverFest), Department of Engineering, University of Cambridge, September 23-24, 2013
GARNet 2013	GARNet Synthetic Biology Workshop, University of Nottingham, UK, May 21-22, 2013.
Valencia 2013	"XI Simposio cea de Ingeniería de Control: Automática y Biología celular: una combinación emergente", Universitat Politècnica de Valencia, Valencia, Spain, April 10-11, 2013.
ECC 2013	12th European Control Conference (ECC 2013), ETH Zurich, Switzerland, July 17-19, 2013.
IWBDA 2013	5th International Workshop on Bio-Design Automation (IWBDA 2013), Imperial College London, UK, July 12-13, 2013.
SB6.0 2013	BioBricks Foundation SB6.0: The 6th International Meeting on Synthetic Biology. Imperial College London, UK, July 9-11, 2013.
Flowers Consortium 2013	Flowers Consortium all-hands meeting, Cumberland Lodge, The Great Park, Windsor, May 9-10, 2013.
GMMO containment and release 2013	International workshop "Synthetic biology: containment and release of engineered micro-organisms", Council Room, King's College London, Strand Campus, London, April 29, 2013.
SBOL workshop 2013	9th Synthetic Biology Open Language (SBOL) workshop, Newcastle University, April 24-26, 2013.
Valencia 2013	XI Simposio cea de Ingeniería de Control: Automática y Biología celular: una combinación emergente, Universitat Politècnica de Valencia, Valencia, Spain, April 10-11, 2013.
Exeter 2012	"Respecting Complexity: New Methods and Concepts for a More Robust Synthetic Biology" international workshop, University of Exeter, December 13-14 2012.
enGENEious 2012	enGENEious: Evolving Life for Future Technologies, Christ Church College, University of Oxford, June 25-26, 2012.
Paris ENS 2012	Design, optimization and control in systems and synthetic biology workshop, École Normale Supérieure, Paris, June 11-12, 2012.
Exeter 2012	International workshop "Robustness in Biology and Engineering", University of Exeter, March 16th, 2012.
SBOL workshop 2012	6th Synthetic Biology Open Language (SBOL) workshop, Foege Building, University of Washington, Seattle, WA, USA, January 5-6, 2012.
RoSBNet 2011	3rd RoSBNet Synthetic Biology Workshop, St Anne's College, University of Oxford, Oxford, U.K., July 20-22, 2011.
York SynBio Standards Grant Writing Retreat 2011	BBSRC Synthetic Biology Standards Grant Writing Retreat, The Grange Hotel, 1 Clifton, York, U.K., July 13-15, 2011.
Newcastle SynBio Standards Workshop 2011	BBSRC Synthetic Biology Standards Workshop: Computational Data Standards and Synthetic Biology, School of Computing Science and Centre for Bacterial Cell Biology, Newcastle University, Newcastle, U.K., July 11-12, 2011.
CSynBI workshop at LSE 2011	CSynBI Workshop, Historical, Social and Philosophical Aspects of Modelling and their implications for synthetic biology, London School of Economics, London, June 28th, 2011.
SB 5.0 2011	The Fifth International Meeting on Synthetic Biology (SB 5.0), Stanford University, Stanford, USA, June 15-17, 2011.

