

Benjamin Ziemer, PhD



Educational Background

Medical Physics Residency, University of California, San Francisco, Department of Radiation Oncology (2017 - 2019)

Adjunct Physics Professor San Diego State University 2016 ? current

Post Doctoral Researcher University of California, San Diego, Therapeutic Physics 2015-2017

Post Doctoral Researcher University of California, Irvine, Imaging Physics 2013-2015

Ph.D. University of California, Irvine, Particle Physics 2012

M.S. University of California, Irvine, Particle Physics 2006

B.S. University of Wisconsin Madison, Physics 2003

B.S. University of Wisconsin Madison, Mathematics 2003

B.S. University of Wisconsin Madison, Chemistry 2003

Awards & Honors

Southern California AAPM Norm Baily Award 2016

AAPM Best in Physics Imaging 2015

Fermi National Accelerator Laboratory Visiting Scholars Grant 2009

Fermi National Accelerator Laboratory Visiting Scholars Grant 2008

University of California, Irvine, Masters Degree Fellowship 2006

University of Wisconsin Madison Chinese Language Department Award 2003

Selected Publications and Abstracts

Publications:

B.P. Ziemer, J.A. Hattangadi-Gluth, P. Sanghvi, K.L. Moore, **Knowledge-based planning for single-isocenter stereotactic radiosurgery to multiple brain metastases**, Med Phys (in review)

B.P. Ziemer, S. Shiaishi, J.A. Hattangadi-Gluth, P. Sanghvi, K.L. Moore, **Fully-automated, comprehensive knowledge-based planning for stereotactic radiosurgery ? pre-clinical validation through blinded physician review**, Pract Radiat Oncol (in final review)

L. Hubbard, B.P. Ziemer, J. Lipinski, et.al. **Functional assessment of coronary artery disease using whole-organ dynamic computed tomography perfusion versus coronary fractional flow reserve**, Circ Cardiovasc Imaging 2016 9(12)

B.P. Ziemer, L. Hubbard, J. Lipinski, et.al. **Dynamic CT perfusion measurement in a cardiac phantom**, Int J Cardiovascular Imaging 2015 31(7):1451-9;

H.M. Cho, H. Ding, B.P. Ziemer, et.al. **Energy response calibration of photon-counting detectors using x-ray fluorescence: a feasibility study**, Phys Med Bio 2014 59(23):7211-27

MINER?A Collaboration, **Measurement of muon and proton final states in muon neutrino hydrocarbon interactions at neutrino energy 3.5 GeV**, Phys Rev D 91 071301 (2015)

MINER?A Collaboration, **MINER?A neutrino detector response measured with test beam data**, Nucl Instr Meth A789 28-42 2015

MINER?A Collaboration, **Single neutral pion production by charged current anti-muon neutrino interactions on hydrocarbon at E? 3.6 GeV**, Phys Lett B749 (2015)130-136

MINER?A Collaboration, **Charged pion production in muon neutrino interactions on a hydrocarbon target at neutrino energy 4.0 GeV**, Phys Rev D 92, 092008 2015

MINER?A Collaboration, **Measurement of coherent production of charged pions in neutrino and anti-neutrino beams on carbon from neutrino energy 1.5 to 20 GeV**, Phys Rev Lett 113, 261802 2014

MINER?A Collaboration, **Measurement of ratios of muon neutrino charged current cross section on C, Fe and Pb to CH at neutrino energy 2-20 GeV**, Phys Rev Lett 112, 231801 2014

MINER?A Collaboration, **Measurement of muon anti-neutrino quasi-elastic scattering on a hydrocarbon target at neutrino energy 3.5 GeV**, Phys Rev Lett 111, 022501 2013

MINER?A Collaboration, **Measurement of muon neutrino quasi-elastic scattering on a hydrocarbon target at neutrino energy 3.5 GeV**, Phys Rev Lett 111, 022502 2013

MINER?A Collaboration, **Design, calibration and performance of the MINER?A detector**, Nucl Instr Meth A743 130-159 2014

