

PD Dr.-Ing.

# Lena Maier-Hein

CURRICULUM VITAE



- \* 10. 01. 1980 in Hamburg
- 🌐 German
- 💍 married, two children
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## Professional Experience

since 12 / 2016	Head of Department Computer-assisted Medical Interventions, German Cancer Research Center (DKFZ), Heidelberg Research topics: Surgical data science, Computer assisted medical procedures, Computational biophotonics
07 / 2012 – 11 / 2016	Head of Junior group Computer-assisted Interventions, DKFZ
04 / 2012 – 06 / 2012	Visiting researcher at Imperial College, London
since 10 / 2009	Secondary employment as university lecturer at Heilbronn University / University of Heidelberg
05 / 2009 – 06 / 2012	Postdoctoral fellow at the Div. of Medical and Biological Informatics (Prof. Dr. Hans-Peter Meinzer), DKFZ
10 / 2000 – 07 / 2005	Student research assistant at Karlsruhe Institute of Technology (KIT) and Forschungszentrum Informatik (FZI), Karlsruhe

## Education

09 / 2013	Habilitation at the University of Heidelberg
04 / 2009	Dr.-Ing. with distinction (summa cum laude) awarded by KIT
10 / 2005 – 12 / 2008	Ph.D. scholarship holder within Research Training Group 1126: Intelligent Surgery, Div. Medical and Biological Informatics, DKFZ, Heidelberg
10 / 1999 – 08 / 2005	Diploma (Dipl.-Inform.) in Computer Science at KIT mark 1.0 (A-level with distinction),
09 / 2002 – 06 / 2003	Study abroad at Imperial College, London (Great Britain); degree: International diploma
09 / 1990 – 06 / 1999	Abitur at the Albert-Schweitzer-Gymnasium, Hamburg; mark: 1.0
09 / 1996 – 06 / 1997	School abroad at Hallandale High School, Florida (USA); GPA: 4.6

## Honors and Awards (Selection)

12 / 2017	Berlin-Brandenburg Academy Prize 2017
12 / 2016	Emil Salzer Prize 2016
06 / 2016	Best paper at the conference Information Processing in Computer-assisted Interventions (IPCAI) 2016 (as supervisor)
06 / 2016	Best poster at the conference Medizin 4.0 (Hanns-Martin Schleyer Stiftung) 2016

06 / 2015	Best paper at the conference Information Processing in Computer-assisted Interventions (IPCAI) 2015 (as supervisor)
10 / 2015	Best paper at the conference Computer- und Roboterassistierte Chirurgie (CURAC) 2015 (as supervisor)
06 / 2015	Best paper at the conference IPCAI 2015 (as supervisor)
06 / 2015	Kikuchi Frugal Technology Award 2015 (as supervisor) awarded by the International Society for Computer Assisted Surgery (ISCAS)
09 / 2014	Best paper, runner up, at the Medical Image Computing and Computer Assisted Intervention (MICCAI) workshop CARE (as supervisor)
07 / 2014	Among "Top 40 under 40" in Science in/from Germany, selected by the business journal Capital
05 / 2013	Heinz Maier-Leibnitz Prize, awarded by the German Research Foundation (DFG)
03 / 2013	Best scientific contribution and best poster at the conference Bildverarbeitung für die Medizin 2013 (as supervisor)
09 / 2011	Best scientific talk, 2nd prize, at the 23rd Meeting of the Society for Medical Innovation and Technology (SMIT) 2011, Tel Aviv, Israel
04 / 2010	Ingrid-zu-Solms Prize for Natural Sciences 2009 / 2010 awarded by the Ingridzu-Solms Stiftung
07 / 2009	Waltraud-Lewenz-Prize 2008 for outstanding scientific work awarded by the DKFZ
04 / 2009	PhD from KIT with distinction
03 / 2009	Innovation award (material expenses) granted by the B.Braun Stiftung
04 / 2008	Best scientific talk at the conference Bildverarbeitung für die Medizin 2008
12 / 2007	Best Graduate Award 2007, awarded by Research Training Group 1126: Intelligent Surgery
03 / 2007	Best scientific poster at the conference Bildverarbeitung für die Medizin 2007
02 / 2007	Nomination for best student paper award at the conference SPIE Medical Imaging 2007
07 / 2006	Award for an outstanding diploma thesis, granted by the Förderverein des Forschungszentrums Informatik, Karlsruhe

## Scholarships

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10 / 2005 – 09 / 2008	Ph.D. scholarship within Research Training Group 1126: Intelligent Surgery funded by the DFG
05 / 2002 – 07 / 2005	Merit scholarship for outstanding achievements, German National Academic Foundation (Studienstiftung des Deutschen Volkes)
09 / 2002 – 06 / 2003	Scholarship in support of studies abroad, German Academic Exchange Service (DAAD)
10 / 2001 – 09 / 2004	Full graduate study grant for outstanding achievements, Agilent Technologies (Waldbronn, Germany)
01 / 2000 – 03 / 2009	Online scholarship, E-fellows.net

## Research Grants

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07 / 2017 – 01 / 2020	VIP+ grant: "EchoTrack" (principal investigator (PI))
08 / 2017 – 02 / 2020	BMW grant: "OR 4.1" (co-PI)

