

Curriculum Vitae

Personal Data

Name: Jamal Jon Derakhshan, B.S.

Education

- 2009 Doctor of Medicine, School of Medicine
(expected) Case Western Reserve University, Cleveland, OH
- 2007 Doctor of Philosophy in Biomedical Engineering
(expected) Case Western Reserve University, Cleveland, OH
2006 – Reached Ph.D. Candidacy
- 2002 Bachelor of Science in Physics
 Computer Science and Mathematics Minors
 Summa Cum Laude, University Honors Scholar
 West Virginia University, Morgantown, WV
- 1998 High School Diploma
 Western Reserve Academy, Hudson, OH

Examinations and Licensing

- 2005 May Department of Biomedical Engineering Graduate Qualifying Examination
- 2004 June United States Medical Licensing Examination Step 1

Professional Training

- 2005, May Numaris 4.0 Sequence Development, Siemens Training and Development
23-27 Center, Cary, NC

Honors and Awards

- 2004-pres Case Partial Prime Fellowship
- 2002-pres Case Medical Scientist Training Program
- 2001-2002 WVU Foundation Order of Augusta recipient (WVU's highest student
 honor)

- 2001-2002 WVU Foundation Outstanding Senior
- 2001-2002 WVU Honors Program Joginder and Charlotte Nath Scholar
- 2001-2002 WVU Department of Physics Outstanding Senior
- 2001-2002 Edmund and Rose Rotter Excellence in Physics Scholarship
- 2000-2001 WVU Eberly College of Arts and Sciences Scholar (one of 25 recipients out of 3000 students)
- 1998 WRA Salutatorian, Cum Laude Society, Diploma Honors in Science, Math, Spanish, English

Research Experience

- Dec 2004-
Present **Graduate Student**
MRI Research Lab
Department of Radiology, University Hospitals of Cleveland
Research Advisor: Jeffrey L. Duerk, Ph.D.
MRI Pulse Sequence Design
- Jan-Dec, 2004 **Research Rotation Student**
Nuclear Medicine Molecular Imaging Lab
Department of Radiology, University Hospitals of Cleveland
Research Rotation Mentor and PI: Zhenghong Lee, Ph.D.
Studied various in vivo molecular imaging paradigms utilizing CT, SPECT, planar x-ray and planar gamma scintigraphy. Image fusion. Image analysis.
- May-July,
2003 **Research Rotation Student**
MRI Research Lab
Department of Radiology, University Hospitals of Cleveland
Research Rotation Mentor: Jeff Duerk, Ph.D.
Built several phased array coils for MRI small animal imaging. Built intravascular tracking coil/catheter combinations.
- Jan-May,
2003 **Research Rotation Student**
Biomedical Image Processing Laboratory
Department of Biomedical Engineering, Case Western Reserve University
Research Rotation Mentor: David Wilson, Ph.D.
Worked on bioluminescence imaging system and digital biomedical image processing.

- Oct. 1999-
July 2002 **Research Assistant**
Nuclear Medicine Instrumentation Research Lab
Department of Radiology, West Virginia University
Research Mentor: Ray Raylman, Ph.D.
Built and conducted experiments with a hand-held positron-sensitive probe to be used for cancer localization during surgery.
- June-Aug.
2001 **CERN Summer Student**
European Center for Nuclear Research and Particle Physics (CERN)
Geneva, Switzerland
University of Michigan REU program sponsored by NSF and Ford Motor Co.
Worked in the information technology division and attended the summer student lecture series on particle physics.
- June-Aug.
2000 **REU Student**
Condensed Matter Experiment Lab
Department of Physics, University of Florida
Research Mentor: Art Hebard, Ph.D.
REU program sponsored by the NSF
Took magnetoresistance measurements in high purity bismuth samples at low temperatures and high magnetic fields using the Physical Property Measurement System (PPMS)

Peer-Reviewed Papers

Derakhshan JJ, Duerk JL.

Update to Pulse Sequences for Interventional MR Imaging.