SBOL workshop 2011	5th Synthetic Biology Open Language (SBOL) workshop, The Omni Hotel, San Diego, USA, June 8, 2011.
IWBDA 2011	International Workshop on Bio-Design and Automation 2011, San Diego Convention Centre, San Diego, CA, USA, June 6-7, 2011.
CSynBI UK Strategy Meeting 2011	CSynBI Strategy Meeting for Synthetic Biology, Imperial College London, May 9-10, 2011.
Six Acad Symposium on Syn Bio 2011	Six Academies Symposium on Synthetic Biology, "The economic and social life of synthetic biology", Royal Society and Royal Academy of Engineering, London, April 13-14, 2011.
Syn Bio Sandpit Follow Up 2011	NSF-EPSRC Synthetic Biology Sandpit Follow Up Event, Huxley Building, Imperial College London, March 29-30, 2011.
Syn Bio Public Dialogue Workshop 2011	Workshop to further explore the messages in the synthetic biology public dialogue, Mercure Holland House Hotel, Bristol, U.K., February 10th, 2011.
SBOL workshop 2011	4th Synthetic Biology Open Language (SBOL) workshop, The Inn at Virginia Tech, Blacksburg, Virginia, USA, January 7-10, 2011.
CDC 2010	49th IEEE Conference on Decision and Control (IEEE-CDC 2010), Atlanta, Georgia, USA, December 15-17, 2010.
Autum SSB Symposium 2010	Autumn Symposium of the Institute of Systems and Synthetic Biology, Imperial College, London, U.K., November 10-11, 2010.
CSynBI 2010	Synthetic Biology and Open Source: Normative Cultures of Biology, London School of Economics, London, U.K., September 23-24, 2010.
RoSBNet 2010	2nd RoSBNet Synthetic Biology Workshop, St Anne's College, University of Oxford, Oxford, U.K., July 12-14, 2010.
IWBDA 2010	"International Workshop on Bio-Design and Automation at the Design and Automation Conference (DAC)", Convention Centre, Anaheim, CA, USA, June 14-15, 2010.
SynBio Networks meeting 2010	"Networks in Synthetic Biology Initiative: Meeting of the Networks", Four Pillars Hotel, Costwold Water Park, Gloucestershire, U.K., March 16-17, 2010.
SynBio LSE Debate 2009	"Creating the organisms that evolution forgot", Old Theatre, Old Building, London School of Economics, London, U.K., November 26th, 2009.
SynBio Royal Society Debate 2009	"Synthetic Biology - a threat or an opportunity?", The Royal Society, 7-9 Carlton House Terrace, London, U.K., November 18th, 2009.
Autumn SSB Symposium 2009	Autumn Symposium of the Institute of Systems and Synthetic Biology, Imperial College Business School, London, U.K., 11-12 November, 2009.
Cold Spring Harbor Lab 2009	Joint Cold Spring Harbor Laboratory/Wellcome Trust Conference, "Engineering Principles in Biological Systems", Wellcome Trust Genome Campus, Hinxton, U.K., March 14-16, 2009.
RoSBNet 2009	1st RoSBNet Synthetic Biology Workshop, St Anne's College, University of Oxford, Oxford, U.K., September 14-16, 2009.
CDC 2008	47th IEEE Conference on Decision and Control, Fiesta Americana Grand Coral Beach, Cancún, Mexico, December 9-11, 2008.
MTNS 2008	18th International Symposium on Mathematical Theory of Networks and Systems, The Inn at Virginia Tech, Blacksburg, Virginia, USA, 28 July-1 August, 2008.

