

## RESEARCH CONFERENCES

ESF-UB Conference in Biomedicine

# ECSB II: DESIGN, PROGRAMMING AND OPTIMISATION OF BIOLOGICAL SYSTEMS

Hotel Eden Roc, Sant Feliu de Guixols (Costa Brava) • Spain  
29 March – 03 April 2009

Chair: **David Gilbert**, Brunel University, UK

Co-Chairs: **Alfonso Jaramillo**, Ecole Polytechnique, FR, **Natalio Krasnogor**, University of Nottingham, UK

**Victor de Lorenzo**, Centro Nacional de Biotecnología, ES

Organising Committee Chairs: **Sibylle Gaisser**, Fraunhofer Institute for Systems and Innovation Research ISI, DE  
**Markus R. Schmidt**, Organisation for International Dialogue and Conflict Management - IDC – idialog, AT

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### Presenters

### LIST OF ACCEPTED POSTERS

	<b>Surname</b>	<b>First Name</b>	<b>Poster Title</b>
<b>1</b>	Bikard	David	The Synthetic Integron: An in vivo genetic shuffling device
<b>2</b>	Billerbeck	Sonja	Orthogonalization of a dihydroxyacetone-phosphate producing biotransformation module: Systematic search for ATP sinks in cell free extracts
<b>3</b>	Blakes	Jonathan	An integrated development environment for synthetic biology models
<b>4</b>	Calles	Belén	Re-writing metabolic pathways: a transposon tool tailored for production of conditional enzymes
<b>5</b>	Camsund	Daniel	Synthetic Biology in Cyanobacteria – Tools and parts development and characterization
<b>6</b>	Carrera	Javier	Re-engineering E. coli chassis under dynamic environments
<b>7</b>	Ceroni	Francesca	LacI operator sites for regulated promoter standard assembly
<b>8</b>	Damborsky	Jiri	Engineering of Tunnels in Proteins with Buried Active

<b>9</b>	de las Heras	Aitor	Designing regulatory networks to increase the response of a whole-cell biosensor
<b>10</b>	Delaye	Luis José	Engineering the genome of <i>Synechococcus elongatus</i> : towards a minimum photoautotrophic cell
<b>11</b>	Dietz	Sven	Constructing minimal cells by genome reduction and selection: A synthetic biology approach
<b>12</b>	Durante	Gonzalo	Designing artificial regulatory proteins for novel transcriptional control circuits
<b>13</b>	Feher	Tamas	Removal of the flexible gene pool of <i>E. coli</i> is accompanied by loss of adaptability USA
<b>14</b>	Glieder	Anton	Artificial promoters and minimal cells for whole cell biocatalysis
<b>15</b>	Grünberg	Raik	Biobrick applications and management (in everyday research)
<b>16</b>	Guazzaroni	María Eugenia	EXPERIMENTAL RECONSTRUCTION OF SINGLE CELL METABOLISMS AND ITS IMPLICATION IN SYSTEM BIOLOGY
<b>17</b>	Jimenez	Jose Ignacio	Rewiring metabolic networks in bacteria through intracellular expression of camel VHH domains
<b>18</b>	Kirov	Boris	Minimal Oscillator
<b>19</b>	Leprince	Audrey	<i>Pseudomonas putida</i> KT2440: genome minimization project
<b>20</b>	Linshiz	Gregory	Recursive construction of perfect DNA molecules from imperfect building blocks
<b>21</b>	Liu	Xuan	A computational platform to support the design and construction of synthetic biological systems
<b>22</b>	Lopo	Miguel	Parts and modules for H <sub>2</sub> production in a <i>Synechocystis</i> sp. PCC 6803 “chassis”
<b>23</b>	Michel	Klaus-Peter	FORSYS and FORSYS-Partner: German Research Units for Systems Biology
<b>24</b>	Mohamed Zuki	Fathiah	Bacterial adhesion: XDLVO Theory and Numerical Analysis on Geometrical Effect
<b>25</b>	Montagud	Arnau	Construction and analysis of a genome scale metabolic model for the cyanobacteria <i>Synechocystis</i> sp. PCC6803
<b>26</b>	Müller	Kristian	Engineering Membrane Receptors, Reporter Enzymes, and DNA Nano-Structures as Parts for Synthetic Signaling
<b>27</b>	Neverov	Konstantin V.	A composition containing photosensitizer and perfluorocarbons: photodynamic properties and impact on cell cultures
<b>28</b>	Noirel	Josselin	Validation of Mixture Model on Graphs on yeast
<b>29</b>	Pacheco	Catarina	Parts and modules for H <sub>2</sub> production in a <i>Synechocystis</i> sp. PCC 6803 “chassis”
<b>30</b>	Panke	Sven	Orthogonality in metabolic networks
<b>31</b>	Pasotti	Lorenzo	Construction and validation of logic functions in a biological chassis
<b>32</b>	Paun	Andrei	DISCRETE NONDETERMINISTIC MODELING OF AN APOPTOSIS PATHWAY
<b>33</b>	Pinto	Filipe	Parts and modules for H <sub>2</sub> production in a <i>Synechocystis</i> sp. PCC 6803 “chassis”
<b>34</b>	Rialle	Stephanie	CompuBioTic, a methodology for de novo design of vesicles performing programmed tasks
<b>35</b>	Rizk	Aurelien	Towards a general computational method for robustness analysis

<b>36</b>	Rodrigo	Guillermo	Towards the hydrogen production in cyanobacteria using oxygen consuming pathways
<b>37</b>	Rouilly	Vincent	Design of Experiments Applied to Stochastic Gene Expression Simulations: Steady-state diagnostic and Sensitivity Analysis
<b>38</b>	Ruiz	Raúl	Deciphering the transcriptional regulatory network of conjugative plasmid R388
<b>39</b>	Silva-Rocha	Rafael	The layout of the TOL logicome tunes m-xylene degradation to the core metabolic network of <i>Pseudomonas putida</i> mt-2
<b>40</b>	Smaldon	James	Liposome Logic – Compartmentalised Computing
<b>41</b>	Strelkowa	Natalja	Robust synthetic gene network for sequential pathways regulation
<b>42</b>	Tanaka	Kosei	A combined experimental/theoretical approach to reduce the bacterial genome
<b>43</b>	Thierry	Alain	NANOSTRUCTURES UNVEIL A GENERAL SELF-ORGANIZATION OF NUCLEIC ACIDS: Implications to prebiotic chemistry to in vivo DNA condensation
<b>44</b>	Thijs	Inge	Modeling for Dr. Coli: a synthetic biology approach to intelligent bacterial drug delivery
<b>45</b>	Trybilo	Maciej	A Rational Design Framework of Orthologous miRNA/target site Pairs for Synthetic Biology
<b>46</b>	Venken	Lyn	Facilitating ChIP-chip-based reconstruction of regulatory networks by combining omics data
<b>47</b>	Wu	Bian	Enzymatic synthesis of enantiopure $\alpha$ - and $\beta$ -amino acids by phenylalanine aminomutase-catalyzed amination of cinnamic acid derivatives