

Curriculum vitae

Name: Ivan Mijakovic
Date of birth: 08-08-1975
Nationality: Croatian
Residence: Frölundagatan 35C, 431 44 Mölndal, Sweden

Current positions

2013-present Professor, Chalmers University of Technology, Sweden
2017-present Professor, DTU-Biosustain, Technical University of Denmark, Denmark

Education and degrees

2008 Professor Habilitation, University Claude Bernard Lyon, France
2007 University Level Teaching Diploma (UdTU), Technical University of Denmark, Denmark
2003 PhD degree in Molecular Microbiology, University Paris XI, Orsay, France
1997 Engineering degree in Molecular Biology (Master degree), University of Zagreb, Croatia

Previous positions

2013-2016 Professor with special responsibilities, Technical University of Denmark, Denmark
2013-2016 Consulting Professor, AgroParisTech, France
2008-2013 Professor of Systems Biology, AgroParisTech, France
2007-2008 Associate Professor, Technical University of Denmark, Denmark
2006-2007 Assistant Professor, Technical University of Denmark, Denmark
2004-2005 Postdoctoral fellow, Technical University of Denmark, Denmark
2000-2003 PhD student, INRA-CNRS, France
1998-2000 Research associate, Faculty of Science and Mathematics, University of Zagreb, Croatia

Brief career synopsis and research interests

In 1997 I obtained an Engineering degree in Molecular Biology from the University of Zagreb, Croatia. I graduated at the top of my class and was honored as the Best Student at the University of Zagreb (25 000 students) by the Rector. After spending a brief period as Research Associate at the University of Zagreb, I moved to Paris, France, for my PhD studies. After obtaining a PhD degree in Molecular Microbiology from the University Paris XI in 2003, I moved to the Technical University of Denmark (DTU) as a postdoctoral fellow. In 2006 I became Assistant and in 2007 Associate Professor at the DTU. That is when I started my independent research group, so I have 11 years of experience as an independent group leader. In 2008 I accepted a Full Professorship from AgroParisTech and moved to Paris as Professor of Systems and Synthetic Biology. In 2013, I accepted an offer to move to the Chalmers University of Technology, as Full Professor of Bacterial Systems Biology. At the same time, the DTU extended to me an offer to start a satellite group there, with a part-time position, first as Professor with special responsibilities (2013-2016), and from January 2017 as Full Professor. Currently I lead a research group implanted at two sites, Chalmers and DTU, with around 15 members, mostly postdoctoral fellows (http://www.sysbio.se/Lab_Mijakovic/IM_lab.html). The oldest and still dominant research topic in my group is bacterial protein phosphorylation, its physiological role and means to use it to engineer bacterial cell factories or to fight bacterial pathogens. My group is among the world leaders in this field, with pioneering contributions in methods to study protein phosphorylation and seminal studies elucidating its physiological role. More recent topics in my group are metabolic engineering of bacterial cell factories (for production of industrial enzymes, platform chemicals, nanoparticles) and bio-applications of

the advanced carbon material graphene (in collaboration with the EU Graphene Flagship) for antibacterial coatings, bio-sensors and extraction of oleochemicals from cell factories. We are increasingly using approaches of experimental evolution in our basic and applied science projects.

Distinctions and awards

- 2020 "Spiridion Brusina Medal", Croatian Society of Natural Sciences
- 2007 "Skou Award", Danish Natural Science Research Council (FNU)
- 2007 "Jorcks pris" for excellence in teaching and research, award from Jorcks Foundation
- 2006 "Researcher of the Year 2006", BioCentrum, Technical University of Denmark
- 2005 "Teacher of the Year 2005", BioCentrum, Technical University of Denmark
- 2003 "Costa Award", Conference on Functional Genomics of Gram-positive Bacteria
- 1997 Rector's award for the best student at the University of Zagreb

