

**BIOGRAPHICAL SKETCH**

Provide the following information for the key personnel in the order listed for Form Page 2.  
Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Donald J. Peck, PhD		POSITION TITLE Division Head, Physics and Engineering	
EDUCATION (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE	YEAR CONFERRED	FIELD OF STUDY
Oakland University, Rochester, Michigan	BS	1989	Medical Physics
Wayne State University, Detroit, Michigan	MS	1992	Radiological Physics
Oakland University, Rochester, Michigan	PhD	1999	Medical Physics

**A. Positions and Honors****Positions and Employment**

- 1994 – 1998 Medical Physicist, Radiology, Henry Ford Health System, Detroit, MI  
 1994 – present Adjunct Instructor, Radiological Physics, Wayne State University, Detroit, MI,  
 2000 – present Radiation Safety Officer, Henry Ford Health System, Detroit, MI  
 1999 – present Division Head of Physics, Radiology, Henry Ford Health System, Detroit, MI,

**B. Selected Peer-Reviewed Publications**

- Soltanian-Zadeh H, **Peck DJ**, Hearshen DO, Lajiness-O'Neill, RR: "Model-Independent Method for fMRI Analysis" IEE Tran Med Imag 23(3): 285-296, 2004
- Soltanian-Zadeh H, **Peck DJ**: "Feature Space Analysis: Effects of MRI Protocols" Med Phy 28(11): 2344-2351, 2001.
- Mah E, Samei E, **Peck DJ**: "Evaluation of a Quality Control Phantom for Digital Chest Radiography" JACMP 2(2): 90-101, 2001.
- Jacobs MA, Zhang ZG, Knight RA, Soltanian-Zadeh H, Goussev AV, **Peck DJ**, Chopp M: "A Model for Multiparametric MRI Tissue Characterization in Experimental Cerebral Ischemia With Histological Validation in Rat: Part 1" Stroke, 32: 943-949, 2001.
- Jacobs MA, Mitsias P, Soltanian-Zadeh H, Santhakumar S, Ghanei A, Hammond R, **Peck DJ**, Chopp M, Patel S: "Multiparametric MRI Tissue Characterization in Clinical Stroke With Correlation to Clinical Outcome: Part 2" Stroke, 32: 950-957, 2001.
- Jacobs M, Knight R, Windham J, Zheng Z, **Peck DJ**, Goussev A, Chopp M: "Identification of a Cerebral Ischemic Lesion using Eigenimage Filtering" Brain Research, 83 (1-2): 83-94, 1999.
- Jacobs M, Windham J, Soltanian-Zadeth H, **Peck DJ**, Knight,R: "Registration and Warping of Magnetic Resonance Images to Histological Sections." Med Phys 26(8), 1568-1578, 1999.
- Soltanian-Zadeh H, **Peck DJ**, Windham J, Mikkelsen T: "Brain Tumor Segmentation and Characterization by Pattern Analysis of Multispectral NMR Images." NMR Biomed 11,: 201-208, 1998.
- Jiang Q, Chopp M, Zhang Z, Knight R, Jacobs M, Windham J, **Peck DJ**, Ewing J, Welch K: "The Temporal Evolution of MRI Tissue Signatures After Transient Middle Cerebral Artery Occlusion in Rat." J Neuro Sci 145: 15-23, 1997.
- Peck DJ**, Windham J, Emery L, Soltanian-Zadeh H, Hearshen D, Mikkelsen T: "Cerebral Tumor Volume Calculations Using Planimetric and Eigenimage Analysis." Med Phys 23(12): 2035-2042, 1996.
- Soltanian-Zadeh H, Windham J, **Peck DJ**: "Optimal Linear Transformation for MRI Feature Extraction." IEEE Trans Med Imag 15(6): 749-767, 1996.

12. Welch K, Windham J, Knight R, Nagesh V, Hugg J, Jacobs M, **Peck DJ**, Booker P, Dereski M, Levine S: "A Model to Predict the Histopathology of Human Stroke Using Diffusion and T2-Weighted MRI." *Stroke* 26: 1983-1989, 1995.
13. **Peck DJ**, Windham J, Soltanian-Zadeh H, Roebuck J: "A Fast and Accurate Algorithm for Volume Determination in MRI." *Med Phys* 19(3): 599-605, 1992.
14. **Peck DJ**, Spickler E, Knight R, Hearshen D, Windham J: "Analysis of the Evolution of Focal Cerebral Ischemia in the Rat Using Eigenimage Filtering." *J Magn Reson Med* 26:259-273, 1992.

### **Invited Presentations/Publications**

1. **Peck D**: "Quality Assessment Procedures for Digital Radiography", Presented at 48th Annual Meeting of the American Association of Physicists in Medicine (AAPM), Orlando, FL 2006.
2. **Peck D**, "Digital Imaging Display for Mammography" Presented at Annual Meeting of Conference of Radiation Control Program Directors (CRCPD), Detroit, MI 2006.
3. **Peck D**, "Digital Imaging – Acquisition to Display" Presented at Annual Meeting of Illinois Radiology Administrators, Chicago, IL 2006.
4. **Peck DJ**, "AAPM-RSNA Equipment Selection Tutorial on Digital Radiography" Presented at 91<sup>st</sup> Annual Radiological Society of North America (RSNA), Chicago, IL 2005.
5. **Peck DJ**, Flynn M: "The Role of the Physicist in Planning and Design of Digital Image Management Systems", Presented at 47th Annual Meeting of the American Association of Physicists in Medicine (AAPM), Seattle WA 2005.
6. **Peck DJ**, Morin R, Shepard, SJ, Flynn M: "The Role of the Medical Physicist in the Digital Era", Presented at 46<sup>th</sup> Annual Meeting of the American Association of Physicists in Medicine (AAPM), Pittsburgh, PA 2004.
7. **Peck DJ**, Kruger R: "AAPM/RSNA Basic Physics Lecture for Radiologic Technologist: Understanding Patient Radiation Dose", Presented at 89<sup>th</sup> Annual Radiological Society of North America (RSNA), Chicago, IL 2003.