Alberto Isidori's 65th Birthday Workshop	"Analysis and Design of Nonlinear Control Systems: A 4-day Control Event", Imperial College and Royal Society, London, U.K., May 13-16, 2008.
IET Tustin Lecture 2008	The Institution of Engineering and Technology Tustin Lecture 2008, "Systems Biology and the Spirit of Tustin" by Prof Peter Wellstead, The IET, Savoy Place, London, U.K., May 1st, 2008.
ACC 2007	26th IEEE American Control Conference, New York City, NY, USA, July 11-13, 2007.
Gatsby 2007	Gatsby Computational Neuroscience Unit Workshop, "Circadian Timing in Brain Circuits", University College London, London, U.K., April 23-25, 2007. Invited by Prof Michael Hastings.
ZIF 2007	"Mathematical Stability Analysis in Biomechanics and Robotics" Symposium, Zentrum für Interdisziplinäre Forschung (ZIF), Universität Bielefeld, Germany, February 15-17, 2007.
NSSPW 2006	IEEE Nonlinear Statistical Signal Processing Workshop 2006, "Classical, Unscented and Particle Filtering Methods", University of Cambridge, U.K., September 13-15, 2006.
CCBI 2006	Cambridge Computational Biology Institute Annual Symposium 2006, Centre for Mathematical Sciences, University of Cambridge, U.K., May 24th, 2006.
BENELEARN 2006	15th Machine Learning conference of Belgium and The Netherlands, University of Ghent, Belgium, May 11-12, 2006.
KDECB 2006	Knowledge Discovery and Emergent Complexity in Bioinformatics Workshop, University of Ghent, Belgium, May 10th, 2006.
Keith Glover's 60th Birthday Workshop	"Control of Uncertain Systems: Modelling, Approximation, and Design", a workshop on the occasion of Keith Glover's 60th birthday, University of Cambridge, U.K., April 21-22, 2006.
DSP Conf. 2005	4th Philips Conference on Digital Signal Processing, Koningshof Veldhoven, The Netherlands, November 15-16, 2005.
IWAENC 2005	International Workshop on Acoustic Echo and Noise Control, High-Tech Campus, Eindhoven, The Netherlands, September 12-15, 2005.
IAP 2005	Study Day of the IAP Network, Château de Colonster, University of Liège, Belgium, May 19th, 2005.
SCORES 2004	Scores workshop, "Systems, Control and Optimization in Research, Education and Services", ESAT, KUL, Heverlee, Belgium, October 12-13, 2004.
NOLCOS 2004	6th IFAC Symposium on Nonlinear Control Systems, Stuttgart, Germany, September 1-3, 2004.
MTNS 2004	16th International Symposium on Mathematical Theory of Networks and Systems, KUL, Heverlee, Belgium, July 5-9, 2004.
IAP 2004	Study Day of the IAP Network, Het Pand, Ghent, Belgium, June 1st, 2004.
ICCoS-IAP 2004	Joint ICCoS-IAP Study Day, UCL, Louvain-la-Neuve, Belgium, March 24th, 2004.
CDC 2003	42nd IEEE Conference on Decision and Control, Maui, Hawaii, USA, December 9-12, 2003.
ICCoS-IAP 2003	Joint ICCoS-IAP Study Day, UCL, Louvain-la-Neuve, Belgium, March 14th, 2003.
IAP 2002-a	Study Day of the IAP Network, UCL, Louvain-la-Neuve, Belgium, November 26th, 2002.
Dyn. and Comp. Workshop 2002	6th workshop on dynamics and computation, "From robotics to quantum control", Royal Academy of Sciences, Brussels, Belgium, July 1-2, 2002.
IAP 2002-b	Study Day of the IAP Network, KUL, Heverlee, Belgium, May 15th, 2002.
ICCoS-IAP 2002	ICCoS-IAP Workshop, "Kalman filtering, signal processing, estimation", KUL, Heverlee, Belgium, March 6th, 2002.

Dyn. and Comp. Workshop 2001 5th workshop on dynamics and computation, "Dynamics and Verification", Royal Academy of Sciences, Brussels, Belgium, July 16-17, 2001.

AES 2000 108th Audio Engineering Society Convention, Paris, France, February 19-22, 2000.

Complementary Training

Oct 2023 - Oct 2025 European Patent Office, The Hague, The Netherlands. EPO Academy: Patent Search and Examination, IP Protection, Patent Law.

Oct 2015 Media Training Imperial College London. Media Training course by David Wheal, Managing Director of Media Counsellors (UK) Ltd, Imperial Incubator, Conference Room B215, 8 October 2015.

2010-2011 Imperial College London. CASLAT Education and Teaching course series.
▷ *23 February 2010, 14:00 - 17:00, "Issues and Techniques for One-Off Teaching Sessions".*
▷ *27 April 2010, 09:30 - 12:30, "Interactive Group Teaching".*
▷ *3 June 2010, 14:00 - 16:00, "Using Feedback to Enhance Student Learning".*
▷ *24 June 2011, 09:00 - 17:00, "Introduction to Personal Tutoring at Imperial".*
▷ *13 September 2011, 09:30 to 16:30, "Introduction to Supervising PhD Students at Imperial".*
▷ *15 September 2011, 09:00 - 17:00, "Introduction to Teaching for Learning".*

2010-2011 Imperial College London. Continuous Training and Personal Development.
▷ *28 January 2010, 9:15 - 14:00, "Imperial Insights (2006-2010)".*
▷ *18 June 2010, 9:30 - 16:30, "Recruitment and Selection for Academic & Research Staff".*
▷ *14 September 2010, 9:30 - 12:30; 21 January 2011, 9:30 - 12:30; 1 April 2011, 9:30 - 12:30, "Research Proposal Checklist Workshop (Grant Incubator)".*

3 Oct 2009 Chesterfield Hotel, Mayfair, London. Michael Heppell — How to be Brilliant.
10 hours interactive course by Michael Heppell: personal development, time management, leadership development.

