DANA C. PETERS
Ph.D. Physics

- **Adresses**

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- **Research Interests**

Magnetic Resonance Imaging. Projection reconstruction acquisitions. Contrast enhanced methods, image reconstruction methods, rapid imaging, cardiac imaging, interventional MR.

- **Education**

The Johns Hopkins University. B.A. in Physics, 1988.

University of Wisconsin - Madison. Ph.D. in Physics in 1999.
Thesis title: "Fast contrast enhanced Imaging with Projection Reconstruction"
Advisor: Charles A Mistretta.

- **Experience**

Post-doctoral Fellow in the Laboratory for Cardiac Energetics, in the National Heart Lung and Blood Institute (NHLBI). I am working on rapid MR imaging methods for real-time interventional and cardiac function applications. (1999-Present).

Research Assistant at the Magnetic Resonance Center of the University of Wisconsin - Madison, in the MR angiography group. I developed ultra-fast projection reconstruction sequences. I have worked on contrast-enhanced coronary artery imaging and pulmonary artery imaging. (1994-1999).

Teaching Assistant for the Physics Department of the University of Wisconsin. I taught the introductory physics courses. (1993-1994, 1991-1992).

Research Assistant in Space Physics group at University of Wisconsin-Madison, Department of Physics. I designed, tested and completed many electronic instruments for a rocket mission, launched in 1999, including a thermometer measuring temperatures below 1 Kelvin. (1993-1994).

Member of Technical Staff of Computer Sciences Corporation. I was a member of Orbit Operations, part of the Flight Dynamics Facility at Goddard Space Flight Center. Our group was responsible for tracking the orbit of NASA satellites and the Space Shuttle.(1990-1993).

- **Skills**

EPIC pulse sequence programming, C, C++, Java and Matlab programming. Unix, PC environments.

- **Society Memberships**

International Society of Magnetic Resonance in Medicine (1995-present).

Association of American Physicists in Medicine (2000-present) .

- **Awards**

ISMRM Student Stipend Awards: 1996-1998**.**

- **Patents**

Title:Three-Dimensional MRA Using Interleaved Slice Encoding.
Inventors:C. A. Mistretta, F.R. Korosec, R. Frayne, T.M. Grist, **D.C. Peters.**
US Patent No. P96012US.

Title: Reduced Field of View MRI Imaging Method.
Inventors: C.A. Mistretta, **D.C. Peters**
US Patent No. P960296.95041.

- **Invited Talks**

"Functional Cardiac MR Imaging", IV Mexican Symposium on Medical Physics, sponsored by CINVESTAV. March, 2000, Merida, Mexico.

"Cardiac and Interventional MR with Projection Reconstruction", V Mexican Symposium on Medical Physics, sponsored by CINVESTAV. March, 2001, Queretaro, Mexico.

- **Research Publications**

D. C. Peters, F. H. Epstein, E.R. McVeigh, "Myocardial wall motion imaging with undersampled projection reconstruction", Magn Reson Med **45**, 562-567 (2001)

F.H. Epstein, J.F. London**, D.C. Peters**, L. Goncalves, J. Taylor, R.S. Balaban, A.E Arai, ”Multi-slice high resolution cardiac perfusion imaging using first-pass MRI: a validation study.” Submitted to Magn Reson Med, June 2000.

R. Frayne, T.M .Grist, J.S. Swann, **D.C. Peters**, F.R. Korosec, C.A. Mistretta, ”3D MR DSA: Effects of Injection Protocol and Image Masking”, Journal of Magnetic Resonance In Medicine, **12**, 476-487 (2000).

A.V. Barger, **D.C. Peters**,W. F. Block,K.K.Vigen, F. R. Korosec, T. M. Grist, C. A. Mistretta, “ Phase-Contrast with Interleaved Undersampled Projections, Magn. Reson. Med., **43**, 503 (2000).

D.C. Peters, T. M. Grist, F. R. Korosec, J. E. Holden, W. F. Block, K. K. Vigen, C. A. Mistretta, "Undersampled Projection Reconstruction Applied to MR Angiography", Magn. Reson. Med. **41,** 99 (2000).

K. K. Vigen, **D.C. Peters**, T.M. Grist, W.F. Block, C. A. Mistretta, “Undersampled Projection Imaging for Time-Resolved Contrast-enhanced 3D MR Angiography (PR-TRICKS)”, Magn. Reson. Med. **41, 170 (2000).**

C.A. Mistretta, T.M. Grist, F.R. Korosec, R. Frayne, **D.C. Peters**, Y. Mazaheri, T.J. Carroll, "3D Time-Resolved Contrast-enhanced MR DSA: Advantages and Tradeoffs", Magn. Reson. Med. **40**, 571 (1998).

K. L. Wedding, T, M. Grist, J. D. Folts, N. Maleej, K. K. Vigen, **D. C. Peters**, H. Osman, C. A Mistretta, "Coronary Flow and Flow Reserve in Canines Using MR Phase Difference and Complex Difference Processing", Magn. Reson. Med. **39**, 656 (1998).

T. M. Grist, F. R. Korosec, **D.C. Peters**, S. Witte, R. C. Walovitch, R. P. Dolan, W. E. Bridson, E. K. Yucel, C. A. Mistretta, "Steady State and Dynamic MR Angiography with MS-325: Initial Experience in Humans", Radiology **207**, 539 (1998).

