

Wednesday, September 23, 2020						
9:00 AM-10:00 AM	<p>Invited Talk</p> <p>Speaker: <u>Grégory Batt</u></p> <p>Chair: Verena Wolf</p> <p>Title: <b>Methods and Tools for the Quantitative Characterization of Engineered Biomolecular Systems</b></p>					
10:30 AM-12:30 PM	<p>Regular Papers - Session 1 (Modelling and Analysis 1)</p> <p>Chair: Mirco Tribastone</p> <table border="1"> <tr> <td><u>Vincent Danos</u>, Tobias Heindel, Ricardo Honorato-Zimmer and <u>Sandro Stucki</u>. <b>Rate Equations for Graphs</b></td> </tr> <tr> <td><u>Candan Çelik</u>, Pavol Bokes and Abhyudai Singh. <b>Stationary distributions and metastable behaviour for self-regulating proteins with general lifetime distributions</b></td> </tr> <tr> <td>Julia Klein, <u>Pavol Bokes</u> and Tatjana Petrov. <b>Accelerating reactions at the DNA can slow down transient gene expression</b></td> </tr> <tr> <td>Elisabeth Degrand, François Fages and Sylvain Soliman. <b>Graphical Conditions for Rate Independence in Chemical Reaction Networks</b></td> </tr> </table>	<u>Vincent Danos</u> , Tobias Heindel, Ricardo Honorato-Zimmer and <u>Sandro Stucki</u> . <b>Rate Equations for Graphs</b>	<u>Candan Çelik</u> , Pavol Bokes and Abhyudai Singh. <b>Stationary distributions and metastable behaviour for self-regulating proteins with general lifetime distributions</b>	Julia Klein, <u>Pavol Bokes</u> and Tatjana Petrov. <b>Accelerating reactions at the DNA can slow down transient gene expression</b>	Elisabeth Degrand, François Fages and Sylvain Soliman. <b>Graphical Conditions for Rate Independence in Chemical Reaction Networks</b>	
<u>Vincent Danos</u> , Tobias Heindel, Ricardo Honorato-Zimmer and <u>Sandro Stucki</u> . <b>Rate Equations for Graphs</b>						
<u>Candan Çelik</u> , Pavol Bokes and Abhyudai Singh. <b>Stationary distributions and metastable behaviour for self-regulating proteins with general lifetime distributions</b>						
Julia Klein, <u>Pavol Bokes</u> and Tatjana Petrov. <b>Accelerating reactions at the DNA can slow down transient gene expression</b>						
Elisabeth Degrand, François Fages and Sylvain Soliman. <b>Graphical Conditions for Rate Independence in Chemical Reaction Networks</b>						
12:30 PM-1:30 PM	Lunch Break					
1:30 PM-4:00 PM	<p>Regular Papers - Session 2 (Boolean Networks)</p> <p>Chair: Andrea Vandin</p> <table border="1"> <tr> <td><u>Laura Cifuentes Fontanals</u>, Elisa Tonello and Heike Siebert. <b>Control Strategy Identification via Trap Spaces in Boolean Networks</b></td> </tr> <tr> <td><u>Ousmane Diop</u>, Madalena Chaves and Laurent Tournier. <b>Qualitative analysis of mammalian circadian oscillations: cycle dynamics and robustness</b></td> </tr> <tr> <td><u>Stéphanie Chevalier</u>, Vincent Noel, Laurence Calzone, Andrei Zinovyev and Loïc Paulevé. <b>Synthesis and Simulation of Ensembles of Boolean Networks for Cell Fate Decision</b></td> </tr> <tr> <td><u>Robert Schwieger</u>, Matías Bender, Heike Siebert and Christian Haase. <b>Classifier construction in Boolean networks using algebraic methods</b></td> </tr> <tr> <td><u>Cui Su</u> and Jun Pan. <b>Sequential Temporary and Permanent Control of Boolean Networks</b></td> </tr> </table>	<u>Laura Cifuentes Fontanals</u> , Elisa Tonello and Heike Siebert. <b>Control Strategy Identification via Trap Spaces in Boolean Networks</b>	<u>Ousmane Diop</u> , Madalena Chaves and Laurent Tournier. <b>Qualitative analysis of mammalian circadian oscillations: cycle dynamics and robustness</b>	<u>Stéphanie Chevalier</u> , Vincent Noel, Laurence Calzone, Andrei Zinovyev and Loïc Paulevé. <b>Synthesis and Simulation of Ensembles of Boolean Networks for Cell Fate Decision</b>	<u>Robert Schwieger</u> , Matías Bender, Heike Siebert and Christian Haase. <b>Classifier construction in Boolean networks using algebraic methods</b>	<u>Cui Su</u> and Jun Pan. <b>Sequential Temporary and Permanent Control of Boolean Networks</b>
<u>Laura Cifuentes Fontanals</u> , Elisa Tonello and Heike Siebert. <b>Control Strategy Identification via Trap Spaces in Boolean Networks</b>						
<u>Ousmane Diop</u> , Madalena Chaves and Laurent Tournier. <b>Qualitative analysis of mammalian circadian oscillations: cycle dynamics and robustness</b>						
<u>Stéphanie Chevalier</u> , Vincent Noel, Laurence Calzone, Andrei Zinovyev and Loïc Paulevé. <b>Synthesis and Simulation of Ensembles of Boolean Networks for Cell Fate Decision</b>						
<u>Robert Schwieger</u> , Matías Bender, Heike Siebert and Christian Haase. <b>Classifier construction in Boolean networks using algebraic methods</b>						
<u>Cui Su</u> and Jun Pan. <b>Sequential Temporary and Permanent Control of Boolean Networks</b>						
4:30 PM-5:30 PM	<p>Tutorial 1</p> <p>Speaker: <u>Auralien Rizk</u></p> <p>Chair: Carolyn Talcott</p> <p>Title: <b>Integrating Experimental Pharmacology and Systems Biology for GPCR Drug Discovery</b></p>					
5:30 PM-6:00 PM	Coffee Break					
6:00 PM-7:00 PM	<p>Posters and short presentations</p> <p>Chair: Verena Wolf</p>					

