

# Johannes Jordan

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CONTACT INFORMATION      Pattern Recognition Lab      *Voice:* +49 (9131) 85-27891  
University of Erlangen-Nuremberg      *Fax:* +49 (9131) 303811  
Martensstr. 3      *E-mail:* johannes.jordan@cs.fau.de  
91058 Erlangen      *URL:* www5.cs.fau.de/~jordan  
Germany

EDUCATION      **Doctoral Candidate, 2009 –**  
Pattern Recognition Lab,  
Friedrich-Alexander-University Erlangen-Nuremberg  
**Diplom in Computer Science, High Distinction, 2002 – 2009**  
Friedrich-Alexander-University Erlangen-Nuremberg  
**Visiting Student, 2008**  
State University of New York at Stony Brook  
**Abitur, 2002**  
Gymnasium Fraenkische Schweiz, Ebermannstadt

WORK EXPERIENCE      **Programmer 2007**  
Google Summer Of Code  
**Research Assistant 2005 – 2006**  
CS6: Data Management

RESEARCH INTERESTS      My current research lies in Computer Vision. My special interests are  
**Multispectral Scene Analysis**  
**Illumination and Reflectance Analysis**  
**Image Forensics**

PUBLICATIONS      J. Jordan, E. Angelopoulou. “Mean-shift Clustering for Interactive Multispectral Image Analysis”, *IEEE International Conference on Image Processing*, September 2013, to appear  
J. Jordan, E. Angelopoulou. “Hyperspectral Image Visualization With a 3-D Self-organizing Map”, *IEEE 5th Workshop on Hyperspectral Image and Signal Processing: Evolution in Remote Sensing*, June 2013, to appear  
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 (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

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”, *10th annual conference on Genetic and Evolutionary Computation (GECCO)*, July 2008, pp. 49-56.

AWARDS AND  
HONOURS

2008: Awarded DAAD scholarship to study abroad

2006: Participant at South Western European Regional Programming Contest (SWERC) of the ACM International Collegiate Programming Contest (ICPC) after local qualification

2005: Participant at SWERC of the ACM ICPC after local qualification

RESEARCH  
PROJECTS

**An Eye Model as a Means for Integration of Human Vision Cues in Object Classification**, 2009

Diploma thesis (equiv. MSc Thesis),

Computer Vision, Prof. Elli Angelopoulou, Prof. Dimitris Samaras

Friedrich-Alexander-University Erlangen-Nuremberg, 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),

Efficient Combinatorial Algorithms, Prof. Dr. Rolf Wanka

Friedrich-Alexander-University Erlangen-Nuremberg

TALKS

“This looks shopped! An Introduction to Image Forensics”, at Friedrich-Alexander-University (ACM ICPC NWERC Dinner Speech), 2009

TEACHING  
EXPERIENCE

**2009-2013: Wavelet Transform in Image Processing**, Recitation Sessions

**2012: Computer Vision**, Recitation Sessions

**2011, 2005-2006: Computer Science for Engineers**, Recitation Sessions

**2009: New Methods in Image Forensics**, Seminar

**2004-2005: Software Systems**, Recitation Sessions

**2004: Functional and Logic Programming**, Recitation Sessions

THESES  
SUPERVISION

Daniel Danner, “Unsupervised Segmentation of Multispectral and Hyperspectral Image Data”, Friedrich-Alexander-University Erlangen-Nuremberg, 2011.

Ralph Müssig, “Variants of Self-Organizing Maps for Edge Detection”, Friedrich-Alexander-University Erlangen-Nuremberg, 2011.

David Föhrweiser, “Empirical Analysis of Semi-automatic 2D/3D Image Segmentation Approaches”, Friedrich-Alexander-University Erlangen-Nuremberg, 2011.

Felix Lugauer, “Self-Organizing Maps for Edge Detection in Multispectral Images”, Friedrich-Alexander-University Erlangen-Nuremberg, 2010.

Vincent Christlein, “A Common Framework for Copy-Move Forgery Detection”, Friedrich-Alexander-University Erlangen-Nuremberg, 2009.

SERVICES

2012-2013: Member of faculty council, CS department steering committee

2007-2010: Problem setter for local ACM ICPC competition

2007-2008: Member of the Curriculum Committee (Studienkommission)

2006-2008: Member of the Committee for Student Funds Appropriation

2006-2007: Member of student parliament (Studentischer Konvent)

2006-2007: Member of faculty council

2005-2007: Elected student representative

FREE SOFTWARE

since 2010: [Gerbil](#) multispectral visualization and analysis framework.

2012: Mentoring organization ([Gerbil](#) project) in [ESA Summer of Code in Space](#)

2004, 2005: Open-source software projects [xmms-rootvis](#) and [Pong<sup>2</sup>](#).

Both were included into several major GNU/Linux distributions.

MEMBERSHIPS

[IEEE Signal Processing Society \(IEEE SPS\)](#)

[Computer Science Students' Organization of the Friedrich-Alexander-University Erlangen-Nuremberg \(FSI\)](#)

[FAU FabLab](#), founding member

LANGUAGE

German: native

SKILLS

English: fluently

French: basic knowledge