J. Polzin, F. Korosec, K. Wedding, T. Grist, R. Frayne, **D. Peters**, C. Mistretta, "Effects of Through-Plane Myocardial Motion on Phase-Difference and Complex-Difference Measurements of Absolute Coronary Artery Flow", JMRI **1**,113 (1996).

- **Conference Proceedings**

Dana C. Peters, Frederick H. Epstein, Elliot R. McVeigh, “Tagged Imaging Using Limited Angle Projection Reconstruction”, Eighth ISMRM 1511 (2000).

James E. Holden, Orhan Unal**, Dana C. Peters**, T.R. Oakes, “Control of Undersampling Artifacts in Projection-based Angiography by Iterative Reconstruction”, Eighth ISMRM 1827 (2000).

Emilio Esparza-Coss, Walter F. Block, Frank R. Korosec**, Dana C. Peters**, Charles A. Mistretta, “3D RARE with a Projection Reconstruction Trajectory,” Seventh ISMRM 1651 (1999).

Mazaheri Y**, Peters DC**, Korosec FR, Carroll TJ, Block W, Grist TM, Mistretta CA, “Spatial Resolution Improvement in Time-Resolved Contrast-Enhanced MRA”, Seventh ISMRM 1897 (1999).

Karl K. Vigen, **Dana C. Peters**, Thomas M. Grist, Walter F. Block, Charles A. Mistretta, “Undersampled Projection Imaging for Time-Resolved Contrast-enhanced 3D MR Angiography (PR-TRICKS)”, Seventh ISMRM 1899 (1999).

A.V. Barger**, D. Peters**, W. F. Block, K. Vigen, T. M. Grist, F. R. Korosec, and C. A. Mistretta, “Phase Contrast with Interleaved Undersampled Projections”, Seventh ISMRM 156 (2000).

Dana C. Peters, Thomas M. Grist, Frank R. Korosec, James E. Holden, Walter F. Block, Kristin L. Wedding, Timothy J. Carroll, and Charles A. Mistretta, “Undersampled Projection Reconstruction Applied to MR Angiography”, Seventh ISMRM 153 (1999).

D. Peters, K. Vigen, Y. Mazaheri, T. Grist, J. Holden, F. Korosec, W. Block, K. Wedding, T. Carroll, C. Mistretta, "High Resolution MRA Using Sparsely Sampled Projection Reconstruction:Preliminary Clinical Studies", *In* "Xth Annual Internation Workshop on Magnetic Resonance Angiography, Park City, Utah, 1998" p. 85.

D. Peters, T. Grist, K. Vigen, J. Holden, F. Korosec, W. Block, C. Mistretta, "High Resolution MRA Using Sparsely Sampled Projection Reconstruction", *In* "Xth Annual Internation Workshop on Magnetic Resonance Angiography, Park City, Utah, 1998" p. 11.

D.C. Peters, C.A. Mistretta, F. R. Korosec, J. Holden, F. Kelcz, K.L. Wedding, T. M. Grist, " Using Projection Reconstruction with a Limited Number of Projections to Increase Image Resolution or Acquisition Speed", Sixth ISMRM, 182 (1998).

D. Peters, F. Korosec, R. Frayne, T.M. Grist, and C.A. Mistretta, "Cardiac-Gated Contrast-Enhanced Time-Resolved 3D Imaging of the Pulmonary Arteries", Fifth ISMRM, 1859 (1997).

D. Peters, R. Frayne, T.M. Grist, and C.A. Mistretta, "Simulation of Contrast-Enhanced Single Breath-hold Multiphase 3D Coronary Artery Imaging", Fourth ISMRM, 670 (1996).

R. Frayne, T.M. Grist, J. S. Swan, **D. C. Peters**, F.R. Korosec, C. A. Mistretta, "Contrast Agent Injection Protocols for 3D MR DSA: Effects of Injection Order, Volume and Rate." Sixth ISMRM 770 (1998).

K.L. Wedding, T. M. Grist, J. D. Folts, N. Maleej, K.K. Vigen, **D.C. Peters**, H. Osman, C. A. Mistretta, "Sources of Variability in MR Coronary FLow and Coronary Flow Reserve Measurements in the Canine Model" Sixth ISMRM, 274 (1998).

C. A. Mistretta, T.M. Grist, F.R. Korosec, R. Frayne, **D.C. Peters**, Y. Mazaheri, T.J. Carroll, "Comparison of Methods for Contrast-enhanced 3D MR DSA", IX International Workshop on MRA, 172 Spain, 1997.

T.M. Grist, F.R. Korosec, **D. C. Peters**, R. C. Walovitch, E.K.Yucel, and C. A. Mistretta, "Steady State and Dynamic Angiographic Imaging with MS-325: Initial Experience in Humans", Fifth ISMRM, 207 (1997).

K.L. Wedding, T.M. Grist, J.D. Foltz, N. Maleej, K.K. Vigen, **D.C.Peters,** E.D. Goodwyn, H. Osman and C.A. Mistretta, "*In vivo* Validation of MR Flow Measurements and Motion Correction Algorithms in Coronary Arteries", Fifth ISMRM, 866 (1997).