Thursday, September 24, 2020					
9:00 am - 10:00 am	<p>Tutorial 2</p> <p>Speaker: <u>Loïc Paulevé</u></p> <p>Chair: Jérôme Feret</p> <p>Title: <b>The CoLoMoTo Interactive Notebook, Accessible and Reproducible Computational Analyses for Qualitative Biological Networks</b></p>				
10:30 am - 12:30 pm	<p>Regular Papers - Session 3 (Identification and inference)</p> <p>Chair: Luca Bortolussi</p> <table border="1"> <tr> <td><u>Gareth Molyneux</u> and Alessandro Abate. <b>ABC(SMC)<sup>2</sup>: Simultaneous inference and model checking of chemical reaction networks</b></td> </tr> <tr> <td><u>Eva Šmijáková</u>, Samuel Pastva, David Šafránek and Luboš Brim. <b>Parameter Synthesis for Hybrid Systems from Hybrid CTL Specifications</b></td> </tr> <tr> <td><u>Marielle Péré</u>, Madalena Chaves and Jérémie Roux. <b>Core models of receptor reactions evaluate basic pathway designs enabling heterogeneous commitments to apoptosis</b></td> </tr> <tr> <td><u>Stefan Haar</u>, Loïc Paulevé and Stefan Schwoon. <b>Drawing the Line: Basin Boundaries in Safe Petri Nets</b></td> </tr> </table>	<u>Gareth Molyneux</u> and Alessandro Abate. <b>ABC(SMC)<sup>2</sup>: Simultaneous inference and model checking of chemical reaction networks</b>	<u>Eva Šmijáková</u> , Samuel Pastva, David Šafránek and Luboš Brim. <b>Parameter Synthesis for Hybrid Systems from Hybrid CTL Specifications</b>	<u>Marielle Péré</u> , Madalena Chaves and Jérémie Roux. <b>Core models of receptor reactions evaluate basic pathway designs enabling heterogeneous commitments to apoptosis</b>	<u>Stefan Haar</u> , Loïc Paulevé and Stefan Schwoon. <b>Drawing the Line: Basin Boundaries in Safe Petri Nets</b>
<u>Gareth Molyneux</u> and Alessandro Abate. <b>ABC(SMC)<sup>2</sup>: Simultaneous inference and model checking of chemical reaction networks</b>					
<u>Eva Šmijáková</u> , Samuel Pastva, David Šafránek and Luboš Brim. <b>Parameter Synthesis for Hybrid Systems from Hybrid CTL Specifications</b>					
<u>Marielle Péré</u> , Madalena Chaves and Jérémie Roux. <b>Core models of receptor reactions evaluate basic pathway designs enabling heterogeneous commitments to apoptosis</b>					
<u>Stefan Haar</u> , Loïc Paulevé and Stefan Schwoon. <b>Drawing the Line: Basin Boundaries in Safe Petri Nets</b>					
12:30 pm - 2:00 pm	Lunch Break				
2:00 pm - 3:00 pm	<p>Invited Talk</p> <p>Speaker: <u>Iain Couzin</u></p> <p>Chair: Tatjana Petrov</p> <p>Title: <b>Employing Immersive Virtual Reality to Reveal Common Geometric Principles of Individual and Collective Decision-Making</b></p>				
