Hans-Peter WIESER

PERSONAL DATA

PLACE OF BIRTH:	Bad Reichenhall, Germany
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	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