
PETER SALZ SOFTWARE DEVELOPMENT

CV

Date: 07.01.2022



+49 151 72900109
psalz.app.dev@web.de

<https://petersalz.com>

Turnierstraße 69a
55218 Ingelheim
Germany

Personal Information

Name	Dr.-Ing. Peter Salz
Address	Turnierstraße 69a 55218 Ingelheim Germany
Nationality	German

Work Experience

Since 02/2020	Peter Salz Software Development, Ingelheim <ul style="list-style-type: none">• Freelancer<ul style="list-style-type: none">• App Development<ul style="list-style-type: none">• TwoSlideOver for iPhone & iPad• Satoshi Converter for iPhone, iPad & Mac• Software Development• Consulting
07/2016 - 06/2021	Fritz Stephan Medizintechnik GmbH, Gackebach <ul style="list-style-type: none">• Research & Development<ul style="list-style-type: none">• Software Developer
02/2017 - 03/2019	Innovation Center Computer Assisted Surgery (ICCAS) <ul style="list-style-type: none">• Medical Faculty, University of Leipzig• Research Group Life Support Systems<ul style="list-style-type: none">• Deputy Group Leader• Projects EMU & IMPACT
07/2014 - 06/2016	University of Kaiserslautern <ul style="list-style-type: none">• Computer Graphics Group<ul style="list-style-type: none">• Researcher (PostDoc)
07/2014 - 06/2016	University of Kaiserslautern <ul style="list-style-type: none">• Nachwuchsring<ul style="list-style-type: none">• Member of the steering committee

Work Experience

10/2006 - 06/2014

University of Kaiserslautern

- Research and Teaching Assistant
 - Computer Graphics Group
 - Software Engineering Group
 - Numerical Algorithms Group
 - Geometric Algorithms Group

09/2005 - 10/2005

IBM Deutschland GmbH, Mainz

- Working student

02/2005 - 03/2005

IBM Deutschland GmbH, Mainz

- Internship

05/2004 - 01/2005

Reha-Klinik Nahetal, Bad Kreuznach

- Civilian Service

Education

01/2011 - 06/2014

University of Kaiserslautern

- DFG-funded PhD program International Research Training Group (IRTG) 1131, Department of Computer Science
- *Degree:* Doctor of Engineering (Dr.-Ing.), 31.07.2014
- *Title of dissertation thesis:* Towards Patient-specific Electrical Impedance Tomography using 3D Thorax Models

10/2008 - 01/2011

University of Kaiserslautern

- Master studies of Computer Science
- *Degree:* Master of Science (M.Sc.), 11.01.2011
- *Major:* Visualization / Artificial Intelligence
- *Minor:* Economics
- *Title of master's thesis:* Automated Tracking of Threats in Imagery from mm-wave Scanners

04/2005 - 05/2008

University of Kaiserslautern

- Bachelor studies of Computer Science
- *Degree:* Bachelor of Science (B.Sc.), 06.05.2008
- *Major:* Human Computer Interaction / Computer Graphics
- *Minor:* Mathematics
- *Title of bachelor's thesis:* Zeit-dynamische Volumen-Visualisierung multimodal PAR3-EGFP getaggtter Zellen des Auges von „Danio rerio“

03/2004

Gymnasium an der Stadtmauer, Bad Kreuznach

- Final secondary-school examinations
- *Majors:* Mathematics, Physics, English

Knowledge

Languages

- German (Native)
- English (Fluent)
- French (Basic)
- Portuguese (Basic)

Programming Languages

- Swift
- Metal
- C++
- Matlab
- QT
- Python
- PHP
- JavaScript
- OpenGL

Tools (Selection)

- Codebeamer
- Trello
- Git
- MS Office
- MS Project

Awards

2016

University of Kaiserslautern

- Nachwuchsring
- Travel sponsorship for research stay in Sao Paulo, Brazil
- Award amount: 574€

2015

Summer Course on Image-based Biomedical Modeling

- Park City, UT, USA
- Sponsorship
- Sponsorship ca. 3.000\$

2015

Klaus-Tschira-Preis für verständliche Wissenschaft

- Prize money: 5.000€
- Article title: „Live-Übertragung aus der Lunge“

2008

University of Kaiserslautern

- Department of Computer Science
 - Teaching Award: Best Teaching Assistant for Theoretical Computer Science

2005

University of Kaiserslautern

- Freshman Sponsorship

Kind regards,

A handwritten signature in black ink, appearing to read "Peter Salz", with a long, sweeping flourish extending from the end of the name.

