Stanford



Norbert Pelc

Boston Scientific Applied Biomedical Engineering Professor and Professor of Radiology, Emeritus

Rad/Radiological Sciences Laboratory

Curriculum Vitae available Online

Bio

BIO

Norbert Pelc is Professor of Radiology, Emeritus. His primary research interests are in the physics, engineering, and mathematics of diagnostic imaging and the development of applications of this imaging technology. His current work focuses on computed tomography, specifically in methods to improve the information content and image quality and to reduce the radiation dose from these examinations. He holds a doctorate and master degrees in Medical Radiological Physics from Harvard University and a BS from the University of Wisconsin in Madison. He served on the first National Advisory Council of the National Institute of Biomedical Imaging and Bioengineering of the NIH. He is a member of the National Academy of Engineering and a Fellow of the American Association of Physicists in Medicine, the International Society for Magnetic Resonance in Medicine, the American Institute of Medical and Biological Engineering, and of SPIE.

ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Rad/Radiological Sciences Laboratory
- Member, Bio-X
- Member, Cardiovascular Institute
- Member, Stanford Cancer Institute

ADMINISTRATIVE APPOINTMENTS

- Chair, Department of Bioengineering, (2012-2017)
- Associate Chair, Department of Radiology, (2004-2012)

HONORS AND AWARDS

- Fellow, Council on Cardiovascular Radiology, American Heart Association (-)
- Fellow, Society of Magnetic Resonance in Medicine (-)
- Fellow, American Institute for Medical and Biological Engineering (2006)
- Fellow, American Association of Physicists in Medicine (2008)
- Fellow, SPIE (2016)
- Member, National Academy of Engineering (2012)
- Edith Quimby Lifetime Achievement Award, American Association of Physicists in Medicine (2013)
- Outstanding Researcher Award, Radiological Society of North America (2013)
- Doctor of Medicine, Honoris Causa, Friedrich Alexander University of Erlangen-Nuremberg (2016)

PROFESSIONAL EDUCATION

- Sc.D., Harvard University , Medical Radiological Physics (1979)
- S.M., Harvard University , Medical Radiological Physics (1976)
- B .S., University of Wisconsin , Engineering and Physics (1974)

LINKS

- CAP website: http://med.stanford.edu/profiles/bioengineering/faculty/Norbert_Pelc/

Research & Scholarship

CURRENT RESEARCH AND SCHOLARLY INTERESTS

Medical imaging has made enormous strides in recent decades. In clinical medicine, imaging plays an increasingly important role in patient care. A recent study found that internists rank the development of computed tomography (CT) and magnetic resonance imaging (MRI), together, as the most important innovation in medicine (Health Affairs, Vol 20, p. 30, 2001). At the same time, experts in a completely different scientific field, the National Academy of Engineering, ranks the development of imaging as one of the top 20 greatest engineering achievements of the 20th century (www.greatachievements.org), amazingly at a rank higher than that of household appliances and nuclear technology. Imaging is also taking on an increasing role in research, improving our understanding of both normal and diseased states and as a surrogate endpoint in the evaluation of therapies. Imaging allows serial studies in the same individual, thereby increasing statistical power and reducing the number of subjects needed in a study. Imaging is also a powerful tool to guide minimally invasive therapies.

The effectiveness of imaging and the powerful impact of visual images have led to a major increase in the utilization of this strategy, a trend that will continue but will evolve in coming years. Further advances will lead to improved detection, localization, and characterization of disease which should enable more accurate selection of optimized therapies for individual subjects (personalized medicine) as well as treatments that are more effective, less expensive, and less traumatic. Imaging will also play an increasingly important role in the challenges facing biomedical research.

There are many imaging “modalities”, each acquiring data using physical mechanisms such as x-ray transmission, nuclear magnetic resonance, acoustic or optical properties, and signals from radioactive tracers. Optimal design and utilization of each requires an appreciation of the underlying physical phenomena. Each modality uses sensors to detect signals and mathematical methods to covert the measured signals to images. Additional image processing methods are used to extract physiological information from the images.