Magnetic Resonance Imaging Clinics of North America 2005, 13(3): 415-29.

Raylman RR, Majewski S, Smith MF, Wojcik R, Weisenberger AG, Kross B, Popov V, Derakhshan JJ.

Comparison of scintillators for positron emission mammography (PEM) systems.

IEEE Transactions on Nuclear Science 2003, 50(1): 42-49.

R.R. Raylman, J. Derakhshan.

In Vivo Detection of Tumor-Infiltrated Axillary Lymph Nodes with a Handheld Beta-Sensitive Probe: A Phantom Study.

Proceedings of SPIE 2001, 4244: 474-483.

Talks

Derakhshan JJ, Heidenreich JO, Paul S, Viohl I, Sunshine JL, Duerk JL.
In vivo active catheter tracking and high resolution vessel wall imaging with a novel, disposable, commercial, micro-manufactured 5-French MR imaging catheter coil.
6th Interventional MRI Symposium (Leipzig, Germany) 2006: (V-11) 35-37.

Heidenreich JO, Paul S, Derakhshan JJ, Nour SG, Riffe MJ, Griswold MA, Duerk JL, Sunshine JL.
Intravascular imaging of the carotid artery using a combined stent and imaging catheter in a pig model.
6th Interventional MRI Symposium (Leipzig, Germany) 2006: (V-22) 66-68.

Nour SG, Paul S, Heidenreich JO, Derakhshan JJ, Griswold MA, Duerk JL.
Radiofrequency ablation of the adrenal glands: MRI guidance on a new open-bore high-field scanner.
6th Interventional MRI Symposium (Leipzig, Germany) 2006: (V-34) 95-97.

Derakhshan JJ, Raylman RR.
Intra-operative detection of breast cancer metastasis to the axillary lymph nodes.
Bulletin of the American Physical Society 2002, 47(1): 302-303.

Posters and Abstracts

Derakhshan JJ, Blaimer M, Schmitt P, Sunshine JL, Duerk JL, Griswold MA.
Inversion-optimized, multi-slice, parallel TOSSI (T-One insensitive Steady State Imaging).
Proc Intl Soc Mag Res Med 2006. Abstract #4933.

Assem Ziady, Max Kotlarchyk, Perrin Cheung, Yuan Lin, Jamal Derakhshan, Greg Wojtkiewicz, Joe Molter, Stan Majewski, Pam Davis, Zhenghong Lee.
Dual-reporter imaging of gene transfer for CF gene therapy.
Molecular Imaging 2004, 3(3): 283.

Wojtkiewicz GR, Ziady AG, Martone P, Derakhshan JJ, Majewski S, Davis PB and Lee Z.
Imaging of live mice for cystic fibrosis gene therapy.
Research ShowCASE 2004: Poster 141.

Derakhshan JJ, Sampath L, Cheung PJ, Wilson DL.
Image Processing Algorithms for Cosmic Ray Removal in Bioluminescence Imaging.
2nd Annual Meeting of the Society for Molecular Imaging 2003: 174 (abstract number 151).

Hebard, A.F., Maslov, D.M., Bompadre, S.G., Biagini, C., Derakhshan, J.
Magnetotransport in High Purity Bismuth Crystals.

National High Magnetic Field Laboratory Reports 2001, 8 (Winter): 9.

Work Experience

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|-----------------------------|---|
| Fall 2005 | Teacher's Assistant (graduate course)
Physics of Imaging, Department of Physics, Case Western Reserve University |
| Fall 2004 | Teacher's Assistant (graduate course)
Biomedical Transducers, Department of Biomedical Engineering, Case Western Reserve University |
| July 2004-
Present | Network Administrator
Comprehensive Neurology Inc. |
| May 1999-
November 2002 | Network Administrator
Comprehensive Neurology Inc. |
| Summer 1999 | Teacher's Assistant and Laboratory Assistant (undergraduate courses)
Electricity and Magnetism, Department of Physics, WVU |
| Summers of
1997 and 1998 | Administrative Clerk
Lake County Public Defender's Office, Painesville, Ohio |