Peter Salz, 07.01.2022

ATTACHMENTS:

- Publications
- Reviewer Experience
- Stays abroad
- Conferences & Workshops
- Teaching Experience

Publications	
	Peer-reviewed Papers
2020	<p>Differential lung ventilation assessed by Electrical Impedance Tomography in Ultrasound-guided anterior suprascapular nerve block vs. interscalene brachial plexus block</p> <ul style="list-style-type: none"> • David Petroff, Martin Wiegel, Virginia Pech, Peter Salz, Julia Mrongowius, Andreas W. Reske • European Journal of Anesthesiology • December 2020, 37(12), pp. 1105-1114, DOI: 10.1097/EJA.0000000000001367
2020	<p>Detection of posttraumatic pneumothorax using Electrical Impedance Tomography: An observer-blinded study in pigs with blunt chest trauma</p> <ul style="list-style-type: none"> • F. Girrbaach, T. Landeck, D. Schneider, S. Reske, G. Hempel, S. Hammermüller, U. Gottschaldt, P. Salz, K. Noreikat, S. Stehr, H. Wrigge, A.W. Reske • PLoS ONE • January 2020, 15(1):e0227518, DOI: 10.1371/journal.pone.0227518
2019	<p>Mechanical Ventilation Strategies Targeting Different Magnitudes of Collapse and Tidal Recruitment in Porcine Acid Aspiration-Induced Lung Injury</p> <ul style="list-style-type: none"> • J. Haase, D. Buchloh, S. Hammermüller, P. Salz, J. Mrongowius, N.C. Carvalho, A. Beda, A. Rau, H. Starke, P. Spieth, C. Gitter, T. Muders, H. Wrigge, A.W. Reske • Journal of Clinical Medicine Research • August 2019, 8 (8): 1250, DOI: 10.3390/jcm8081250
2018	<p>One-lung ventilation and Pneumothorax detection using Electrical Impedance Tomography: A preliminary study report</p> <ul style="list-style-type: none"> • T. Landeck, S. Prägler, P. Salz, J. Mrongowius, A.W. Reske, T. Neumuth, F.F. Girrbaach • Proceedings of 17. Jahrestagung der Deutschen Gesellschaft für Computer- und Roboterassistierte Chirurgie (CURAC) • Leipzig, 13-15 September 2018, pp. 189-192, ISBN 978-3-00-060786-8

Publications	
2018	<p>Electrical Impedance Tomography for ventilation delay analysis</p> <ul style="list-style-type: none"> • R. Fuchs, J. Mrongowius, A.W. Reske, T. Neumuth, P. Salz • Proceedings of 17. Jahrestagung der Deutschen Gesellschaft für Computer- und Roboterassistierte Chirurgie (CURAC) • Leipzig, 13-15 September 2018, pp. 192-194, ISBN 978-3-00-060786-8
2018	<p>Electrical Impedance Tomography Lung Imaging with partial access to the thorax: A simulation study</p> <ul style="list-style-type: none"> • J. Mrongowius, A.W. Reske, T. Neumuth, P. Salz • Proceedings of 17. Jahrestagung der Deutschen Gesellschaft für Computer- und Roboterassistierte Chirurgie (CURAC) • Leipzig, 13-15 September 2018, pp. 40-42, ISBN 978-3-00-060786-8
2018	<p>Respiratorisches Versagen: Innovationen zur Diagnostik und Therapie</p> <ul style="list-style-type: none"> • Gunter Hempel, Philipp Simon, Peter Salz, Hermann Wrigge • Anästhesie. Intensivmed. Notfallmed. Schmerzther. • 2018, 53 (02): pp. 126-140, DOI: 10.1055/s-0043-108216
2018	<p>Was gibt es Neues in der computerassistierten Chirurgie?</p> <ul style="list-style-type: none"> • C. Chalopin, L. Landgraf, A. Melzer, T. Neumuth, S. Oeltze-Jafra, P. Salz • Was gibt es neues in der Chirurgie? • 2018, Landsberg am Lech; ecomed-Storck GmbH; p. 51-68
2017	<p>Good practices learned from designing a more interactive project based visual analytics course</p> <ul style="list-style-type: none"> • José Tiberio Hernandez, Guerra-Gomez, Peter Salz, Humayoun, Fernández, Klaus Madlener, Hans Hagen • International Research Symposium on Problem Based Learning (IRSPBL 2017) • Bogotá, Kolumbien