June 2005 - Dec 2005 Philips Leuven. Intensive Dutch Course - ELAN.
Advanced Dutch course (2 hours a week) by Pol Medaer (native speaker): intensive conversation, vocabulary and grammar training.

26-27 Oct 2005 Bougival, France. DDI International - Communicating for Results.
16 hours course by Christine Schilling: Developing extraordinary leaders, key principles of efficient communication, giving and receiving feedback.

4-8 July 2005 Landshut, Germany. Texas Instruments C6000 Optimization Workshop.
45 hours course.

Feb 2004 Graduate School in Systems and Control, CESAME, UCL, Belgium. Analysis of Feedback Systems: Theory and Computation.
30 hours course by Prof Ulf Jönsson (Royal Institute of Technology, Sweden), Prof Rodolphe Sepulchre (University of Liège, Belgium), and Prof Jan C. Willems (KUL, Belgium).

Spring 2003 Graduate School in Systems and Control, ESAT, KUL, Belgium. Hybrid Systems.
20 hours course by Prof Hans Schumacher (University of Tilburg, The Netherlands) and Prof Arjan Van der Schaft (University of Twente, The Netherlands).

2001-2002 Department of Applied Mathematics, UCL, Belgium. Nonlinear Programming.
20 hours course by Prof Yuri Nesterov (UCL, Belgium).

2000-2001 Department of Electrical Engineering and Computer Science, University of Liège, Belgium. Nonlinear systems theory and applications.
60 hours course by Prof Rodolphe Sepulchre (University of Liège, Belgium).

17-21 Sep 2001 École d'été d'automatique de Grenoble, France. Modélisation Géométrique et Commande des Systèmes Physiques.
5 days lectures.
▷ *Scientific organizers: Profs Bernhard Maschke and Arjan Van Der Schaft.*

June 2001 Graduate School in Systems and Control, ESAT, KUL, Belgium. Convex Optimization with Engineering Applications.
45 hours course by Prof Stephen Boyd (University of Stanford, USA) and Prof Lieven Vandenberghe (UCLA, USA).

May 2001 Graduate School in Systems and Control, CESAME, UCL, Belgium. Control in Automotive Applications.
50 hours course by Prof Stephen Yurkovich (Ohio State University, USA).

March 2001 Graduate School in Systems and Control, CESAME, UCL, Belgium. Model Predictive Control.
20 hours course by Prof Jan Maciejowski (University of Cambridge, U.K.).

Aug 1993 (2 weeks) CERAN, Spa, Belgium. Intensive Language and Communication Course in English.
▷ *Group communication.*

Aug 1989 (2 weeks) SIEP, Liège, Belgium. Intensive English Course.
▷ *Group communication.*

Fields of Interest

Synthetic biology, Systems biology, Analysis and Control of Biological Systems	Synthetic biology, systems biology, biomedical systems, optimal control, machine learning applied to control. ▷ *Analysis and design of multi-scale biological systems for synthetic biology applications.* ▷ *Dynamical network reconstruction from data with direct application to biochemical network reconstruction.* ▷ *Data-based optimal control of biological systems (natural or synthetic) using reinforcement learning algorithms. Application to drug-scheduling automatic control for chronic diseases: optimal drug-scheduling for HIV, cancer, obesity and depression; optimal control of gene regulatory networks (toggle-switch, generalised repressilator, genetic oscillators).* ▷ *Analysis and design of robust, scalable networks of interconnected oscillators with application to biology and engineering; analysis of biochemical oscillator networks, application to the study of circadian networks.* ▷ *Analysis of oscillation synchronisation and design of networks of oscillators capable of generating oscillations with predefined frequency, amplitude and phase.* ▷ *Analysis and design of ultra-fast consensus protocols using prediction mechanisms. Application to the analysis and design of coordinated behaviours (swarming, schooling and flocking).*
Nonlinear systems analysis, design and control	Modelling, analysis, and control of complex dynamical networks; nonlinear control of complex mechatronic systems, control of walking robots. ▷ *Analysis and design of scalable oscillator networks using input-output approaches (e.g., global asymptotic stability analysis using passivity, global synchronisation analysis using incremental passivity).* ▷ *Analysis and control of hybrid and nonlinear systems.* ▷ *Design of numerical methods for the global asymptotic stability analysis of piecewise linear oscillators (isolated and/or interconnected).* ▷ *Design of Central Pattern Generators for the control of nature-inspired rhythmic robots (e.g., the bipedal robot RABBIT from the "Laboratoire d'Automatique de Grenoble", CNRS-GIPSA Lab, France).*
Acoustics	Impulse response measurement, loudspeaker and room equalisation, software and electronic development. ▷ *Application to sound spatialisation, audio virtual reality, and loudspeaker design.*
Signal processing	Digital signal processing, adaptive signal processing, image and sound processing. ▷ *Design of adaptive filters; real-time implementation for the the automotive industry: former coordinator of the Philips Applied Technologies R&D teams for the projects "Adaptive Noise and Echo Cancellation" and "Ubiquitous Communication" in cars.*

