

# FH-Prof. PD DI Dr. Stephan Winkler

October 2018



## CURRENT POSITION

University of Applied Sciences Upper Austria, School for Informatics, Communications and Media  
Professor at Department for Medical and Bioinformatics  
Head of Bioinformatics Research Group  
Member of Heuristic and Evolutionary Algorithms Laboratory

## PERSONAL DATA

Name: Dipl.-Ing. Dr. Stephan M. Winkler  
Business address: FH OÖ (University of Applied Sciences Upper Austria), Hagenberg Campus  
Softwarepark 11, 4232 Hagenberg  
Date and place of birth: October 26th, 1980, Linz, Austria  
Nationality: Austrian  
Marital status: Married

## EDUCATION

1985 – 1990 Elementary schools in Newark, Delaware, USA and Linz, Austria  
1990 – 1998 Secondary school, high school: Bischöfliches Gymnasium Kollegium Petrinum, Linz, Austria  
1999/10 – 2004/09 Studies in computer science at Johannes Kepler University, Linz, Austria  
2004/09 Graduation; diploma thesis: “Identifying Nonlinear Model Structures Using Genetic Programming”  
2004/10 – 2008/04 PhD studies in engineering sciences at Johannes Kepler University, Linz, Austria  
2008/04 Promotion; PhD thesis: “Evolutionary System Identification - Modern Concepts and Practical Applications”  
2018/05 Venia docendi at Johannes Kepler University Linz for the field “Data based modeling” (computer science);  
Habilitation thesis: “Evolutionary Computation and Symbolic Regression in Scientific Modeling”

## MILITARY SERVICE

1998/08 – 1999/03 PzB 10, Kopal Kaserne, St. Pölten - Spratzern, Austria

## PROFESSIONAL CAREER

1999 Programmer for Programmierfabrik GmbH, Hagenberg, Austria  
2000 - 2010 Programmer and IT counselor for Altenbetreuungsschule des Landes OÖ, Linz, Austria  
since 2002 Plugin developer for HeuristicLab (<http://dev.heuristiclab.com>)  
since 2003 Member of the Heuristic and Evolutionary Algorithms Laboratory (<http://heal.heuristiclab.com>)  
2003 – 2004 Tutor for computer science at Johannes Kepler Universität, Linz, Austria  
2004/10 – 2006/01 Research assistant at the Institute for Design and Control of Mechatronical Systems, Johannes Kepler Universität, Linz, Austria  
2005/02 – 2006/03 Junior researcher at Linz Competence Center in Mechatronics (LCM)  
2005/03 – 2005/06 Lecturer at Johannes Kepler Universität; courses in Mechatronics  
2006/02 – 2009/01 Research assistant, Translational Research Program project L284-N04 “GP-Based Techniques for the Design of Virtual Sensors”, funded by the Austrian Science Fund (FWF)  
2006/02 – 2009/01 Research assistant at Research Center Hagenberg, University of Applied Sciences Upper Austria  
since 2006/10 Lecturer at University of Applied Sciences Upper Austria, Hagenberg Campus; courses in Software Engineering, Information Engineering and –Management, and Bioinformatics  
since 2009/02 Professor at the Department for Medical and Bioinformatics, University of Applied Sciences Upper Austria, Hagenberg Campus, School for Informatics, Communications and Media, Campus Hagenberg  
since 2011/02 Head of Bioinformatics Research Group, University of Applied Sciences Upper Austria, Hagenberg Campus (<http://bioinformatics.fh-hagenberg.at>)  
2014/04 – 2014/07 Visiting scholar at BEACON, an NSF Center for the Study of Evolution in Action at Michigan State University, East Lansing, MI.  
2015/04 – 2015/05 Guest professor at Department for Applied Mathematics, Universidad de Alcalá de Henares, Madrid, Spain

