FH-Prof. PD DI Dr. Stephan Winkler

November 2022

CURRENT POSITION

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

PERSONAL DATA

Name:	FH-Prof. PD DI Dr. Stephan 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

PROFESSIONAL CAREER

since 2022/07	Scientific Head of Softwarepark Hagenberg
since 2019/09	Head of the Department for Medical and Bioinformatics and Data Science, University of Applied Sciences Upper Austria, Hagenberg
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"
2015/04 – 2015/05	Guest professor at Department for Applied Mathematics, Universidad de Alcalá de Henares, Madrid, Spain
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.
since 2011/02	Head of Bioinformatics Research Group, University of Applied Sciences Upper Austria, Hagenberg (http://bioinformatics.fh-hagenberg.at)
since 2009/02	Professor at the Department for Medical and Bioinformatics, University of Applied Sciences Upper Austria, Hagenberg
since 2006/10	Lecturer at University of Applied Sciences Upper Austria, Hagenberg Campus; courses in Software Engineering, Information Engineering and –Management, and Bioinformatics
2006/02 – 2009/01	Research assistant at Research Center Hagenberg, University of Applied Sciences Upper Austria
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)
2005/03 – 2005/06	Lecturer at Johannes Kepler Universität; courses in Mechatronics
2005/02 – 2006/03	Junior researcher at Linz Competence Center in Mechatronics (LCM)
2004/10 – 2006/01	Research assistant at the Institute for Design and Control of Mechatronical Systems, Johannes Kepler Universität, Linz, Austria
2003 – 2004	Tutor for computer science at Johannes Kepler Universität, Linz, Austria
since 2003	Member of the Heuristic and Evolutionary Algorithms Labortory (http://heal.heuristiclab.com)
since 2002	Plugin developer for HeuristicLab (http://dev.heuristiclab.com)
2000 - 2010	Programmer and IT counselor for Altenbetreuungsschule des Landes OÖ, Linz, Austria
1999	Programmer for Programmierfabrik GmbH, Hagenberg, Austria

EDUCATION, STUDIES

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"
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"
1990 – 1998	Secondary school, high school: Bischöfliches Gymnasium Kollegium Petrinum, Linz, Austria
1985 – 1990	Elementary schools in Newark, Delaware, USA and Linz, Austria

RESEARCH PROJECTS (EXCERPT)

