

Huixiao Chen, PhD, DABR
Assistant Professor
Yale University School of Medicine
Yale New Haven Health
Dept. of Therapeutic Radiology

Education:

08/1991-06/1995	BS,	Biomedical Engineering, Zhejiang University, China
08/1995-06/1998	MS,	Bioelectromagnetics, Zhejiang University, China
08/2005-06/2010	PhD,	Medical physics, University of Heidelberg, Germany

Career/Academic Appointments:

07/1998-06/2003	Medical Physicist, Department of Radiation Oncology, 2nd Affiliated Hospital, Zhejiang University School of Medicine, China <i>TPS commissioning; 3D and IMRT treatment planning on XIO(CMS) and Xknife (RSA); IMRT QA, Linac QA; Animal study for conformal radiotherapy of pancreatic malignancy and the dose impact to the duodenum.</i>
12/2010-02/2011	Postdoctoral Fellow in medical physics, Department of Radiation Oncology, Virginia Commonwealth University, USA <i>Evaluation of dose mapping errors via use of a volume-based dose mapping method on Pinnacle TPS (mentor: Dr. Jeffrey Siebers)</i>
01/2012-02/2013	Postdoctoral Fellow in medical physics, Department of Radiation Oncology, Massachusetts General Hospital, Harvard University, USA <i>Multi-criteria optimization informed VMAT planning on Raystation TPS (mentor: Dr. David Gierga)</i>
07/2014-06/2016	Resident, Medical Physics, Department of therapeutic radiology, Yale New Haven Hospital, Yale University, USA
07/2016-present	Clinical Assistant Professor, Department of therapeutic radiology, Yale New Haven Hospital, Yale University, USA <i>Primary physicist of RefleXion PET-Linac (leading clinical physics IGRT/Scintix BGRT project); Primary physicist of Surface imaging system (CRAD) at main campus; Primary physicist of Orthovoltage machine; Primary physicist of Rapid Planning system; Previous primary physicist of Elekta Synergy system at main campus</i>

Honors & Recognition:

1998	Excellent thesis award in Natural Science of Zhejiang province, China
2004	DAAD (German Academic Exchange Service) full scholarship holder for German language and culture courses in Goethe-Institute and PhD study in Germany

Patent:

1998	Magnetic cyclotron electrochemical cancer treatment device. Huixiao Chen, Zhuming Yu, Guozhang Chen. CN123899A, CN1121881C, China
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Invited Speaking Engagements and Presentations

1. "Commissioning and verification of PrecisePLAN R2.20", ESTRO/Elekta User Meeting, 2007, Barcelona, Spain
2. "Measurement-based approach for verification of XVMC", DEGRO, 2008, Vienna, Austria
3. "MCO-informed VMAT planning for prostate cancer", Young Investigators Symposium, NEAAPM 2012, Boston, USA
4. "VMAT Dosimetry lecture", Massachusetts General hospital, 2013, Boston, USA
5. "Knowledge-based Treatment planning", Yale New Haven hospital, 2015, New Haven, USA

6. “A simple predicator for V105 in breast tangential treatment planning”, AAPM, 2017, Denver, USA
7. “A small footprint couch-top support device for image guided radiotherapy of heavy patients”, Yale New Haven hospital, 2023, New Haven, USA
8. “Reflexion X1 PET-Linac system and IGRT/BGRT commissioning”, CAMPS Meeting, 2024, New Haven, USA

Professional Service:

Peer Reviewer:

2012-present	Journal of Physics in Medicine and Biology
2013-present	Journal of Medical Dosimetry
2022-present	Journal of Medical Physics
2019-present	Journal of Applied Clinical Medical Physics

Professional Organizations:

2012-present	American Association of Physicists in Medicine (AAPM)
2021-present	American Society for Radiation Oncology (ASTRO)

Publications:

Peer-Reviewed Original Research

1. **Huixiao Chen**, Guozhang Chen. Experimental study of temperature elevation by 915 MHz ferromagnetic resonance. *Computerized Tomography Theory Applications*. 1998; 7(1):20-23
2. Zuming Yu, Guozhang Chen, **Huixiao Chen**. Electrochemotherapy with cyclotron method: a new system of treatment for cancer. *Chinese Journal of Medical Instrumentation*. 1998; 4(11):23-24
3. Guozhang Chen, **Huixiao Chen**. The remarkable effect on treatment of malignancy by electrochemotherapy with cyclotron method. *Medical Devices and Health Care Magazine*. 1998 (Chinese); (6):78-84
4. Guozhang Chen, **Huixiao Chen**. A research hotspot in bioelectromagnetics --- non-thermo reaction. *Physics (Chinese)*. 1998; 27(3): 151-155
5. Guangwei Yu, **Huixiao Chen**. Maintenance and aging judgement of electron gun of SIEMENS accelerator. *Chinese Journal of Radiation Oncology*. 2003; 312(4): 28
6. Guangwei Yu, **Huixiao Chen**. Uncertainties on delineation of Target Volume on CT image for breast cancer. *Chinese Journal of Radiological Medicine and Protection*. 2005;(3): 84-85
7. Guangwei Yu, Shuhui Jin, Yongjie Shui, **Huixiao Chen**. Evaluation of three-dimensional conformal radiotherapy based on dose distribution. *Zhongguo Yi Liao Qi Xie Za Zhi*. 2005, 29: 210-1.
8. Ramesh Boggula, Friedlieb Lorenz F, **Huixiao Chen**, Gansemer C, Hansjoerg Wertz, Lutz Mueller, Frederik Wenz, et al. Commissioning of a system to correlate dose measurements to patient anatomy. *International Journal of Radiation Oncology, Biology, Physics*. 2008; 72(1): S662; DOI:10.1016/j.ijrobp.2008.06.354; Project: COMPASS
9. **Huixiao Chen**, Frank Lohr, Peter Fritz, Frederik Wenz, Barbara Dobler, Friedlieb Lorenz, Werner Mühlhnickel. A comparison of absolute dose and dose distribution between Pencil Beam- and Monte Carlo-algorithms based on actual patient CT scans. *International Journal of Radiation Oncology Biology Physics*. 2010. Nov 1; 78(3):955-63.
10. **Huixiao Chen**, David L Craft, David P Gierga. Multi-Criteria Optimization informed VMAT planning. *Medical Dosimetry*. 2014; 39(1): 64-73
11. **Huixiao Chen**, Brian A Winey, Juliane Daartz, Kevin S Oh, John H Shin, David P Gierga. Efficiency gains for Spinal Radiosurgery using Multi-criteria optimization IMRT guided VMAT planning. *Practical Radiation Oncology*. 2015; 5(1): 49-55

