University *of Ljubljana*

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Expression of supervisor's interest to host
Marie Skłodowska-Curie Individual Fellows at the University of Ljubljana (UL)

Assist. Prof. Miha Moškon from University of Ljubljana is searching for a top-class experienced researcher of any nationality interested in developing collaborative MSCA IF application for the following EU Framework Programme for Research and Innovation **Horizon 2020** actions:

- Marie Skłodowska-Curie Individual Fellowships – European (MSCA-IF-2016-EF)
- Marie Skłodowska-Curie Individual Fellowships – Global (MSCA-IF-2016-GF)

Call H2020-MSCA-IF-2016
Planned opening date: 12 April 2016
Deadline: 14 September 2016
More info H2020-MSCA-IF-2016

ELIGIBILITY CRITERIA FOR MSC FELLOWS

- The researcher must, at the deadline for the submission of proposals, be in possession of a doctoral degree or have at least four years of full-time equivalent research experience. The researcher may be of any nationality.
- Mobility rule: the researcher must not have resided or carried out his/her main activity (work, studies) in the country of the host organisation for more than 12 months in the 3 years immediately prior to the deadline for submission of proposals.

OPPORTUNITIES FOR POTENTIAL CANDIDATES – RESEARCHER'S CAREER DEVELOPMENT

The goal of MSCA Individual Fellowships is to enhance the creative and innovative potential of experienced researchers (post-doctoral or with 4 years of equivalent research experience) wishing to diversify their individual competence in terms of skill acquisition through advanced training, international and intersectoral mobility. The researcher and supervisor will develop the application jointly. The project proposals will be submitted by the host organization. If the application will be successful, the IF researcher will be recruited under an employment contract with a monthly salary of 4.650 €* coefficient of the country where the researcher is hosted (living allowance) + 600 € (mobility allowance) + 500 € (family allowance) per month. More information may be found here.

University of Ljubljana offers stimulating environment for postdoctoral research providing modern core facilities in a supported environment with on-the-job training and supervision. In addition, postdoctoral researchers will have access to the generic and transferable skills trainings, they will have the possibility to be involved in educational process and if suitable, they will be seconded to industry all with the purpose for further development of their careers in the academic and non-academic sector.

Researchers who wish to cooperate with UL for the submission of a project proposal under the aforementioned Actions should check that they fulfil the respective eligibility criteria and then send an expression of interest, consisting of a CV and a two-page summary presentation of their research proposal by **18 March 2016**. Proposals will be pre-selected based on internal evaluation and the availability of suitable supervision. Candidates will be informed of the results of the pre-selection by 25 March 2016.

Selected candidates will be invited to meet the supervisor and visit the research environment of the university within the 2-day MSCA-IF proposal writing workshop in Ljubljana organised by the UL at the end of May 2016.

UNIVERSITY OF LJUBLJANA

University of Ljubljana (Univerza v Ljubljani, UL) was founded in 1919 and is the oldest and largest higher education and scientific research institution in Slovenia. It encompasses 23 faculties and 3 art academies and has more than 40.000 undergraduate and postgraduate students and approximately 5.600 employees. UL is listed amongst the **top 500 universities** in the world according to the ARWU Shanghai, Times THES-QS and WEBOMETRICS rankings. UL is very active in national and international R&D and educational programmes, and creates almost half of the research results of Slovenia. In the period 2007-2013 UL cooperated in **745 EU projects**, including **163 FP7 projects**, which places UL on the first place among the organisations in the EU 13 member states. The University of Ljubljana has close ties with many excellent Slovenian and foreign companies. In May 2015, UL founded the Slovenian Innovation Hub, which will operate mainly as a facilitator and promoter of development and research teams in the academic and business sphere. UL is also founder of the University incubator, the Institute for Research and Innovation, and very recently the SMUL network - a global alumni and associates network. From 2008 UL is committed to respect the principles of the European Charter for Researchers and the Code of Conduct for Recruitment of Researchers, which led to the EC given UL the right to use the logo *'HR Excellence in Research'* in 2013.

PROFILE OF THE SUPERVISOR

NAME OF THE SUPERVISOR: Miha Moškon
MAIN RESEARCH FIELD: Computational Biology
E-MAIL address: miha.moskon@fri.uni-lj.si
LINK to SUPERVISOR's CV: http://lrss.fri.uni-lj.si/bio/personal/cv_moskon.pdf

DESCRIPTION OF THE SUPERVISOR

Miha Moškon is an assistant professor of computer science at the University of Ljubljana, Faculty of Computer and Information Science. He received his BSc degree in Computer Science in 2007 and his PhD in 2012. His main research interests have been recently directed towards accurate quantitative modelling and analysis of gene regulatory networks and towards the computational design of synthetic biological systems. He is currently advising a PhD student on the field of sensitivity analysis of stochastic multiscale models and co-advising a PhD student working on the SteatoNet computational model. He was a mentor of the modelling part of Slovenian iGEM student team in 2010 (grand prize winners) and in 2012 (first runner up, best model prize). He currently teaches the following courses: Computational approaches in systems and synthetic biology (MSc and PhD), Introduction to digital circuits (BSc) and Digital Logic Design (BSc) and leads the laboratory practice for the course Unconventional information processing methods and platforms (MSc).

