Professor (W3)

Departments of Informatics and Mathematics

Technical University of Munich

Boltzmannstr. 3

85748 Garching, Germany

http://vision.in.tum.de Email: cremers@tum.de Phone: 089/289-17755



Education

2002	University of Mannheim	Ph.D., Summa cum Laude	Computer Science
1997	University of Heidelberg	Diplom, With Distinction	Theoretical Physics
1994	University of Heidelberg	Vordiplom, Grade 1.0	Mathematics
1994	University of Heidelberg	Vordiplom, Grade 1.0	Physics

Employment

12/09 -	Professor (W3) for Informatics (since 2012 secondary affiliation in Mathematics), Chair of Computer Vision and Artificial Intelligence, TU Munich , Germany.
07/07 - 08/07	Visiting Researcher (with Prof. A. Blake) at Microsoft Research, Cambridge, UK.
10/05 - 11/09	Professor (W2) for Computer Science, Head of Computer Vision and Pattern Recognition Group, University of Bonn .
08/04 - 09/05	Research Scientist, Siemens Corporate Research, Princeton, NJ, Department of Imaging and Visualisation,
	${\it Medical\ image\ analysis:\ 2D/3D\ segmentation,\ registration,\ statistical\ shape\ modeling.}$
12/02 - 08/04	Postdoctoral Researcher, University of California at Los Angeles, Department of Computer Science, with Prof. Stefano Soatto at the UCLA Vision Lab,
	Bayesian methods in Computer Vision: joint motion estimation and segmentation, Level set methods: shape knowledge in level set based segmentation.
06/99 - 11/02	Wiss. Angest., University of Mannheim , Dept. of Math. and Computer Science, with Prof. Christoph Schnörr in the Computer Vision Group,
	Bayesian inference in Computer Vision: statistical shape knowledge in segmentation, Machine learning: probabilistic kernel principal component analysis.
06/98 - $05/99$	Wiss. Angest., Humboldt University, Berlin , Dept. of Biology, with Prof. Andreas V. M. Herz at the Institute of Theoretical Biology,
	Computational neuroscience: equivalence of different field models of neural activity, Signal processing in the brain: the role of feedback in the visual pathway.
01/96 - 05/98	Teaching and Research Assistant, University of Heidelberg , Dept. of Physics with Prof. Andreas Mielke and Prof. Franz Wegner, Statistical Physics,
	Chaos and quantum mechanics: a classically chaotic system in quantum mechanics, Diagonalizing Hamilton operators: Birkhoff transformation vs. flow equation formalism.
06/95 - 09/95	Fulbright scholar, State University of New York at Stony Brook , Dept. of Physics, with Prof. K. K. Likharev in the Rapid Single-Flux-Quantum Lab,
	Development and testing of superconducting computer chips.

Selected Professional Activities

Associate Editor: IEEE T. on Pattern Analysis and Machine Intelligence (PAMI) (2008-2014),

International Journal of Computer Vision (IJCV) (2008-),

SIAM J. on Imaging Sciences (2011-), Dagstuhl OASIcs, IROS '13,...

General Chair: Europ. Conf. on Computer Vision (ECCV) 2018 (in Munich)

Program Chair: Asian Conf. on Computer Vision (ACCV) 2014, EMMCVPR 2009.

Area Chair: CVPR '09, '11, '12, '13, '14, '18, ICCV '11, '13, '17, ECCV '20,...

Scientific Directorate: Schloss Dagstuhl Leibniz Center for Informatics (Honorary Member)

Co-Founder&Coordinator: Munich Center for Machine Learning, ELLIS Munich

Co-Founder: Munich Data Science Institute, FabliTec UG, Artisense Corporation

Selected Honors and Awards

2020	ERC Advanced Grant (3.5 million €)		
2019	Member of the Bavarian Academy of Sciences and Humanities		
2018	IAS Carl von Linde Senior Fellowship		
2018	3DV Best Paper Award		
2018	ICRA Best Vision Paper Award Finalist		
2017	TUM Informatics Best Lecture Award		
2016	Gottfried-Wilhelm-Leibniz Award (2.5 million \in)		
2016	CVPR Best Paper Honorable Mention		
2016	SGP Best Paper Award		
2015	ERC Consolidator Grant (2 million €)		
2014	Google Faculty Research Award		
2013	ICRA Best Vision Paper Award Finalist		
2010	listed among Germany's Top 40 Researchers below 40 (Capital, Dec. 2010)		
2009	ERC Starting Grant (2 million €)		
2005	Emmy Noether Scholarship, 5-year grant from the German Research Foundation (DFG), including funding for 2 full PhD positions		
2005	UCLA Chancellor's Award for Postdoctoral Research 2005, selected among more than 1000 postdoctoral researchers		
2004	Olympus Award 2004 (highest award of the German Pattern Recognition Society)		
2004	Best Paper of the Year 2003 (Intl. Pattern Recognition Society)		
2003	Nomination for Best Thesis in Computer Science 2002 by the Germany Society of Computer Science (Gesellschaft für Informatik)		
2002	DAGM Main Conference Award, German National Conference on Pattern Recognition		
94/95	Fulbright Scholar in Indiana (Indiana State Univ.) and New York (SUNY at Stony Brook)		
1993	Member of German Nat. Academic Foundation (Studienstiftung des deutschen Volkes) (less than top 0.5% of German university students), $1993-1998$		

Selected Patents

EP20130190218 An apparatus and method for tracking and reconstructing 3D objects

EP2530623 Wave kernel signature for feature description

US7724954 Method and system for interactive image segmentation

System and method for image registration using nonparametric priors and US20070165943

statistical learning techniques

US7889922 Method and system for histogram calculation using a graphics processing unit

US7873185 Method for detection and tracking of deformable objects

US7672516 Statistical priors for combinatorial optimization: efficient solutions via graph cuts

Efficient kernel density estimation of shape and intensity priors for level set US7773806

segmentation

Language Skills

English (5 years in the US), French (1 1/2 years in France), German (native language),

Russian (1/2 year in Russia),Chinese & Spanish (several years at university in Heidelberg/Berlin)

Personal Interests

Music: several years of singing in choirs in Heidelberg, Berlin and Bonn

10 years of Judo, rock climbing, running, swimming, snowboarding, scuba diving, surfing Sports:

Theater: 2 semesters at Heidelberg University

References

Professor Stefano Soatto

Department of Computer Science

University of California, Los Angeles, CA 90095

Phone: +1-310-825-4840 Email: soatto@cs.ucla.edu

Professor Antonin Chambolle

Centre de Mathématiques Appliquées

Ecole Polytechnique, 91128 Palaiseau, France

Phone: +33-169334619

Email: antonin.chambolle@polytechnique.fr

Professor David Mumford

Division of Applied Mathematics Brown University, Providence, RI 02912

Phone: +1-401-863-3441

Email: David Mumford@brown.edu

Professor Andrew Zisserman

Department of Engineering Science

University of Oxford, Oxford OX1 3PJ, UK

Phone: +44-1865-283056 Email: az@robotics.ox.ac.uk

Prof. Dr. Joachim Weickert

Dept. of Math. and Computer Science

Saarland University, 66041 Saarbrücken, Germany

Phone: +49-681-302-64380

Email: weickert@math.uni-saarland.de

Professor Andrew Blake

Consultant in Artificial Intelligence

Chairman of Samsung's AI Research Centre SAIC

Phone: +44-300-770-1912

Email: ab@blake.ai