My own interests center on the physics, engineering and mathematics of medical imaging. While I have worked on many imaging modalities over the past decades, my current projects are focused on computed tomography, digital x-ray imaging, and hybrid multimodality systems. An area of current focus is understanding the potential impact of a new class of x-ray detectors for CT imaging, energy discriminating photon counting detectors. They promise improved tissue characterization and dose efficiency, but currently available detectors have imperfections that detract from their performance. Important questions for this and other new technologies are: what are the real benefits and when is it worthwhile adopting them into clinical systems.

In addition to these technical projects, I am also interested in the development of new clinical and research applications of medical imaging. This is highly interdisciplinary research, incorporating not only the latest imaging technology but also fundamental appreciation of anatomy and pathophysiology.

CLINICAL TRIALS

- Comparison of I-124 PET/CT, F-18 FDG PET/CT & I-123 Whole Body Scintigraphy for Recurrent Thyroid CA, Not Specified

Publications

PUBLICATIONS

- **A virtual trial evaluation of patient motion in arc and linear system designs in body digital tomosynthesis.** *Biomedical physics & engineering express*
  Samei, E., Segars, P. W., Shoval, L., Karniel, G., Daliot, A., Pelc, N. J.
  2025

- **Analytical model for pulse pileup spectra and count statistics in photon counting detectors with seminonparalyzable behavior.** *Medical physics*
  Yang, Y., Pelc, N. J., Wang, A. S.
  2025

- **Spectral optimization using fast kV switching and filtration for photon counting CT with realistic detector responses: a simulation study.** *Journal of medical imaging (Bellingham, Wash.)*
  Wang, S., Yang, Y., Pal, D., Yin, Z., Maltz, J. S., Pelc, N. J., Wang, A. S.
  2024; 11 (Suppl 1): S12805

- **The effects of intra-detector Compton scatter on low-frequency DQE for photon-counting CT using edge-on-irradiated silicon detectors.** *Medical physics*
  Grönberg, F., Yin, Z., Maltz, J. S., Pelc, N. J., Persson, M.
  2024

- **Empirical optimization of energy bin weights for compressing measurements with realistic photon counting x-ray detectors.** *Medical physics*
  Yang, Y., Wang, S., Pal, D., Yin, Z., Pelc, N. J., Wang, A. S.
  2023

- **Early CT physics research at massachusetts general hospital.** *Medical physics*
  Pelc, N. J., Chesler, D. A.
  2023

- **Empirical Optimization of Energy Bin Weights for Compressing Measurements with Photon Counting X-ray Detectors**
  Yang, Y., Wang, S., Pal, D., Pelc, N. J., Wang, A. S.
  edited by Zhao, W., Yu, L.
  SPIE-INT SOC OPTICAL ENGINEERING.2022

- **A Methodology to Train a Convolutional Neural Network-Based Low-Dose CT Denoiser With an Accurate Image Domain Noise Insertion Technique** *IEEE ACCESS*
  Kim, B., Divel, S. E., Pelc, N. J., Baek, J.
  2022; 10: 86395-86407

- **Fast kV Switching for Improved Material Decomposition with Photon Counting X-ray Detectors**
  Wang, S., Yang, Y., Pal, D., Pelc, N. J., Wang, A. S.
  edited by Zhao, W., Yu, L.
  SPIE-INT SOC OPTICAL ENGINEERING.2022

- **How CT happened: the early development of medical computed tomography.** *Journal of medical imaging (Bellingham, Wash.)*
  Schulz, R. A., Stein, J. A., Pelc, N. J.
  2021; 8 (5): 052110

- **Special Section Guest Editorial: Computed tomography (CT) at 50 years.** *Journal of medical imaging (Bellingham, Wash.)*
  La Riviere, P. J., Fahrig, R., Pelc, N. J.
  2021; 8 (5): 052101

