Hans-Peter Wieser

Personal Data

Place of Birth: Bad Reichenhall, Germany
Address: Munich, Germany
email: email@hpwieser.de
Xing profile | LinkedIn profile | GitHub profile

Education

Aug. 2018 – Feb. 2015 PhD student, **German Cancer Research Center**
Heidelberg, Germany - Medical Physics in Radiation Oncology,
Radiotherapy Optimization `https://www.dkfz.de/radopt`

May 2017 – Aug. 2017 Internship, **Max Planck Institute for Intelligent Systems**
Tübingen, Germany - Probabilistic Numerics Group,
developing closed-form uncertainty propagation algorithms for radiotherapy

Feb. 2017 – Apr. 2017 Internship, **University of Texas MD Anderson Cancer Center**
Houston, USA - research intern in the radiation oncology department,
purpose: robust treatment planning for protons

May 2016 – Aug. 2016 Internship, **Max Planck Institute for Intelligent Systems**
Tübingen, Germany - Probabilistic Numerics Group,
developing closed-form uncertainty propagation algorithms for radiotherapy

Nov. 2013 – Sept. 2011 Master of Science, **Carinthia University of Applied Sciences**
Klagenfurt, Austria - Health Care Information Technology
emphasis on medical image processing | graduation: October 2013
weighted Average: 1.83 course of study

Aug. 2013 – Feb. 2013 Intern at **University of Texas MD Anderson Cancer Center**
Houston, USA - research intern in the diagnostic radiology department
purpose: automated prostate zone segmentation

July 2011 – Sept. 2008 Bachelor of Science, **Carinthia University of Applied Sciences**
Klagenfurt, Austria - Medical Information Technology
emphasis on medical image processing and electrical engineering
weighted Average: 2.12 course of study

June 2008 – Sept. 2003 University-Entrance Diploma, HTBL
Salzburg, Austria - Higher secondary School for Electrical Engineering
focus on power engineering and industrial electronics

Scholarships and Awards

Jun. 2017	Selected as Editors choice June 2017 Link
May 2016	PTCOG 55 Travel Fellowship
Dez. 2013	winner of Build! FH MasterCup 2013 (best master thesis)
Aug. 2013	awarded *Exzellenzstipendium* by *Industriellenvereinigung Kärnten*
Apr. 2013	3rd place at the NCI-ISBI Automated Prostate Segmentation Challenge
Jan. 2013	awarded *Austrian Marshall Plan* scholarship

Publications

Apr. 2018	matRad - An open source treatment planning toolkit for educational purposes *Medical Physics International Journal* Link
Feb. 2018	Analytical incorporation of fractionation effects in probabilistic treatment planning for intensity-modulated proton therapy - *Med.Phys.* Link
Nov. 2017	Analytical probabilistic modeling of RBE-weighted dose for ion therapy *Phys Med Biol.* Link
Nov. 2017	Impact of respiratory motion on variable relative biological effectiveness in 4D-dose distributions of proton therapy. -*Acta Oncol.* Link
Jun. 2017	Development of the open-source dose calculation and optimization toolkit matRad. - *Med.Phys.* Link
Jun. 2017	Efficiency of analytical and sampling-based uncertainty propagation in intensity-modulated proton therapy. -*Phys Med Biol.* Link

Talks and Posters

Jun. 2018	matRad ein open-source Planungssystem für strahlentherapeutische Krebsbehandlungen TALK at MATLAB Expo Munich
Apr. 2018	Simultaneous consideration of biological and physical uncertainties in robust ion beam therapy planning with analytical probabilistic modeling TALK at ESTRO 37 Barcelona
Apr. 2018	matRad as a collaboration tool in radiotherapy developments TALK at Workshop, Santiago de Chile
Apr. 2018	Smooth animations of the probabilistic analog to worst-case dose distributions coauthor POSTER at ESTRO 37, Barcelona
Apr. 2018	Analytical probabilistic models for dose quality metrics and optimization objectives coauthor POSTER at ESTRO 37, Barcelona
Nov. 2017	Analytical probabilistic modelling of RBE-weighted dose for ion therapy TALK at 1st ESTRO physics workshop, Glasgow
June 2016	Analytical probabilistic modeling of range and setup uncertainties in carbon ion therapy planning TALK at ICCR, London
May 2016	Validation of a proton dose calculation engine for the open-source treatment planning software matRad POSTER at PTCOG, Prague
Mar. 2016	Analytical Probabilistic Modeling for Proton and Carbon Ion Radiotherapy POSTER at Novel Techniques in Ion Beam Radiotherapy, Heidelberg
Sep. 2015	matRad Open Source Toolkit für biologische Bestrahlungsplanung mit Kohlenstoff Ionen TALK at DGMP, Marburg

Research interests

- charged particle therapy (CPT)
- physical and biological uncertainties in (CPT)
- probabilistic treatment planning
- treatment plan optimization
- proton mini beams
- physical and bio. beam models
- ion range verification

Work Experience

Feb 2015 – Feb 2014 | Project Engineer/Software Developer at BrainLAB AG, Feldkirchen
full time - 40 hours per week
Department: Radiotherapy Research and Development
http://www.brainlab.com

Jan. 2013 – July 2011 | Medical Engineer at Ordination Dr. W. Weitensfelder, Klagenfurt
side job - 10 hours per week
archived patient records using *DocuWare*, managed digital library with *Calibre*, responsible for frequent data backups, IT supervision
http://www.w-weitensfelder-chirurg.at

Feb. 2011 – May. 2011 | Intern at RoMed Klinikum, Rosenheim, Germany
full time
Quality assurance concerning the radiology department, performed constancy checks, maintained DICOM Server, dealt with X-ray ordinance as well as radiation protection
http://www.romed-kliniken.de

Summer 2009 | Electrical Engineer at Reihnmetall Defence Waffe Muntion, Schneizelreuth, Germany
nine weeks full time
programmed cable testing devices, tested cables for German defense canonry
http://www.rheinmetall-defence.com

2006 - 2008 | Control technician & software engineer at Kiefel AG, Freilassing, Germany
28 weeks - part time
commissioned medical blood-bags producing devices, programmed PLC software for components tests, commissioned linear motors, analyzed time behavior of SPS components, programmed generic interfaces for GUI's
http://www.kiefel.com

Summer 2005 | Electrical engineer at Wildkogelbahnen, Neukirchen am GroSSvenediger, Austria
6 weeks - full time
installed the drive station of a ski chair lift
http://www.wildkogel-arena.at

Projects

Autumn 2018	PhD thesis - Probabilistic Treatment Planning for Carbon Ion Therapy
Summer 2013	master thesis - Supervised Machine Learning Approach utilizing Artificial Neural Networks for Automated Prostate Zone Segmentation in Abdominal MR images
Autumn 2012	project work - Quantifying Stained Liver Tissue in Microscopy Images using Matlab
Autumn 2012	project work - Implementation of a GUI to visualize training calendars in C#
Autumn 2012	project work - Developed Secure Instant Messenger Application for Apple Devices
Spring 2011	bachelor thesis - Robust Volume Calculation of Closed Surface Models

Languages

German:	native speaker
English:	proficient in both spoken and written

Computer Skills

Intermediate Knowledge:	phyton, C++,C#, mySQL, LabView
Expert Knowledge:	Matlab, LaTeX

Interests and Activities

interests:	physics, programming, reading IT magazines, smart home, renewable energies, distributed ledger technologies
sports:	jogging, hiking, climbing, soccer, traveling