F&E FH OÖ

since 2022	Research collaboration with SCCH and Backaldrin [project leader]
2020 - 2022	Research collaboration with lingohub GmbH: "Linguist: Translation Quality Analysis"; sponsored by FFG [project leader]
2020	Research collaboration with MAGNA Engineering Center Steyr: "Modeling of thermic networks" [project leader]
2020	Research collaboration with SalesSuckers OG: "Automated analysis of websites"; sponsored by FFG [project leader]
2020 - 2021	Research collaboration with KML Vision: "Optimization of image analysis and machine learning algorithms"; sponsored by FFG [project leader]
2020 - 2022	Research collaboration with PASO Solutions: "b-tastic" [senior researcher]
2018 – 2019	Research project "NGS assessment of donor reactive T cell repertoire" with AKH Wien, Nephroloy [senior researcher]
2018 – 2019	Research project "Multimodal imaging and machine learning - TC-MIML"; sponsored by Center for Technical Innovation in Medicine (TIMed) of FH OÖ [deputy project leader]
2019 - 2020	Research project „Laser-Induced-Surface-Modification zur Erzeugung biokompatibler Mikrostrukturen", sponsored by Center for Technical Innovation in Medicine (TIMed) of FH OÖ [deputy project leader]
2019 - 2021	Research project "KIMIKU" with hello again GmbH; sponsored by FFG [senior researcher]
2019 - 2022	Research project "LeukImmun" (Identification of crucial factors for the development and therapy of leukemia based on immunological data), PhD funding for Julia Vetter [project leader]
2019 - 2022	Research project "SymRegZeit" (Vektor-basierte Genetische Programmierung für Symbolische Regression und Klassifikation mit Zeitreihen), PhD funding for Philipp Fleck [project leader]
2018 – 2020	Collaborative PhD funding for bioinformatics; sponsored by Center for Technical Innovation in Medicine (TIMed) of FH OÖ [project leader]
2018 – 2023	Research project "Biophysikalische Charakterisierung extrazellulärer Biopartikel für die therapeutische Anwendung - BioCETA"; sponsored by FFG [senior researcher]
2018	Research collaboration with TDE Thonhauser Data Engineering GmbH: "Modeling by Symbolic Regression" [project leader]
2018	Research collaboration with BAP Consult: „Identifikation of 3D objects in 2D scans"; sponsored by FFG [project leader]
2017	Research collaboration with OntoJob GmbH: "Automated Web-Crawling"; sponsored by FFG [project leader]
2017 - 2019	Research collaboration with Asoss GmbH: "Software based detection of 3D elements"; sponsored by Land OÖ (Easy2Research) and FFG [project leader]
since 2017	Member of the Scientific Board of the Center for Technical Innovation in Medicine (TIMed) of FH OÖ
since 2017	Research collaboration with Bergkräuter: "Reduction of Herb Contamination" within K-Center FFoQSI - Feed and Food Quality Safety and Innovation [project leader]
since 2017	Research Project "LeiVMed Online": Leistungsvergleich Medizin, research collaboration with Oberösterreichische Gesundheitsholding GmbH (OÖG) [deputy project leader]
2016 – 2019	PHD-Programm II: PhD funding for Sebastian Dorl; sponsored by FH OÖ [deputy project leader]
since 2015	Research collaboration with José Ignacio Hidalgo Pérez et al. at Universidad Complutense Madrid: Modeling of glucose concentrations in diabetes patients
2015 – 2017	Research project "Screening 2.0"; sponsored by Innovatives OÖ 2020 [senior researcher]
2015 – 2017	Research project "Thrombotherm"; sponsored by Innovatives OÖ 2020 [senior researcher]
2015	Research collaboration with Rafael Sendra at Universidad de Alcalá de Henares: Optimization of coefficients of curve parametrizations
2015	Research collaboration with Faschang Service & Management GmbH: "Detection of elements for the OMIS system"; sponsored by Land OÖ (Easy2Research) [project leader]
2014 – 2018	K-Project "HOPL": Heuristic Optimization in Production and Logistics; sponsored by FFG [senior researcher]
2014 – 2016	Basic research project "GlucoStar"; sponsored by FH OÖ [deputy project leader]
2014 – 2016	Basic research project "Immune Profiler"; sponsored by FH OÖ [senior researcher]
2014 – 2018	Research Project "TOMO3D": Bioinformatics research project in cooperation with Blutzentrale des RK OÖ and Olympus Austria, sponsored by the Austrian Research Funding Agency (FFG) [project leader]
2013 – 2015	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 [deputy project leader, research partner]
2013 – 2017	Research Project "SESAM": Bioinformatics research project in cooperation with IMP Vienna, sponsored by the Austrian Research Funding Agency (FWF) [deputy project leader, research partner]
2013 – 2016	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) [project leader]
2011 – 2013	Basic research project "MOdoPS": Model Based Design by Open Source; sponsored by FH OÖ [senior researcher]

2011 – 2013	Basic research project "DETECTOR + µ-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 [project leader]
2011 – 2012	Research project "MS Amanda": Bioinformatics research project in cooperation with IMP Vienna [senior researcher]
2010 – 2013	Research project "Opinion Mining im Web 2.0 - OPMIN"; sponsored by FFG [senior researcher]
2010 – 2011	Basic research project "Tschechow": Opinion Mining and Bioinformatical Information Retrieval; sponsored by FH OÖ [project leader]
2010	Cooperation with Borealis: "Data Based Modeling" [researcher]
2009 – 2013	Josef Ressel Centre for Heuristic Optimization "*Heureka!*" [researcher]
2008	Research collaboration with MAS Alzheimerhilfe Bad Ischl: "Identification of Influences and Relationships in Data of Patients Suffering from Alzheimer's Disease Using Genetic Programming"; FFG project [researcher]
2008	Research collaboration with Gunytronic: "Identification of Model Structures in Measurement Data"; TIM project [researcher]
2007 – 2008	Research collaboration with VA-S: "Using Genetic Programming in the Identification of Model Structures in Measurement Data" [researcher]
2006	Research collaboration with Hofer Powertrain: "Data Based Modeling" [researcher]
2006 – 2009	Research project "GP-Based Techniques for the Design of Virtual Sensors"; sponsored by FWF, joint execution by FH OÖ, JKU (DesReg), and LCM [researcher]