06 / 2016 – 05 / 2018	Intuitive Surgical grant: “Targeted fluorescence-guided surgery with the da Vinci Si” (PI)
07 / 2015 – 06 / 2020	European Research Council (ERC) Starting Grant: “Computational biophotonics in endoscopic cancer diagnosis and therapy” (PI)
06 / 2014 – 05 / 2016	Klaus Tschira Stiftung: “Endoscopy meets computer science: Precise navigation for minimally-invasive surgery” (co-PI)
since 07 / 2012	DFG Collaborative Research Project (SFB) 125: Cognition-guided surgery: “Knowledgebased navigated liver surgery” (co-PI)
06 / 2012 – 03 / 2014	DFG Research Training Group 1126: Intelligent Surgery: “Planning and navigation in ablation therapy” (co-PI)
06 / 2012 – 03 / 2014	DFG Research Training Group 1126: Intelligent Surgery: “Navigated liver resection” (co-PI)
05 / 2012 – 04 / 2013	Intramural funding program of the DKFZ: “Radiofrequency identification (RFID) technique for tracking of medical instruments” (PI)
08 / 2010 – 07 / 2013	DFG project: “Time-of-Flight camera technique for navigated visceral surgery” (PI)

## Keynotes and Invited Talks (Selection)

11 / 2017	AIS Challenge: Live Surgery & The Operating Theatre of the Future
03 / 2017	134 <sup>th</sup> Annual Congress of the German Society for Surgery (Munich, Germany)
03 / 2017	Annual Congress of the German Network for Evidence-based Medicine (Hamburg, Germany)
11 / 2016	First European Workshop of MedTech Alsace (Strasbourg, France)
09 / 2016	European Health Science Match (Heidelberg, Germany)
02 / 2016	Dutch society of Pattern Recognition and Image Processing - Spring 2016 Meeting (Rotterdam, The Netherlands)
02 / 2016	3rd EMBO Conference on Visualizing Biological Data (Heidelberg, Germany)
02 / 2016	BioPro Baden-Württemberg Meet and Match: Optical Imaging: Future Trends in Medical Applications (Mannheim, Germany)
06 / 2015	2nd International Workshop on Medical Imaging and Cognition-Guided Surgery (Heidelberg, Germany)
10 / 2014	British Computer Society technical meeting: Surgical vision and biophotonics (London, UK)
10 / 2014	1st Conference on Image-Guided Interventions (Magdeburg, Germany)
07 / 2014	Hamlyn Symposium 2014: Surgical Imaging Workshop (London, UK)
06 / 2013	Computer-assisted Radiology and Surgery (CARS) 2013: Clinical Day (Heidelberg, Germany)
09 / 2011	14th Korea-Germany Joint Workshop on Advanced Medical Image Processing (Heidelberg, Germany)
07 / 2011	Joint Workshop on New Technologies for Computer/Robot Assisted Surgery 2011 (Graz, Austria)
06 / 2011	ESF EMRC Workshop on Image-guided Laparoscopic Therapies 2011 (Caceres, Spain)
06 / 2011	Computer Integrated Surgery (CIS) Workshop 2011 (Budapest, Hungary)
10 / 2010	Computer Integrated Surgery and Interventional Robotics Tutorial at the first International Conference on Applied Bionics and Biomechanics

## Academic services (Selection)

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2017	Program co-chair for the international conference Medical Image Computing and Computer Assisted Intervention (MICCAI) 2017
06 / 2016	General chair of the first international workshop on Surgical Data Science 2016
09 / 2015	General chair of the Endoscopic Vision Challenge as part of the conference MICCAI 2015
since 2015	Deputy Editor for the International Journal of Computer Assisted Radiology and Surgery
2015	Program chair for the international conference IPCAI 2015
since 2014	Board member of the International Society for Computer Aided Surgery (ISCAS)
since 2014	Head of the ISCAS Open Science working group
06 / 2013	General chair of the international workshop "5th ISCAS surgical workshop on computer-assisted liver surgery" at the conference Computer-assisted Radiology and Surgery (CARS) 2013
since 2009	Member of program committee of international and national conferences including MICCAI 2015, SPIE Medical Imaging 2013 – 15, IPCAI 2012 – 15, Bildverarbeitung für die Medizin (BVM) 2012 – 15, Computer- und Roboterassistierte Chirurgie (CURAC) 2010 – 14, World Congress 2009 on Medical Physics and Biomedical Engineering
since 2008	Reviewer / Associate editor for international journals including Medical Image Analysis, IEEE Transactions on Medical Imaging, IEEE Transactions on Image Processing, IEEE Transactions on Biomedical Engineering, Medical Physics, International Journal of Computer-assisted Radiology and Surgery
since 2008	Reviewer for international conferences including MICCAI, IPCAI, CURAC, BVM

## Teaching (Selection)

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12 / 2014	Lecturer at the Hamlyn Winter School
02 / 2012	Online lecture "Pairing real and virtual: Registration procedures in the OR" as part of the IRCAD B.E.S.T Innovation Course
12 / 2011	Baden-Württemberg Certificate for University Didactics
09 / 2011	Organization of the tutorial "3D surface reconstruction for laparoscopic surgery" at the conference MICCAI 2011
since 03 / 2011	Graduate course Current Challenges in Medical Image Analysis as lecturer for Heilbronn University / University of Heidelberg
03 / 2010 – 08 / 2010	Graduate course Image Processing, as lecturer for Heilbronn University / University of Heidelberg
since 2009	(Co-) Supervision of doctoral/master/bachelor theses
09 / 2009 – 08 / 2012	Graduate course Medical systems for diagnosis and therapy support, as lecturer for Heilbronn University / University of Heidelberg
10 / 2000 – 04 / 2001	Tutorial Computing I as student lecturer for KIT

## Other activities

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2009	Winner of the German Championships in Beachbasketball 2009
2001 – 2005	Voluntary service as student head of the department of basketball at the Institute of Sports and Sports Science, KIT
since 1986	Hobbies: Basketball, piano, traveling