Academic appointments and commissions of trust

- 2019-present Head of Division of Systems and Synthetic Biology, Chalmers, Sweden
- 2018-present Member of the Scientific Advisory Board of the Chalmers Graphene Centre, Sweden
- 2015-present Associate Editor at *Periodicum Biologorum*
- 2014-present Chairman of the Scientific Committee for the International Conference Series on Post-translational Modifications in Bacteria
- 2018-2019 Member of the Board of Directors of the Sahlgrenska Science Park, Sweden
- 2018-2019 Member of the Advisory Board of the Vestra Götaland Region Innovation Platform, Sweden
- 2018-2019 Member of the Advisory Board of the Gothia Forum, Sweden
- 2016-2019 Director of the Chalmers Area of Advance Life Science Engineering, Sweden
- 2015-2019 Associate Editor at *Frontiers in Microbiology*
- 2015-2018 Member of the Steering Committee of the BACELL Society
- 2013-2016 Chairman of the Section of Functional Genomics of the European Federation of Biotechnology
- 2012-2015 Member of the Steering Committee of the Centre of Excellence for Industrial Agrobiotechnology, France
- 2011-2013 Head of Division of Microbiology and Molecular Genetics, AgroParisTech, France
- 2003-present Reviewer for Molecular Microbiology, Molecular and Cellular Proteomics, Science Signalling, PLoS Genetics, Journal of Proteome Research, Journal of Proteomics, Journal of Biological Chemistry, Microbiology, Journal of Bacteriology, Biochemica & Biophysica Acta, Proteomics, PLoS Pathogens, Molecular & Cellular Biology, FEBS Letters, Frontiers in Microbiology, PLoS One and many other molecular biology and biochemistry journals.
- 2003-present Evaluator for funding agencies: ANR (Agence Nationale de la Recherche, France), ARC (Fondation pour la Recherche sur le Cancer, France), the Polish Natural Science Council, the Croatian Academy of Science and the Rumanian National Funding Agency.
- 2003-present Evaluator in recruitment committees for Assistant and Associate Professors at the University of Wageningen, Chalmers University of Technology, Technical University of Denmark, Lund University, and University of Lyon I.

Assistant/Associate Professors and Senior Researchers supervised

- Dr. Carsten Jers (2019-present)
- Dr. Tao Chen (2016-2017)
- Dr. Sandrine Poncet (2011-2013)
- Dr. Yves Pagot (2011-2013)

Postdoctoral fellows supervised

Dr. Caroline Wasén (2020-present)
Dr. Yanyan Chen (2020-present)
Dr. Avlant Nilsson (2020-present)
Dr. Abhayraj Joshi (2019-present)
Dr. Julie Bonne Køhler (2019-present)
Dr. Mériem Senissar (2019-present)
Dr. Abhroop Garg (2018-present)
Dr. Shadi Rahimi (2018-present)
Dr. Priyanka Singh (2016-present)
Dr. Santosh Pandit (2015-present)
Dr. Vaishnavi Ravikumar (2015-present)
Dr. Abderahmane Derouiche (2014-present)
Dr. Lei Shi (2009-present)
Dr. Carsten Jers (2015-2019)
Dr. Abida Sultan (2015-2019)
Dr. Raghu Mokkaapati (2015-2018)
Dr. HeeJin Hwang (2017-2018)
Dr. Valentina Cantatore (2016-2017)
Dr. Fen Yang (2015-2016)

PhD students supervised

Aida Kalantari (2012-2016)
Charlotte Cousin (2010-2014)
Abderrahmane Derouiche (2010-2013)
Ahasanul Kobir (2009-2012)
Boumediene Soufi (2007-2010)
Sujata Vijay Sohoni (2007-2010)
Carsten Jers (2007-2010)
Mette Erichsen Hansen (2006-2009)

Guest PhD students supervised

Mahdis Noori (2020-2021)
Hossein Helalat (2020-2021)
Alireza Neissi (2019-2020)

Master students supervised

A total of 20 Master students graduated from my lab.