## ACTIVITIES IN RESEARCH PROJECTS

LCM / JKU (DesReg)	Cooperation with VA-I: "Fault Detection and Isolation"; 2004–2005 [researcher]
	Cooperation with AVL: "Automatic Measurement and Plausibility Analysis"; 2004 [researcher]
	Cooperation with VA-I: "Pre-Assessment of Quality of Steel Products"; 2005–2006 [researcher]
F&E FH OÖ	FWF-Project "GP-Based Techniques for the Design of Virtual Sensors"; joint execution by FH OÖ, JKU (DesReg), and LCM; 2006–2009 [researcher]
	Cooperation with Hofer Powertrain: "Data Based Modeling"; 2006 [researcher]
	Cooperation with VA-S: "Using Genetic Programming in the Identification of Model Structures in Measurement Data"; 2007–2008 [researcher]
	Cooperation with Gunytronic: "Identification of Model Structures in Measurement Data"; TIM project, 2008 [researcher]
	Cooperation with MAS Alzheimerhilfe Bad Ischl: "Identification of Influences and Relationships in Data of Patients Suffering from Alzheimer's Disease Using Genetic Programming"; FFG project, 2008 [researcher]
	Josef Ressel Centre for Heuristic Optimization " <i>Heureka!</i> "; since 2009 [researcher]
	Cooperation with Borealis: "Data Based Modeling"; 2010 [researcher]
	Basic research project "Tschechow": Opinion Mining and Bioinformatical Information Retrieval; sponsored by FH OÖ 2010 – 2011 [project leader]
	Research project "MS Amanda": Bioinformatics research project in cooperation with IMP Vienna; 2011 – 2012 [senior researcher]
	Basic research project "DETECTOR + $\mu$ -Prot": Design and Implementation of a Framework for Optimized Structure Analysis in Microscopy Images + Analysis of the Influence of Secondary Substances in Plants on Protein-Protein Interactions in Living Cells; sponsored by FH OÖ 2011 – 2013 [project leader]
	Basic research project "MOdoPS": Model Based Design by Open Source; sponsored by FH OÖ; 2011 – 2013 [senior researcher]
	Research Project "SESAM": Bioinformatics research project in cooperation with IMP Vienna, sponsored by the Austrian Research Funding Agency (FWF); 2013 – 2016 [deputy project leader, research partner]
	Research Project "NanoDetect": Bioinformatics research project in cooperation with Blutzentrale des RK OÖ, Olympus Austria, and Trauma Care Consult, sponsored by the Austrian Research Funding Agency (FFG); 2013 – 2016 [project leader]
	Research Project "Transplant": Bioinformatics research project in cooperation with Blutzentrale des RK OÖ, sponsored by the European Union and the Upper Austrian Government within the Research Programme Regio13; 2013 – 2015 [deputy project leader, research partner]
	Research Project "TOMO3D": Bioinformatics research project in cooperation with Blutzentrale des RK OÖ and Olympus Austria, sponsored by the Austrian Research Funding Agency (FFG); 2014 – 2018 [project leader]
	Basic research project "Immune Profiler"; 2014 – 2016 [senior researcher]
	Basic research project "GlucoStar"; 2014 – 2016 [deputy project leader]
	K-Project "HOPL": Heuristic Optimization in Production and Logistics; sponsored by FFG; 2014-2018 [senior researcher]

## AWARDS

2002, 2003	Scholarships of the Technical Faculty at the Johannes Kepler University for excellent merits in studies in the years 2002 and 2003.
2004/04	Best Paper Award of EMCSR 2004 conference for the contribution "Identifying Nonlinear Model Structures Using Genetic Programming Techniques" in the session "Theory and Applications of Artificial Intelligence"
2005/07	Best Paper Award of WMSCI 2005 conference for the contribution "Solving Multiclass Classification Problems by Genetic Programming" in the session "Management Information Systems"
2008/12	Junior Researcher Award 2008 of University of Applied Sciences Upper Austria
2010/02	Best Teacher Award (First Rank) of the Studies "Medical and Bioinformatics", "Biomedical Informatics" and "Bioinformatics" at Upper Austria of Applied Sciences, Campus Hagenberg
2011/09	Best Paper Award of the 8 <sup>th</sup> International Mediterranean and Latin American Modeling Multiconference (IMMM 2011) conference for the contribution "On the use of estimated tumor marker classifications in tumor diagnosis prediction" in the 23 <sup>rd</sup> European Modeling & Simulation Symposium (EMSS 2011)
2011/09	Best Teacher Award (Second Rank) of the Studies "Medical and Bioinformatics", "Biomedical Informatics" and "Bioinformatics" at Upper Austria of Applied Sciences, Campus Hagenberg
2015/12	Researcher Award 2015 of University of Applied Sciences Upper Austria