JKU (DesReg) / LCM

2005 – 2006	Cooperation with VA-I: "Pre-Assessment of Quality of Steel Products" [researcher]
2004 – 2005	Cooperation with VA-I: "Fault Detection and Isolation" [researcher]
2004	Cooperation with AVL: "Automatic Measurement and Plausibility Analysis" [researcher]

ADVISING OF PHD THESES

2019	Dr. Viktoria Dorfer, MSc: "Identification of Peptides and Proteins in High Resolution Tandem Mass Spectrometry Data"; JKU Linz, Computer Science
XXXX	Susanne Schaller, MMSc
XXXX	Julia Vetter, MSc
XXXX	Sebastian Dorl, MSc
XXXX	Lukas Kammerer, MSc
XXXX	Andreas Haghofer, MSc
XXXX	Jonas Schurr, MSc

REVIEWING, PROGRAM COMMITTEES

since 2020	Member of the organization committee of Genetic Programming Theory & Practice
2020	Reviewer of PhD theses for Universität für Bodenkultur Wien
2019	Reviewer of PhD theses for Universität Salzburg, Naturwissenschaftliche Fakultät
since 2017	Reviewer for Elsevier Applied Soft Computing
since 2014	Reviewer for the Workshop on Evolutionary Computation Software Systems at the Genetic and Evolutionary Computation Conference (GECCO/EvoSoft)
since 2014	Reviewer for Springer Soft Computing (SOCO)
2014	Reviewer for Springer Genetic Programming and Evolvable Machines (GPEM)
since 2012	Reviewer for the International Journal of Simulation and Process Modelling
since 2012	Program Committee Member of the International Asia Pacific Conference on Computer Aided System Theory (APCAST)
2011	Reviewer for the Foundations of Genetic Algorithms XI (FOGA 2011)
2010	Reviewer for 14th IEEE International Conference on Intelligent Engineering Systems (INES 2010)
since 2010	Reviewer of PhD theses for National University of Computer & Emerging Sciences Islamabad, Pakistan
since 2009	Reviewer for IEEE Transactions on Neural Networks
since 2009	Reviewer for IEEE Transactions on Evolutionary Computation
2009	Reviewer for the International Symposium on Logistics and Industrial Informatics (LINDI 2009)
since 2009	Reviewer for the Workshop on Parallel Evolutionary Systems at the Genetic and Evolutionary Computation Conference (GECCO/PES)
since 2009	Reviewer and program committee member for the International Conference on Computer Aided Systems Theory (EuroCAST)
since 2008	Reviewer for the Workshop on Soft Computing and Modelling & Simulation at the European Modeling and Simulation Symposium (EMMS)
since 2006	Reviewer for the Workshop on Medical Applications at the Genetic and Evolutionary Computation Conference (GECCO/MedGEC)
2006	Reviewer for the Workshop on Nature Inspired Distributed Computing (NIDISC'06)
since 2005	Reviewer for the International Mediterranean Modeling Multiconference (I3M)

AWARDS

2015/12	Researcher Award 2015 of University of Applied Sciences Upper Austria
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
2011/09	Best Paper Award of the 8th 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 23rd European Modeling & Simulation Symposium (EMSS 2011)
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
2008/12	Junior Researcher Award 2008 of University of Applied Sciences Upper Austria
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"
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"
2002, 2003	Scholarships of the Technical Faculty at the Johannes Kepler University for excellent merits in studies in the years 2002 and 2003