3:30 pm - 5:30 pm	<p>Regular Papers - Session 4 (Modelling and Analysis 2 )</p> <p>Chair: Nicola Paoletti</p> <table border="1"> <tr> <td><u>Alexandru Oarga</u>, Bridget Bannerman and Jorge Julvez. <b>Growth Dependent Computation of Chokepoints in Metabolic Networks</b></td> </tr> <tr> <td><u>Aurelien Desoeuvres</u>, Gilles Trombettoni and Ovidiu Radulescu. <b>Interval Constraint Satisfaction and Optimization for Biological Homeostasis and Multistationarity</b></td> </tr> <tr> <td><u>Mathieu Hemery</u>, François Fages and Sylvain Soliman. <b>On the Complexity of Quadratization for Polynomial Differential Equations</b></td> </tr> <tr> <td><u>Sophie Le Bars</u>, Jérémie Bourdon and Carito Guziolowski. <b>Comparing probabilistic and logic programming approaches to predict the effects of enzymes in a Neurogenerative disease model</b></td> </tr> </table>	<u>Alexandru Oarga</u> , Bridget Bannerman and Jorge Julvez. <b>Growth Dependent Computation of Chokepoints in Metabolic Networks</b>	<u>Aurelien Desoeuvres</u> , Gilles Trombettoni and Ovidiu Radulescu. <b>Interval Constraint Satisfaction and Optimization for Biological Homeostasis and Multistationarity</b>	<u>Mathieu Hemery</u> , François Fages and Sylvain Soliman. <b>On the Complexity of Quadratization for Polynomial Differential Equations</b>	<u>Sophie Le Bars</u> , Jérémie Bourdon and Carito Guziolowski. <b>Comparing probabilistic and logic programming approaches to predict the effects of enzymes in a Neurogenerative disease model</b>
<u>Alexandru Oarga</u> , Bridget Bannerman and Jorge Julvez. <b>Growth Dependent Computation of Chokepoints in Metabolic Networks</b>					
<u>Aurelien Desoeuvres</u> , Gilles Trombettoni and Ovidiu Radulescu. <b>Interval Constraint Satisfaction and Optimization for Biological Homeostasis and Multistationarity</b>					
<u>Mathieu Hemery</u> , François Fages and Sylvain Soliman. <b>On the Complexity of Quadratization for Polynomial Differential Equations</b>					
<u>Sophie Le Bars</u> , Jérémie Bourdon and Carito Guziolowski. <b>Comparing probabilistic and logic programming approaches to predict the effects of enzymes in a Neurogenerative disease model</b>					
6:00 pm - 7:30 pm	<p>Virtual Tour of Konstanz</p> <p>Local Organisation Chair: Stefano Tognazzi</p>				

Friday, September 25, 2020

9:00 am -  
11:00 am

Tool Papers Session

Chair: David Šafránek

Filipe Gouveia, Ines Lynce and Pedro T. Monteiro. **ModRev – Model Revision tool for Boolean logical models of biological regulatory networks**

Jorge Julvez and Stephen G Oliver. **Fnyzer: a Python package for the analysis of Flexible Nets**

Matej Troják, David Šafránek, Lukrécia Mertová and Luboš Brim. **eBCSgen: A Software Tool for Biochemical Space Language**

Déborah Boyenval, Gilles Bernot, Hélène Collavizza and Jean-Paul Comet. **What is a cell cycle checkpoint? The TotemBioNet answer**

Luca Cardelli. **Kaemika app: Integrating protocols and chemical simulation**

11:30 am -  
12:30 pm

Invited Talk

Speaker: Domitilla del Vecchio

Chair: Alessandro Abate

Title: **Context dependence of biological circuits: Predictive models and engineering solutions.**

12:30 pm -  
12:45 pm

Final Remarks and conference closing