## REVIEWING, PARTICIPATION IN PROGRAM COMMITTEES

2005	Reviewer for the International Mediterranean Modeling Multiconference (I3M'05)
2006	Reviewer for the Workshop on Nature Inspired Distributed Computing (NIDISC'06)
2006	Reviewer for the Workshop on Medical Applications at the Genetic and Evolutionary Computation Conference (GECCO 2006; MedGEC '06)
2008	Reviewer for the Workshop on Soft Computing and Modelling & Simulation at the 20th European Modeling and Simulation Symposium (EMMS 2008)
2009	Reviewer and program committee member for the International Conference on Computer Aided Systems Theory (EuroCAST 2009)
2009	Reviewer for the Workshop on Parallel Evolutionary Systems at the Genetic and Evolutionary Computation Conference (GECCO 2009)
2009	Reviewer for the Track on Simulation and Modeling in Medicine and Biology at the 21st European Modeling and Simulation Symposium (EMMS 2009)
2009	Reviewer for the International Symposium on Logistics and Industrial Informatics (LINDI 2009)
2009	Reviewer for IEEE Transactions on Evolutionary Computation
2009	Reviewer for IEEE Transactions on Neural Networks
2009	Reviewer for Bentham Science Publishers, Recent Patents on Computer Science
2010	Reviewer for the Workshop on Parallel Evolutionary Systems at the Genetic and Evolutionary Computation Conference (GECCO 2010)
2010	Review of PhD Thesis of Zahid Halim, National University of Computer & Emerging Sciences Islamabad, Pakistan: "Measuring Entertainment and Automatic Generation of Entertaining Games"
2010	Review of PhD Thesis of Amjad Iqbal, National University of Computer & Emerging Sciences Islamabad, Pakistan: "Function Optimization and Clustering using Computational Intelligence Techniques"
2010	Review of PhD Thesis of Hasan Mujtaba, National University of Computer & Emerging Sciences Islamabad, Pakistan: "Learning to Learn: An Automated and Continuous Approach to Learning in Imperfect Environments"
2010	Reviewer for 14th IEEE International Conference on Intelligent Engineering Systems (INES 2010)
2010	Reviewer for 22nd European Modeling and Simulation Symposium (EMMS 2010)
2011	Reviewer for the Foundations of Genetic Algorithms XI (FOGA 2011)
2011	Reviewer and program committee member for the International Conference on Computer Aided Systems Theory (EuroCAST 2011)
2011	Reviewer for the Workshop on Parallel Evolutionary Systems at the Genetic and Evolutionary Computation Conference (GECCO 2011)
2011	Reviewer for IEEE Transactions on Evolutionary Computation
2011	Reviewer for IEEE Transactions on Neural Networks
2011	Reviewer and program committee member for the 23rd European Modeling and Simulation Symposium (EMMS 2011)

2012 Program Committee Member of the International Asia Pacific Conference on Computer Aided System Theory (APCAST 2012)

2012 Reviewer for the International Journal of Simulation and Process Modelling

2012 Reviewer for the Workshop on Parallel Evolutionary Systems at the Genetic and Evolutionary Computation Conference (GECCO 2012)

2012 Reviewer for the 24th European Modeling and Simulation Symposium (EMMS 2012)

2013 Reviewer and program committee member for the International Conference on Computer Aided Systems Theory (EuroCAST 2013)

2013 Reviewer for the Workshop on Parallel Evolutionary Systems at the Genetic and Evolutionary Computation Conference (GECCO 2013)

2013 Reviewer for the International Journal of Simulation and Process Modelling

2013 Reviewer for IEEE Transactions on Evolutionary Computation

2014 Program Committee Member of the International Asia Pacific Conference on Computer Aided Systems Engineering (APCASE 2012)

2014 Reviewer for Springer Soft Computing (SOCO)

2014 Reviewer for Journal of Healthcare Engineering

2014 Reviewer for the Genetic Programming Track at the Genetic and Evolutionary Computation Conference (GECCO 2014)

2014 Reviewer for the Workshop on Evolutionary Computation Software Systems at the Genetic and Evolutionary Computation Conference (EvoSoft 2014)

2014 Reviewer for Springer Genetic Programming and Evolvable Machines (GPEM)

2014 Reviewer for the 26th European Modeling and Simulation Symposium (EMMS 2014)

2015 Reviewer and program committee member for the International Conference on Computer Aided Systems Theory (EuroCAST 2015)

2015 Reviewer for Springer Soft Computing (SOCO)

2015 Reviewer for the Genetic Programming Track at the Genetic and Evolutionary Computation Conference (GECCO 2015)

2016 Reviewer for Springer Soft Computing (SOCO)

2016 Reviewer for the Genetic Programming Track at the Genetic and Evolutionary Computation Conference (GECCO 2016)

2017 Reviewer and program committee member for the International Conference on Computer Aided Systems Theory (EuroCAST 2017)

2017 Reviewer for the Genetic Programming Track at the Genetic and Evolutionary Computation Conference (GECCO 2017)

2017 Reviewer for Elsevier Applied Soft Computing

2017 Reviewer for Springer Soft Computing (SOCO)

2018 Reviewer for the Genetic Programming Track at the Genetic and Evolutionary Computation Conference (GECCO 2018)

2018 Reviewer for Elsevier Applied Soft Computing

2018 Reviewer for Springer Soft Computing (SOCO)