Teaching experience

I have experience of teaching at three European universities: The Technical University of Denmark (Denmark, 2006-2008), AgroParisTech (France, 2008-2013) and Chalmers University of Technology (Sweden, 2013-present). I have been appointed as course responsible for a number of courses at all three universities (currently responsible for two bachelor courses at Chalmers: UCM010 and KMG050).

Course responsible

2013-present	Chalmers University of Technology, Bachelor level advanced course in Cell and Molecular Biology II (KMG050), theoretical course (lectures), approx. 60 students per generation.
2016-present	Chalmers University of Technology, Bachelor level basic course in Cell and Molecular Biology I (UCM010), theoretical course (lectures), approx. 110 students per generation.
2010-2013	AgroParisTech, Bachelor level course in Molecular Genetics, theoretical course (lectures), approx. 350 students per generation.
2010-2013	AgroParisTech, Master level course in Bio-engineering, theoretical course (lectures), approx. 20 students per generation.
2012-2013	AgroParisTech, Master level course in Medical Systems Biology, theoretical course (lectures), approx. 80 students per generation.
2009-2013	AgroParisTech, Master level course in Functional Genomics, theoretical course (lectures), approx. 20 students per generation.
2006-2008	Technical University of Denmark, Master level course in Molecular and Cellular Biology, theoretical course (lectures), approx. 100 students per generation.
2006-2008	Technical University of Denmark, Master level course in Microbial Biotechnology, practical course (experimental), approx. 30 students per generation.

Leading functions in education

2017-present	Responsible for joint education initiatives between Chalmers and the Sahlgrenska Academy/Sahlgrenska Hospital
2013-2017	Responsible for Chalmers bilateral Erasmus exchange agreements with AgroParisTech, France and University of Zagreb, Croatia.
2012-2013	Coordinator for educational activities in the partnership between AgroParisTech and the pre-industrial platform Metagenopolis.
2009-2013	Coordinator for Master programs: Mathematical Modeling at the Interface of Life Science and Economy (MMSEI) and Systems and Synthetic Biology (MSSB), AgroParisTech, France.
2009-2013	Responsible for the Erasmus Student exchange between AgroParisTech, France and University of Zagreb, Croatia.
2007-2008	Coordinator for foreign exchange students at the BioCentrum, Technical University of Denmark, Denmark.

Conference organization

- Main organizer and Chairman of the scientific committee of the “4th International meeting on post-translational modifications in bacteria” (to be held in September 2021) Copenhagen, Denmark
- Chairman of the scientific committee of the “3rd International meeting on post-translational modifications in bacteria” (December 2018) Tübingen, Germany
- Main organizer of the “NanoMed North” conference (May 2017) Gothenburg, Sweden
- Chairman of the scientific committee of the “2nd International meeting on post-translational modifications in bacteria” (October 2016) Lyon, France
- Chairman of the scientific committee of the conference on “Metabolic engineering in bacteria” (April 2015) Amsterdam, The Netherlands
- Member of the organizing committee of the BACELL 2015 meeting (April 2015) Amsterdam, The Netherlands
- Chairman of the organizing committee of the “1st International meeting on post-translational modifications in bacteria” (September 2014) Göttingen, Germany

- Main organizer of the “Symposium on regulation and signalling in bacteria” (October 2013) Göteborg, Sweden