12. **Huixiao Chen**, Kevin Morley, Ronnie Rodriguez, Emily Draeger, Muhammed Shafiq Hassan, Zhe (Jay) Chen. A small footprint couch-top support device for image-guided radiotherapy of heavy patients. *Journal Of Applied Clinical Medical Physics*. 2022; 23(12), e13788
13. Fada Guan, **Huixiao Chen**, Emily Draeger, Yuting Li, Resat Aydin, Christopher J. Tien, Zhe (Jay) Chen. Characterization of Gafchromic TM EBT4 film with clinical KV/MV photons and MeV electrons. *Precision Radiation Oncology*. 2023; 7(2): 81-146

Conference Posters

1. **Huixiao Chen**, Martin Polednik, Yasser Abo-Madyan, Hansjoerg Wertz, Frank Lohr, Frederik Wenz, Friedlieb Lorenz. Influence of rounded leaf end on dose calculation for a typical breast IMRT patient plan. *DEGRO 2008*, Vienna, Austria
2. **Huixiao Chen**, Friedlieb Lorenz, Martin Polednik, Frank Schneider, Volker Steil, Frank Lohr, Yasser Abo-Madyan, Markus Alber, Frederik Wenz, Juergen Hesser. Measurement-based approach for verification of XVMC. *DEGRO 2008*, Vienna, Austria
3. **Huixiao Chen**, Nahla Saleh-Sayah, William T Watkins, Chenyu Yan, Francisco J Salguero, Emily Heath, Jeffrey V Siebers. Evaluation of dose mapping errors via use of a volume-based dose mapping method. *AAPM 2012*, Charlotte, NC, USA
4. **Huixiao Chen**, David L Craft, David P Gierga. MCO-informed VMAT planning for prostate cancer. *AAPM 2012*, Charlotte, NC, USA
5. Brian A Winey, **Huixiao Chen**, Julianne Daartz, David P Gierga, John H Shin, J. Schwab, Kevin S Oh. Dosimetric effects of diaphragm motion on spine SBRT treatments. *AAPM 2013*, Indianapolis, USA
6. **Huixiao Chen**, Brian A Winey, Julianne Daartz, David P Gierga. Parameter sensitivity analysis of VMAT planning for Spine SBRT. *AAPM 2013*, Indianapolis, Indiana, USA
7. **Huixiao Chen**, Zhe Chen, Ravinder Nath, Fanqing Guo. Quality assurance of 4DCT process using ET gating system. *AAPM 2015*, Anaheim, CA, USA
8. **Huixiao Chen**, John Kim, David J Carlson, Jun Deng, Ravinder Nath, Zhe Chen. A simple predictor for V105 in breast tangential treatment planning. *AAPM 2017*, Denver, USA
9. **Huixiao Chen**, Fanqing Guo, David J. Carlson, Jun Deng, Ravinder Nath, Zhe Chen. Commissioning and potential clinical implementation and advantageous of 2.5MV photon beams for selected radiotherapy cases. *AAPM 2017*, Denver, USA
10. **Huixiao Chen**, Stephanie Winter, John H Kim, John Kim, Jacqueline R Kelly, Joseph N Contessa, Kenneth Roberts, Jun Deng, Zhe Chen. Efficiency gain and quality improvements for whole brain treatment planning with hippocampal sparing utilizing a shared RapidPLAN model. *AAPM 2018*, Nashville, TN, USA
11. Muhammed Shafiq Hassan, **Huixiao Chen**, James Bond, Denise Allen, Zhe Chen. Evaluation of a Commercial Tungsten Eye Shield for Orthovoltage beams using Gafchromic film. *AAPM 2020*, virtual meeting
12. **Huixiao Chen**, Kevin Morley, Ronnie Rodriguez, Emily Draeger, Muhammed Shafiq Hassan, Zhe Chen. A small footprint couch-top support device for image-guided radiotherapy of heavy patients. *AAPM 2020*, virtual meeting

Students and Physics Residents Teaching and Training Experience:

2017-present Supervision of clinical rotations of Linac, Surface Imaging, Orthovoltage machine, Special procedures including BGRT, SBRT, TBI, and TSET

Languages English, German, Chinese