RESEARCH FIELD OF THE SUPERVISOR

Main research field: Computational biology
Sub-fields: dynamical modelling and analysis of biological systems, design of biological systems, computational approaches in systems and synthetic biology, fuzzy logic, biological oscillators.

RECENT TRACK-RECORD and other SIGNIFICANT ACHIEVEMENTS

J. Bordon, N. Zimic, M. Moškon, M. Mraz, Fuzzy logic as a computational tool for quantitative modelling of biological systems with uncertain kinetic data, IEEE/ACM Transactions of Computational Biology and Bioinformatics, Vol. 12, No. 5, pp. 1199-1205, 2015 (doi: 10.1109/TCBB.2015.2424424)

M. Petroni, N. Zimic, M. Mraz and M. Moškon, Stochastic simulation algorithm for gene regulatory networks with multiple binding sites, Journal of Computational Biology, Vol. 22, No. 3, pp. 218-226, 2015 (doi: 10.1089/cmb.2014.0064)

M. Moškon, M. Mraz, Systematic Approach to Computational Design of Gene Regulatory Networks with Information Processing Capabilities, IEEE/ACM Transactions of Computational Biology and Bioinformatics, Vol. 11, Issue 2, 2014 (doi: 10.1109/TCBB.2013.2295792)

M. Stražar, N. Zimic, M. Mraz, M. Moškon, An adaptive genetic algorithm for parameter estimation of biological oscillator models to achieve target quantitative system response, Natural Computing, Vol. 13, No. 1., 119-127, Mar.2014.

M. Moškon, J. Bordon, M. Mraz, N. Zimic, M. Petroni, Computational approaches in synthetic and systems biology, book chapter in Recent Advances in System Biology, Nova Science Publishers Inc., USA, January, 2014, ISBN: 978-1-62948-736-6, pp. 131-155.

RESEARCH ENVIRONMENT

FACULTY/DEPARTMENT/LABORATORY

The Faculty of Computer and Information Sciences (FRI), at UL, is the leading educational and research institution in computer sciences in Slovenia. In July 2014 it moved to new premises, the construction of which was funded by a structural development EC grant of nearly 100 million Eur. Faculty houses high-quality research laboratories with all the required facilities to carry out the work of an applicant. Computational Biology Group is a part of Computer Structures and Systems Laboratory with an excellent track of past publications and project.

RESEARCH INFRASTRUCTURE

The Faculty of Computer and Information Sciences (FRI) maintains a range of computational and data storage servers that currently accomplish the needs of its research laboratories (i.e. about 800 modern computers and 30 server blades). FRI is also included in the MSDNAA programme of Microsoft, and owns licences of several software products used in computational biology (e.g. Matlab and Mathematica). New infrastructures and technical facilities gather modern lecture and meeting rooms, and a

vast workspace that will serve as well the project needs. A share of them is currently devoted to computational biology fields like gene regulatory networks and biomolecular sciences (modelling, analysis, design and information processing of biological systems, systems biology, unconventional computing).

ACADEMIC AND NON-ACADEMIC COLLABORATION

Miha Moškon has been involved in the following projects: Pervasive computing (Research Programme), Designed cellular logic (Basic Research and Application Project), Computer vision for mobile computing and interaction (Basic Research and Application Project), Optimization of resiliency and fast convergence in the Ethernet network environment (Industry-Funded Project), Developing IT support for muscle diagnostics (Industry-Funded Project), Introduction of fuzzy logic into the process of defence system management (Target Research programme). He was a visiting scholar at the Institute of Systems and Synthetic Biology in 2013 (prof. Alfosno Jaramillo). His group currently collaborates with the following academic partners: dr. Roman Jerala (National Institute of Chemistry, Slovenia), dr. Damjana Rozman (Center for functional genomics and biochips, University of Ljubljana, Slovenia), dr. Kristina Gruden (Department of Biotechnology and Systems Biology, National Institute of Biology, Slovenia), dr. Monika Heiner (Brandenburg University of Technology Cottbus, Germany), dr. Ria Baumgrass (German Rheumatism Research Centre Berlin, Germany).

SPECIFIC REQUIREMENTS/PREFERENCES

Researcher should have basic computer skills, should be confident in at least one programming language and should be eager to work on very interdisciplinary fields combining mathematics, engineering and biological sciences.

OTHER