MINER?A Collaboration, **The MINER?A data acquisition system and infrastructure**, Nucl Instr Meth A694 179-192 2012

MINER?A Collaboration, **ARACHNE - a web-based event viewer for MINER?A**, Nucl Instr Meth 676 44-49 2012

D.D.Stancil et.al. **Demonstration of communication using neutrinos**, Mod Phys Lett A 27, 1250077 2012

A.L.Nickel, F.Seker, B.P.Ziemer, A.B.Ellis, **Imprinted poly(acrylic acid) films on cadmium selenide**, Chem Mater 13 (4) 2001

Abstracts/Oral Presentations

B.P. Ziemer, S. Shiraishi, J.A. Hattangadi-Gluth, P. Sanghvi, K.L. Moore, **Knowledge-Based Planning for Single-Isocenter Stereotactic Radiosurgery to Multiple Brain Metastases**, Med Phys, 43, 3724-3725 (2016)

B.P. Ziemer, S. Shiraishi, J.A. Hattangadi-Gluth, P. Sanghvi, K.L. Moore, **Full Pre-Clinical Validation of Comprehensive Knowledge-Based Planning for Stereotactic Radiosurgery**, Med Phys, 43, 3338-3338 (2016)

B.P. Ziemer, L. Hubbard, E.M. Groves, B. Sadeghi, H. Javan, J. Lipinski, S. Molloy, **BEST IN PHYSICS IMAGING: Dynamic CT Myocardial Perfusion Measurement and Its Comparison to Fractional Flow Reserve**, Med Phys, 42, 3633-3633 (2015)

B.P. Ziemer, L. Hubbard, J. Lipinski, S. Molloy, **Absolute Blood Flow Measurement in a Cardiac Phantom Using Low Dose CT**, Med Phys, 41, 451-452 (2014)

B.P. Ziemer, H. Ding, H. Cho, S. Molloy, **Characterization of a Silicon Strip Photon-Counting Detector in the Presence of Compton Scatter: A Simulation Study**, Med Phys,

41, 403-404 (2014)

L. Hubbard, B.P. Ziemer, J. Lipinski, S. Malkasian, B. Sadeghi, H. Javan, B. Dertli, E.M. Groves, S. Molloy, **Anatomical and Functional Assessment of Coronary Artery Disease Using Low-Dose Whole-Organ Dynamic Computed Tomography**, Med Phys, 43, 3862-3862 (2016)

L. Hubbard, B.P. Ziemer, S. Malkasian, J. Lipinski, B. Sadeghi, H. Javan, B. Dertli, E.M. Groves, S. Molloy, **Determination of Patient-Specific Myocardial Mass at Risk Using Computed Tomography Angiography**, Med Phys, 43, 3884-3884 (2016)

L. Hubbard, B.P. Ziemer, B. Sadeghi, H. Javan, J. Lipinski, S. Molloy, **Dynamic CT Myocardial Perfusion Measurement Using First Pass Analysis and Maximum Slope Models**, Med Phys, 42, 3633-3633 (2015)

H. Cho, H. Ding, B.P. Ziemer, S. Molloy, **X-Ray Fluorescence for Energy Response Calibration of a Photon Counting Detector: A Simulation Study**, Med Phys, 41, 145-145 (2014)

B.P.Ziemer, **Elastic Scattering with MINER?A**, Neutrino Factory & Super/Beta-beams 2011 Geneva, Switzerland

B.P.Ziemer, **MINER?A Reconstruction**, Neutrino School 2010 Fermi National Accelerator Laboratory Batavia, IL

B.P.Ziemer, **Reconstructing Interactions in MINER?A**, American Physical Society 2010 Washington DC

B.P.Ziemer, **MINER?A Detector and Science Possibilities**, Deep Inelastic Scattering Workshop 2009 Madrid, Spain

MINER?A Tracking Prototype, User?s Meeting 2008 Fermi National Accelerator Laboratory Batavia, IL

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