### **Presentations, Abstracts and Proceedings**

1. Arbab AS, Rad AM, Iskander ASM, Brown SL, Panda S, Ledbetter KA, Ding G, Ewing JR, Soltanian-Zadeh H, **Peck D**; "Differentiation of Glioma from Radiation Necrosis by MRI Using Magnetically labeled cells". Presented at and the Abstract Published in the Proceedings of the ISMRM, Seattle, WA 2006.
2. Arbab AS, Brown SL, Iskander ASM, Rad AM, Panda S, Ledbetter KA, Ewing JR, Soltanian-Zadeh H, **Peck D**; "Cellular MRI to Differentiate Glioma from Radiation Necrosis in Rat Brain". Presented at and the Abstract Published in the Proceedings of the Academy of Molecular Imaging (AMI), Orlando, FL, 2006.
3. Arbab A, Brown S, Rad A, Churchman J, Ding G, Jiang Q, Ewing J, **Peck D**, Soltanian-Zadeh H: "Detection of the Margin of Glioma by MRI Using Magnetically Labeled Sensitized Splenocytes". 4<sup>th</sup> Annual Meeting of Society of Molecular Imaging (SMI), Cologne, Germany, 2005
4. Arbab A, Brown S, Rad A, Churchman J, Ding G, Jiang Q, Ewing J, Soltanian-Zadeh H, **Peck D**: "FePro Labeled Splenocytes as Cellular Probe for MRI to Delineate the Margin, Early Detection of Recurrent or Metastatic Glioma". Presented at and the Abstract Published in the Proceedings of the ISMRM, Miami, FL, 2005
5. Ertl-Wagner B, Blume J, **Peck D**, Udupa J, Schmalfuss I, Herman B, Levering A, Snowdon, S: "Results from the American College of Radiology Imaging Network (ACRIN) 6662 Trial: Estimating Volumes of Enhancing Brain Tumor and Tumor Plus Edema from MR Images in Patients with Malignant Glioma - Work-in-Progress" Presented at Annual Meeting of Radiological Society of North America (RSNA), Chicago, IL 2004.
6. Ryu S, Mikkelsen T, Scarpace L, Young L, **Peck D**, Kim J: "Perfusion and Diffusion MRI in the Assessment of the Antivasular Effect of Arsenic Trioxide Combined with Radiotherapy for

Glioblastoma Multiforme” Presented at Annual Meeting of Radiological Society of North America (RSNA), Chicago, IL 2004.

7. Yin F, Scarpace L, Hearshen D, Rock J, **Peck D**, Ryu S, Promberger C, Mikkelsen T: “Implementation of MRSI in Radiation Treatment Planning”, Presented at 46<sup>th</sup> Annual Meeting of the American Association of Physicists in Medicine (AAPM), Pittsburgh, PA 2004.
8. **Peck DJ**, M Flynn, C Dodge, A Swinford: “Radiographic Techniques for Digital Mammography with An Amorphous Selenium Detector” Presented at 45<sup>th</sup> Annual Meeting of the American Association of Physicists in Medicine (AAPM), San Diego, CA 2003

## C. Research Support

### Active Research Support

5 U01 CA62432 (PI: Mikkelsen), 01/98 - 12/02, 01/04 – 12/08  
NIH/NCI (RFA: CA-04-001)

New Applications in Brain Tumor Therapy

The major goal of this project is to improve the therapeutic outcome of patients with primary brain tumors.

### Completed Research Support

CA80098-05 Protocol 6662 (PI: Ertl-Wagner), 09/02 – 12/03

ACRIN

Semi-automated Calculation of Volumes of Enhancing Tumor And Tumor plus Edema From Routine MR Images In Patients With Malignant Gliomas

This study lays the groundwork for evaluation of two systems for prospective multi-center controlled studies on new therapeutic regimens for brain tumors.

CA46124 (PI: D. Peck) 04/98-03/00

NIH-NCI

Eigenimage Filtering of NMR Image Sequences

The evaluation of the clinical usefulness of the Eigenimage filter technique for surgical planning and monitoring of response to therapy for brain tumor.

RR13041A01 (PI: D. Peck) 05/99-04/00

NIH

Upgrade Research Imaging Analysis Lab

Purchase of a server, archive and associated components for use in Radiology Image Analysis lab to support multiple research projects.

NS23393 (PI: M. Chopp) 07/95-06/00

NIH-NINDS

Center for Stroke Research – Core B

The common goal of the projects and core involved in this program is to develop MRI as an essential tool for the identification and staging of stroke, to predict the ultimate biological outcome from the ischemic event, and to employ MR to assess and monitor the effects of therapeutic intervention.