- **Findings of the AAPM Ad Hoc committee on magnetic resonance imaging in radiation therapy: Unmet needs, opportunities, and recommendations.** *Medical physics*
  McGee, K. P., Tyagi, N., Bayouth, J. E., Cao, M., Fallone, B. G., Glide-Hurst, C. K., Goerner, F. L., Green, O. L., Kim, T., Paulson, E. S., Yanasak, N. E., Jackson, E. F., Goodwin, et al

2021

- **Spectral Photon Counting CT: Imaging Algorithms and Performance Assessment.** *IEEE transactions on radiation and plasma medical sciences*
  Wang, A. S., Pelc, N. J.
  2021; 5 (4): 453-464
- **A dynamic simulation framework for CT perfusion in stroke assessment built from first principles.** *Medical physics*
  Divel, S. E., Christensen, S., Segars, W. P., Lansberg, M. G., Pelc, N. J.
  2021
- **CNN-based CT denoising with an accurate image domain noise insertion technique**
  Kim, B., Divel, S. E., Pelc, N. J., Baek, J.
  edited by Bosmans, H., Zhao, W., Yu, L.
  SPIE-INT SOC OPTICAL ENGINEERING.2021
- **Simulation of contrast agent dynamics in digital brain phantom for CT perfusion optimization**
  Divel, S. E., Christensen, S., Lansberg, M. G., Pelc, N. J.
  edited by Chen, G. H., Bosmans, H.
  SPIE-INT SOC OPTICAL ENGINEERING.2021
- **Analytical model for pulse pileup in photon counting detectors with seminonparalyzable behavior**
  Yang, Y., Pelc, N. J., Wang, A. S.
  edited by Bosmans, H., Zhao, W., Yu, L.
  SPIE-INT SOC OPTICAL ENGINEERING.2021
- **Detective quantum efficiency of photon-counting CdTe and Si detectors for computed tomography: a simulation study.** *Journal of medical imaging (Bellingham, Wash.)*
  Persson, M., Wang, A., Pelc, N. J.
  2020; 7 (4): 043501
- **Principles and Applications of Multi-energy CT Report of AAPM Task Group 291.** *Medical physics*
  McCollough, C. H., Boedeker, K. n., Cody, D. n., Duan, X. n., Flohr, T. n., Halliburton, S. n., Hsieh, J. n., Layman, R. n., Pelc, N. J.
  2020
- **Acoustic Attenuation: Multifrequency Measurement and Relationship To CT and MR Imaging.** *IEEE transactions on ultrasonics, ferroelectrics, and frequency control*
  Webb, T. D., Leung, S. A., Ghanouni, P. n., Dahl, J. J., Pelc, N. J., Pauly, K. B.
  2020; PP
- **Spectral modulator with flying focal spot for cone-beam CT: a feasibility study.** *SPIE Medical Imaging 2020: Physics of Medical Imaging*
  Gao, H., Zhou, H., Zhu, L., Pelc, N., Bennett, R., Wang, A.
  2020
- **Spectral Photon Counting CT: Imaging Algorithms and Performance Assessment.** *IEEE Transactions on Radiation and Plasma Medical Sciences*
  Wang, A. S., Pelc, N. J.
  2020
- **Implementation of a piecewise-linear dynamic attenuator** *JOURNAL OF MEDICAL IMAGING*
  Shunhavanich, P., Bennett, N., Hsieh, S. S., Pelc, N. J.
  2019; 6 (2)
- **Accurate image domain noise insertion in CT images.** *IEEE transactions on medical imaging*
  Divel, S. E., Pelc, N. J.
  2019
- **Fluid-filled dynamic bowtie filter: Description and comparison with other modulators** *MEDICAL PHYSICS*
  Shunhavanich, P., Hsieh, S. S., Pelc, N. J.
  2019; 46 (1): 127–39