Publications

2014	<p>Influence of different thorax models on anatomical precision of EIT</p> <ul style="list-style-type: none"> • Peter Salz, Andreas Reske, Hermann Wrigge, Gerik Scheuermann, Hans Hagen • Proceedings of the 15th International Conference on Biomedical Applications of EIT • 2014, p. 80, ISBN 978-0-7709-0577-4
2014	<p>Improving Visual Communication for EIT-based Lung Research</p> <ul style="list-style-type: none"> • Christina Gillmann, Peter Salz • Proceedings of the IEEE Pacific Visualization Symposium • Visualization Notes, pp. 291-205, 2014
2013	<p>Improving Electrical Impedance Tomography Imaging of the Lung with Patient-specific 3D Models</p> <ul style="list-style-type: none"> • Peter Salz, Andreas Reske, Hermann Wrigge, Gerik Scheuermann, Hans Hagen • Short Paper Proceedings of EuroVis workshop on Visualization in Medicine and Life Sciences (VMLS 2013) • Eurographics Digital Library (part of Computer Graphics Forum Journal), pp. 49-53, 2013
2012	<p>Texture-based Tracking in mm-wave images</p> <ul style="list-style-type: none"> • Peter Salz, Gerd Reis, Didier Stricker • Open Access Series in Informatics • Volume 27, pp. 89-101, ISBN 978-3-939897-46-0, 2012
2008	<p>Time-Dynamic Volume Visualization of Multimodally Tagged Body Cells</p> <ul style="list-style-type: none"> • Peter Salz, Gerd Reis • Proceedings of the 8th IASTED International Conference on Visualization, Imaging, and Image Processing • pp. 137-142, ISBN 978-0-88986-759-8, ACTA Press, 2008
	<p>Dissertation</p>
2014	<p>Towards Patient-specific Electrical Impedance Tomography using 3D Thorax Models</p> <ul style="list-style-type: none"> • Peter Salz • Online publiziert durch Technische Universität Kaiserslautern, https://nbn-resolving.org/urn:nbn:de:hbz:386-kluedo-38487
	<p>Talks and Posters</p>

Publications

12.04.2016	<p>Towards Patient-specific Electrical Impedance Tomography using 3D Thorax Models</p> <ul style="list-style-type: none">• Peter Salz• Invited Talk• Timpel / University of Sao Paulo, Brasilien
08.07.2014	<p>Quantitative Computed Tomography: Medical applications of 3D image processing</p> <ul style="list-style-type: none">• Peter Salz• Gastvorlesung „Volume Image Processing and Analysis“• Technische Universität Kaiserslautern
2013	<p>Towards patient-specific Electrical Impedance Tomography: A precise anatomical model for image reconstruction</p> <ul style="list-style-type: none">• Peter Salz, Andreas Reske, Hermann Wrigge, Gerik Scheuermann, Hans Hagen• Abstract and Talk at ICEBI & EIT Conference 2013 (peer-reviewed, international conference)• Heilbad Heiligenstadt, Deutschland
2012	<p>User-guided Segmentation of Thoracic Computed Tomography Data for Electrical Impedance Tomography Image Reconstruction</p> <ul style="list-style-type: none">• Peter Salz, Andreas Reske, Hermann Wrigge, Gerik Scheuermann, Hans Hagen• Post at BioVis Symposium, VisWeek 2012 (peer-reviewed, international conference)• Seattle, WA, USA
02.11.2012	<p>Providing Anatomical Context for Electrical Impedance Tomography Using Individualized Body Models</p> <ul style="list-style-type: none">• Peter Salz• Invited Talk• Scientific Computing and Imaging Institute, University of Utah, Salt Lake City, USA
2012	<p>An Interactive Workflow to segment Thoracic CT Data for Electrical Impedance Tomography Image Reconstruction</p> <ul style="list-style-type: none">• Peter Salz, Andreas Reske, Hermann Wrigge, Gerik Scheuermann, Hans Hagen• Poster at VCBM 2012 (peer-reviewed, international conference)• Norrköping, Schweden

Reviewer Experience

2016	<ul style="list-style-type: none">• IEEE Visualization Conference• Sensors Open Access Journal
2015	<ul style="list-style-type: none">• IEEE Visualization Conference
2014	<ul style="list-style-type: none">• IEEE Visualization Conference• Sensors Open Access Journal
2013	<ul style="list-style-type: none">• IEEE Visualization Conference• IEEE Pacific Visualization Conference (PacificVis)
2012	<ul style="list-style-type: none">• IEEE Visualization Conference• EG/VGTC Conference on Visualization (EuroVis)

