Dr.-Ing. Johannes Jordan

Contact Information	*Postal address:* Elsässer Str. 3 79110 Freiburg Germany	*Voice:* +49 (162) 464646 5 *Email:* jordan@lanrules.de *Website:* cv.lanrules.de

Personal Details	Date of Birth: 09 November 1982 in Nuremberg Citizenship: German

Work Experience

Developer / Engineer since 2020
SICK AG, Waldkirch, Germany

Data Scientist since 2015
Molecular Physiology, University of Freiburg, Germany

Consultant 2017
LuxFlux GmbH, Reutlingen, Germany

Research Associate 2010 – 2015
Pattern Recognition Lab,
Friedrich-Alexander-University Erlangen-Nuremberg (FAU), Germany

Software Developer 2007
Google Summer Of Code

Research Assistant 2005 – 2006
Chair of Computer Science 6: Data Management, FAU, Germany

Education

Doctorate, 2010 – 2015
Doctor of Engineering, *magna cum laude*
FAU, Germany

Visiting Scholar, 2013 – 2014
National ICT Australia, Canberra, ACT

Computer Science Studies, 2002 – 2009
Dipl.-Inf. Univ., *High Distinction*
Principle subjects: Computer Graphics, Pattern Recognition, Theoretical Computer Science; Subsidiary subject: Psychology
FAU, Germany

Visiting Student, 2008
State University of New York at Stony Brook, NY

Abitur, 2002
Gymnasium Fränkische Schweiz, Ebermannstadt, Germany

Research Projects

Interactive Analysis of Multispectral and Hyperspectral Image Data, 2017
Dissertation, Prof. Dr.-Ing. Joachim Hornegger,
Pattern Recognition Lab, FAU

An Eye Model as a Means for Integration of Human Vision Cues in Object Classification, 2009
Diploma thesis (equiv. MSc Thesis), top mark, Prof. Elli Angelopoulou, Prof. Dimitris Samaras
Pattern Recognition Lab, FAU, Computer Vision Group, State University of New York at Stony Brook

Dynamische Nachbarschaftsgraphen in der Partikelschwarmoptimierung (Dynamic Neighborhood Topologies in Particle Swarm Optimization), 2007
Student thesis (equiv. BSc Thesis), top mark, Prof. Dr. Rolf Wanka
Lehrstuhl für Hardware-Software-Co-Design, FAU Erlangen-Nürnberg

Publications

J. Schwenk, S. Boudkkazi, M. Kocylowski, A. Brechet, G. Zolles, T. Bus, K. Costa, A. Kollewe, J. Jordan, … & B. Fakler. "An ER assembly line of AMPA-receptors controls excitatory neurotransmission and its plasticity", *Neuron*, vol. 104, no. 4, pp. 680-692, 2019.

V. Kusch, G. Bornschein, D. Loreth, J. Bank, J. Jordan, D. Baur, … & H. Schmidt. "Munc13-3 Is Required for the Developmental Localization of Ca^{2+} Channels to Active Zones and the Nanopositioning of $Ca_v2.1$ Near Release Sensors", *Cell reports*, vol. 22, no. 8, pp. 1965-1973, 2018.

J. Jordan, E. Angelopoulou, A. Maier. "A Novel Framework for Interactive Visualization and Analysis of Hyperspectral Image Data", *Electrical and Computer Engineering*, vol. 2016, no. 2635124, 2016.

T. Köhler, J. Jordan, A. Maier, J. Hornegger. "A Unified Bayesian Approach to Multi-Frame Super-Resolution and Single-Image Upsampling in Multi-Sensor Imaging", *British Machine Vision Conference (BMVC)*, September 2015, pp. 143.1-143.12.

J. Jordan, E. Angelopoulou, A. Robles-Kelly. "An Unsupervised Material Learning Method for Imaging Spectroscopy", *IEEE Joint Conference on Neural Networks*, July 2014, pp. 2428-2435.

J. Jordan, E. Angelopoulou. "Mean-shift Clustering for Interactive Multispectral Image Analysis", *IEEE International Conference on Image Processing*, September 2013, pp. 3790-3794.

J. Jordan, E. Angelopoulou. "Hyperspectral Image Visualization With a 3D Self-organizing Map", *IEEE Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing*, June 2013, pp. 1-4.