- **Simulation model for evaluating energy-resolving photon-counting CT detectors based on generalized linear-systems framework**
  Persson, M., Pelc, N. J.
  edited by Schmidt, T. G., Chen, G. H., Bosmans, H.
  SPIE-INT SOC OPTICAL ENGINEERING.2019
- **Noise reduction in photon-counting CT using frequency-dependent optimal weighting**
  Persson, M., Pelc, N. J.
  edited by Matej, S., Metzler, S. D.
  SPIE-INT SOC OPTICAL ENGINEERING.2019
- **Detective Efficiency of Photon Counting Detectors with Spectral Degradation and Crosstalk.** *Medical physics*
  Rajbhandary, P. L., Persson, M. n., Pelc, N. J.
  2019
- **A framework for performance characterization of energy-resolving photon-counting detectors** *MEDICAL PHYSICS*
  Persson, M., Rajbhandary, P. L., Pelc, N. J.
  2018; 45 (11): 4897–4915
- **Fluid-filled dynamic bowtie filter: description and comparison with other modulators.** *Medical physics*
  Shunhavanich, P., Hsieh, S. S., Pelc, N. J.
  2018
- **A framework for performance characterization of energy-resolving photon-counting detectors.** *Medical physics*
  Persson, M., Rajbhandary, P. L., Pelc, N. J.
  2018
- **Photon-counting CT: Technical Principles and Clinical Prospects.** *Radiology*
  Willemink, M. J., Persson, M., Pourmorteza, A., Pelc, N. J., Fleischmann, D.
  2018: 172656
- **Modeling charge transport in photon-counting detectors** *NUCLEAR INSTRUMENTS & METHODS IN PHYSICS RESEARCH SECTION A-ACCELERATORS SPECTROMETERS DETECTORS AND ASSOCIATED EQUIPMENT*
  Fang, Y., Xu, C., Yao, Y., Pelc, N., Danielsson, M., Badano, A.
  2018; 899: 115–21
- **Effect of Spectral Degradation and Spatio-Energy Correlation in X-Ray PCD for Imaging** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Rajbhandary, P. L., Hsieh, S. S., Pelc, N. J.
  2018; 37 (8): 1910–19
- **Measurements of the Relationship Between CT Hounsfield Units and Acoustic Velocity and How It Changes With Photon Energy and Reconstruction Method** *IEEE TRANSACTIONS ON ULTRASONICS FERROELECTRICS AND FREQUENCY CONTROL*
  Webb, T. D., Leung, S. A., Rosenberg, J., Ghanouni, P., Dahl, J. J., Pelc, N. J., Pauly, K.
  2018; 65 (7): 1111–24
- **Spectral resolution and high-flux capability tradeoffs in CdTe detectors for clinical CT** *MEDICAL PHYSICS*
  Hsieh, S. S., Rajbhandary, P. L., Pelc, N. J.
  2018; 45 (4): 1433–43
- **Frequency Dependent DQE of Photon Counting Detector with Spectral Degradation and Cross-talk**
  Rajbhandary, P. L., Persson, M., Pelc, N. J.
  edited by Lo, J. Y., Schmidt, T. G., Chen, G. H.
  SPIE-INT SOC OPTICAL ENGINEERING.2018
- **Effect of Electronic Noise and Lowest Energy Threshold Selection in Photon Counting Detectors**
  Rajbhandary, P. L., Pelc, N. J.
  edited by Lo, J. Y., Schmidt, T. G., Chen, G. H.
  SPIE-INT SOC OPTICAL ENGINEERING.2018
- **Energy dependence of SNR and DQE for effective monoenergetic imaging in spectral CT**
  Rajbhandary, P. L., Pelc, N. J.

edited by Lo, J. Y., Schmidt, T. G., Chen, G. H.
SPIE-INT SOC OPTICAL ENGINEERING.2018

- **Implementation of a Piecewise-linear Dynamic Attenuator**
  Shunhavanich, P., Bennett, N., Hsieh, S. S., Pelc, N. J.
  edited by Lo, J. Y., Schmidt, T. G., Chen, G. H.
  SPIE-INT SOC OPTICAL ENGINEERING.2018

- **Generalized linear-systems framework for performance assessment of energy-resolving photon-counting detectors**
  Persson, M., Rajbhandary, P. L., Pelc, N. J.
  edited by Lo, J. Y., Schmidt, T. G., Chen, G. H.
  SPIE-INT SOC OPTICAL ENGINEERING.2018