Stays abroad

04/2016	Universität Sao Paulo, Brasilien <ul style="list-style-type: none">• Research stay
07/2015	Park City, UT, USA <ul style="list-style-type: none">• Summer Course on Image-based Biomedical Modeling• Participant
06/2015	Universidad de los Andes, Bogotá, Colombia <ul style="list-style-type: none">• Research stay• Lecturer Summer School on Visual Analytics
10/2013	Scientific Computing and Imaging Institute, Salt Lake City, UT, USA <ul style="list-style-type: none">• Research stay
10/2012 - 11/2012	Scientific Computing and Imaging Institute, Salt Lake City, UT, USA <ul style="list-style-type: none">• Research stay
09/2011 - 12/2011	Scientific Computing and Imaging Institute, Salt Lake City, UT, USA <ul style="list-style-type: none">• Research stay

Conferences & Workshops

07/2015	Summer Course on Image-based Biomedical Modeling (IBBM 2015) <ul style="list-style-type: none">• Park City, UT, USA• Participant
06/2015	Summer School on Visual Analytics <ul style="list-style-type: none">• Bogotá, Colombia• Lecturer

Conferences & Workshops

11/2014	IEE VIS <ul style="list-style-type: none">• Paris, France• Participant
04/2014	15th International Conference on Biomedical Applications of Electrical Impedance Tomography (EIT 2014) <ul style="list-style-type: none">• Gananoque, Canada• Speaker
03/2014	7th International Pacific Visualization Symposium (PacificVis 2014) <ul style="list-style-type: none">• Yokohama, Japan• Participant, Co-author
10/2013	IEE VisWeek <ul style="list-style-type: none">• Atlanta, GA, USA• Participant
06/2013	Eurographics Conference on Visualization (EuroVis 2013) and 3rd International Workshop on Visualization in Medicine and Life Sciences (VMLS 2013) <ul style="list-style-type: none">• Leipzig, Germany• Speaker
04/2013	15th International Conference on Electrical Bio-Impedance and 14th Electrical Impedance Tomography (ICEBI & EIT 2013) <ul style="list-style-type: none">• Heilbad Heiligenstadt, Germany• Speaker
10/2012	IEE VisWeek <ul style="list-style-type: none">• Seattle, WA, USA• Poster Presenter
09/2012	3rd Eurographics Workshop on Visual Computing for Biology and Medicine (VCBM 2012) <ul style="list-style-type: none">• Norrköping, Sweden• Poster Presenter
10/2011	IEE VisWeek <ul style="list-style-type: none">• Providence, RI, USA• Participant
07/2010	2nd Eurographics Workshop on Visual Computing for Biology and Medicine <ul style="list-style-type: none">• Leipzig, Germany• Participant

Conferences & Workshops

08/2008	8th IASTED International Conference on Visualization, Imaging, and Image Processing (VIIP 2008) <ul style="list-style-type: none">• Palma de Mallorca, Spain• Speaker
----------------	---

Teaching Experience

2015	University of Kaiserslautern <ul style="list-style-type: none">• Department of Computer Science• Scientific Visualization• M.Sc. Lecture• Lecturer
2015	University of Kaiserslautern <ul style="list-style-type: none">• Department of Computer Science• Geometric Modeling• M.Sc. Lecture• Substitute Lecturer
2014	University of Kaiserslautern <ul style="list-style-type: none">• Department of Computer Science• Algorithmic Geometry• M.Sc. Lecture• Lecturer
2011 - 2014	University of Kaiserslautern <ul style="list-style-type: none">• Department of Computer Science• Computer Graphics• B.Sc. Project• Tutor
2011 - 2012	University of Kaiserslautern <ul style="list-style-type: none">• Department of Computer Science• Computer Graphics• B.Sc. Lecture• Teaching Assistant
2009 - 2010	University of Kaiserslautern <ul style="list-style-type: none">• Department of Computer Science• Software Engineering 2• B.Sc. Lecture• Teaching Assistant
2008	University of Kaiserslautern <ul style="list-style-type: none">• Department of Computer Science• Computer Graphics• B.Sc. Lecture• Teaching Assistant

Teaching Experience

2006 - 2010

University of Kaiserslautern

- Department of Computer Science
- Numerical Algorithms
- B.Sc. Lecture
- Teaching Assistant