Selected invited/keynote lectures

- FEBS Meeting (July 2020 – postponed to July 2021 due to COVID-19) Ljubljana, Slovenia
- Materials for Tomorrow (November 2016), Gothenburg, Sweden
- 2nd International meeting on post-translational modifications in bacteria (October 2016) Lyon, France
- NanoMedNorth (June 2016) Copenhagen, Denmark
- Big Data & Biotechnology (January 2016), Tuval, Saudi Arabia
- UCD Symposium (December 2015), Dublin, Ireland
- Conference on Functional Genomics of Gram-positive Bacteria (June 2015) Montecatini, Italy
- Novo Nordisk Prize Symposium (December 2014), Copenhagen, Denmark
- Annual Meeting of the Croatian Society for Biochemistry and Molecular Biology, (September 2014) Zadar, Croatia
- SFM Mikrobiologisk Vårmöte (April 2014) Trollhättan, Sweden
- iBIOK: Innovative Bioproduction Kobe (January 2014) Kobe, Japan
- Symposium on Proteomics of Microorganisms (December 2013) Tübingen, Germany
- VAAM Annual Meeting (March 2013), Bremen, Germany
- Annual conference of the Croatian Society of Biology (September 2012) Sibenik, Croatia
- Conference on Transmembrane Proteins (October 2010) Maratea, Italy
- FEBS Meeting (July 2010) Gothenburg, Sweden
- ASM General Meeting (May 2009) Philadelphia, USA
- Plasmidtagung Conference (October 2008) Göttingen, Germany
- International conference on inhibitors of bacterial protein kinases (June 2007) Warsaw, Poland

Ongoing scientific collaborations

- Dr. Marie-Francoise Noirot-Gros, Argonne, USA
- Prof. Boris Macek, University of Tübingen, Germany
- Dr. Christophe Grangeasse, CNRS, France
- Dr. Damjan Franjevic, University of Zagreb, Croatia
- Dr. Tomislav Domazet-Loso, Rudjer Boskovic Institute, Croatia
- Dr. Markus Herrgard, DTU-Biosustain, Denmark
- Prof. Takashi Gojobori, KAUST, Saudi Arabia
- Dr. Magnus Svensson, Wellspect Healthcare, Sweden
- Prof. Sun Nyunt Wai, Umeå University, Sweden
- Prof. Åsa Sjöling, Karolinska Institute, Sweden
- Prof. Avgust Yurgens, Chalmers MC2, Sweden
- Prof. Roland Kadar, Chalmers IMS, Sweden
- Dr. Celine Henry, INRAE, France
- Dr. Helene Bierne, INRAE, France
- Prof. Margarita Gomila, University of the Balearic Islands, Spain

Current funding (research grants)

Granting agency	Years	Amount
EU Marie Curie ITN Grant	2021-2024	4150 k€

DTU PhD grant	2021-2024	200 k€
VINNOVA Competence Center	2020-2025	200 k€
VINNOVA SIO Grafen	2020-2022	300 k€
Velux Foundation	2019-2021	500 k€
Lundbeckfonden	2019-2022	300 k€
FORMAS	2019-2022	300 k€
Danish Research Council FNU	2019-2022	380 k€
Danish research Council FTP	2018-2021	380 k€
ÅForsk	2019-2020	50 k€
Novo Nordisk Foundation	2021-2025	670 k€
Carl Tryggers Foundation	2018-2020	60 k€

Career total of external funding raised for research as the main applicant: 15.5 M€.

Scientific collaboration with industrial partners

- Naicons, Italy, 2020-present (antimicrobial peptides)
- Clinical Microbiomics, Denmark, 2020-present (microbiomics and bacterial infections)
- AltraBio, France, 2020-present (big data and infection diagnostics)
- Nanoxis Consulting, Sweden, 2020-present (proteomics of bacterial pathogens, diagnostic chips)
- Wellspect Healthcare, Sweden, 2015-present (advanced antibacterial coating of catheters and other biomedical devices)
- Danisco A/S, Denmark: 2007-2009 (engineering of *Bacillus subtilis* for production of nisine)
- Novozymes A/S, Denmark: 2007-2008 (transcriptomics characterization of *Bacillus licheniformis* under heat stress and iron limitation)
- Christian Hansen A/S, Denmark: 2007-2008 (improvement of protein secretion and folding for heterologous protein expression in *Bacillus subtilis*)

Patents

EU patent 19184488.5 – 1109 (2019) Antibacterial article comprising a polymer matrix with aligned nanoscale flakes of platelets. Inventors: Kadar R, **Mijakovic I**, Gaska K, Pandit S, Svensson M.

Bibliometrics

115 peer reviewed publications. Google Scholar: 5030 citations, H-index 39 (Google Scholar, September 2020).