Computer Skills

Operating Systems	UNIX/Linux, MacOS X, Windows.
Prog. and Edition	LaTeX, Python, C/C++ (Code Composer Studio), xhtml.
Math Tools	Matlab, Mathematica, Maxima.

Languages

French	Mother tongue.
English	Fluent.
Dutch	Intermediate.
German	Intermediate.
Romanian	Fluent.

Education

March 2005 — University of Liège, Department of Electrical Engineering, Belgium. Ph.D.
Doctor of Philosophy in Applied Sciences with honours.
Ph.D. thesis entitled "*Global analysis and synthesis of oscillations: a dissipativity approach*".
▷ *Committee: Dirk Aeyels (University of Ghent, Belgium), Carlos Canudas-de-Wit (CNRS, France), Jorge Gonçalves (University of Cambridge, U.K.), Henk Nijmeijer (Eindhoven University of Technology, The Netherlands), Louis Wehenkel (University of Liège, Belgium), Jacques Destiné (president, University of Liège, Belgium), Rodolphe Sepulchre (advisor, University of Liège, Belgium).*
▷ *Supported by the Belgian National Fund for Scientific Research (FNRS).*
▷ *Honours: La Plus Grande Distinction (Highest possible honour in Ph.D. evaluation).*

June 2000 — University of Liège, Department of Electrical Engineering, Belgium. Integrated Masters in Engineering.
Integrated Masters in Electrical Engineering with honours.
Masters thesis entitled "*Creation of an autonomous impulse response measurement system for rooms and transducers with different methods*".
▷ *Supervisor: Prof Jean-Jacques Embrechts.*
▷ *Honours: La Plus Grande Distinction avec les Félicitations du Jury (average score* $> 92\%$*).*
▷ *Ranking: top 1% students.*

Sep 1995 - June 2000 — University of Liège, Department of Electrical Engineering, Belgium. Undergraduate Student.
Electrical Engineer with speciality in Electronics.
Core curriculum with education in mathematics, physics, mechanics, chemistry and computer science during the first two years; and with education in electronics, signal processing, systems theory, and automatic control during the next three years. Specialisation towards a Masters of Science in Electrical Engineering from September 1999 until June 2000.
Honours:
▷ *June 2000: La Plus Grande Distinction avec les Félicitations du Jury (average score* $> 92\%$*).*
▷ *June 1999: La Plus Grande Distinction (*$85\% <$ *average score* $\leq 92\%$*).*
▷ *June 1998: Grande Distinction (*$75\% <$ *average score* $\leq 85\%$*).*
▷ *June 1997: Grande Distinction (*$75\% <$ *average score* $\leq 85\%$*).*
▷ *June 1996: Grande Distinction (*$75\% <$ *average score* $\leq 85\%$*).*

June 1995 — University of Liège, Department of Electrical Engineering, Belgium. Entrance examination at the Faculty of Applied Sciences.
▷ *Grade: average score* $> 94\%$.
▷ *Ranking:* first *over 350 candidates.*

1989-1995 — Collège Saint-Benoit Saint-Servais, Liège, Belgium. Secondary school student.
General humanities with Latin and Greek in the third and fourth years followed by physics and mathematics in the fifth and sixth years.
▷ *Honours: Excellent (average score* $> 95\%$*).*