A. Maier, Z. Jiang, J. Jordan, C. Riess, H. Hofmann, J. Hornegger. "Atlas-based linear volume-of-interest (ABL-VOI) image correction", *SPIE Medical Imaging 2013: Physics of Medical Imaging*, February 2013, vol. 8668, pp. 8668-83

V. Christlein, C. Riess, J. Jordan, C. Riess, E. Angelopoulou. "An Evaluation of Popular Copy-Move Forgery Detection Approaches", *IEEE Transactions on Information Forensics and Security*, vol. 7, no. 6, pp. 1841-1854, 2012. **2017 IEEE Signal Processing Society Best Paper Award**

J. Jordan, E. Angelopoulou. "Supervised Multispectral Image Segmentation with Power Watersheds", *IEEE International Conference on Image Processing*, September 2012, pp. 1585-1588.

J. Jordan, E. Angelopoulou. "Edge Detection in Multispectral Images Using the n-dimensional Self-Organizing Map", *IEEE International Conference on Image Processing*, September 2011, pp. 3181-3184.

J. Jordan, E. Angelopoulou. "Gerbil - A Novel Software Framework for Visualization and Analysis in the Multispectral Domain", *VMV 2010: Vision, Modeling and Visualization*, November 2010, pp. 259-266.

C. Riess, J. Jordan, E. Angelopoulou. "A Common Framework for Ambient Illumination in the Dichromatic Reflectance Model", *IEEE Color and Reflectance in Imaging and Computer Vision Workshop*, October 2009, pp. 1939-1946.

J. Jordan, S. Helwig, R. Wanka. "Social Interaction in Particle Swarm Optimization, the Ranked FIPS, and Adaptive Multi-Swarms", *Annual conference on Genetic and Evolutionary Computation (GECCO)*, July 2008, pp. 49-56.

Teaching Experience

Computer Science for Engineers, Recitation Sessions

Software Systems, Recitation Sessions

Functional and Logic Programming, Recitation Sessions

Computer Vision, Recitation Sessions

Wavelet Transform in Image Processing, Recitation Sessions

New Methods in Image Forensics, Seminar

Theses Supervision

Janis Fix, "Concept and Prototype of an Alternative Object Identification in Track-and-Trace Systems", BSc thesis, 2021.

Daniel Danner, "Unsupervised Segmentation of Multispectral and Hyperspectral Image Data", Student thesis, 2011.

Ralph Müssig, "Variants of Self-Organizing Maps for Edge Detection", Student thesis, 2011.

David Föhrweiser, "Empirical Analysis of Semi-automatic 2D/3D Image Segmentation Approaches", Student thesis, 2011.

Felix Lugauer, "Self-Organizing Maps for Edge Detection in Multispectral Images", BSc thesis, 2010.

Vincent Christlein, "A Common Framework for Copy-Move Forgery Detection", Student thesis, 2009.

Awards and Honours

Scholarship, Deutscher Akademischer Austauschdienst (DAAD), 2008

Two-times Participant at South Western European Regional Programming Contest (SWERC) of the ACM International Collegiate Programming Contest (ICPC) after local qualifications, 2005 – 2006

Services	Peer review for Real-Time Image Processing (Springer), Geoscience and Remote Sensing Letters (IEEE), Machine Vision and Applications (Springer), Information Fusion (Elsevier), IET Image Processing, and IEEE Workshop on Applications in Computer Vision
	Academic self-governance at FAU: Member of faculty council, CS department steering committee, CS curriculum committee, CS committee for student funds appropriation, FAU student parliament
	Problem setter for local ACM ICPC competition at FAU
Free Software	Gerbil hyperspectral visualization and analysis framework, since 2010
	Mentoring (Gerbil project) in Summer of Code in Space, European Space Agency, 2012 – 2016
	Various small open-source software projects since 2004, some included into several major GNU/Linux distributions
Programming Experience	**Expert Knowledge**: C++17, C, Python, Javascript, Qt, OpenCV, Lua, PHP
	Working Knowledge: Java EE, Perl, OpenGL, SQL, Flux, MATLAB, Bash
	Basic Knowledge: Go, Scheme, Gtk+
	800+ answers on Stack Overflow
System Administration	Ubuntu, Debian GNU/Linux, Arch Linux; Client und Server
	Apache HTTP Server, OpenLDAP, MySQL/MariaDB, QEMU/KVM
Advanced Trainings	**Agiles Projektmanagement: Mit Scrum!** Two-day workshop, Freiburger Akademie für Universitäre Weiterbildung (FRAUW), 2017
	Intercultural Communication: Developing Key Problem-Solving Skills for the International Workplace Two-day workshop, 2014
	Presentation & Rhetoric Two-day workshop, FBZHL Erlangen, 2013
Language Skills	German: native
	English: fluently
	French: basic knowledge
	Russian: basic knowledge
Hobbies and Interests	Maker culture (Freilab e.V., Freiburg; FabLab Erlangen) Literature and film Bouldering, mountaineering, cycling