- **Can image-domain filtering of FBP CT reconstructions match low-contrast performance of iterative reconstructions?**
  Divel, S. E., Hsieh, S. S., Wang, J., Pelc, N. J.
  edited by Lo, J. Y., Schmidt, T. G., Chen, G. H.
  SPIE-INT SOC OPTICAL ENGINEERING.2018

- **Segmented targeted least squares estimator for material decomposition in multibin photon-counting detectors.** *Journal of medical imaging (Bellingham, Wash.)*
  Rajbhandary, P. L., Hsieh, S. S., Pelc, N. J.
  2017; 4 (2): 023503-?

- **Special Section Guest Editorial: Positron Emission Tomography: History, Current Status, and Future Prospects.** *Journal of medical imaging (Bellingham, Wash.)*
  Pelc, N. J., Kinahan, P. E., Pettigrew, R. I.
  2017; 4 (1): 011001-?

- **Improvements in low contrast detectability with iterative reconstruction and the effect of slice thickness**
  Hsieh, S. S., Pelc, N. J.
  edited by Flohr, T. G., Lo, J. Y., Schmidt, T. G.
  SPIE-INT SOC OPTICAL ENGINEERING.2017

- **Sensitivity Analysis of Pulse Pileup Model Parameter in Photon Counting Detectors**
  Shunhavanich, P., Pelc, N. J.
  edited by Flohr, T. G., Lo, J. Y., Schmidt, T. G.
  SPIE-INT SOC OPTICAL ENGINEERING.2017

- **Effect of Spatio-energy Correlation in PCD due to Charge Sharing, Scatter and Secondary Photons**
  Rajbhandary, P. L., Hsieh, S. S., Pelc, N. J.
  edited by Flohr, T. G., Lo, J. Y., Schmidt, T. G.
  SPIE-INT SOC OPTICAL ENGINEERING.2017

- **Image quality comparison between single energy and dual energy CT protocols for hepatic imaging.** *Medical physics*
  Yao, Y., Ng, J. M., Megibow, A. J., Pelc, N. J.
  2016; 43 (8): 4877-?

- **Multisource inverse-geometry CT. Part I. System concept and development.** *Medical physics*
  De Man, B., Uribe, J., Baek, J., Harrison, D., Yin, Z., Longtin, R., Roy, J., Waters, B., Wilson, C., Short, J., Inzinna, L., Reynolds, J., Neculaes, et al
  2016; 43 (8): 4607-?

- **Multisource inverse-geometry CT. Part II. X-ray source design and prototype.** *Medical physics*
  Neculaes, V. B., Caiafa, A., Cao, Y., De Man, B., Edic, P. M., Frutschy, K., Gunturi, S., Inzinna, L., Reynolds, J., Vermilyea, M., Wagner, D., Zhang, X., Zou, et al
  2016; 43 (8): 4617-?

- **A prototype piecewise-linear dynamic attenuator** *PHYSICS IN MEDICINE AND BIOLOGY*
  Hsieh, S. S., Peng, M. V., May, C. A., Shunhavanich, P., Fleischmann, D., Pelc, N. J.
  2016; 61 (13): 4974-4988

- **Improving pulse detection in multibin photon-counting detectors.** *Journal of medical imaging (Bellingham, Wash.)*
  Hsieh, S. S., Pelc, N. J.
  2016; 3 (2): 023505-?
- **A limit on dose reduction possible with CT reconstruction algorithms without prior knowledge of the scan subject.** *Medical physics*
  Hsieh, S. S., Chesler, D. A., Fleischmann, D., Pelc, N. J.
  2016; 43 (3): 1361-?
- **Digital Tomosynthesis System Geometry Analysis Using Convolution-Based Blur-and-Add (BAA) Model** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Wu, M., Yoon, S., Solomon, E. G., Star-Lack, J., Pelc, N., Fahrig, R.
  2016; 35 (1): 131-143
- **Limits to dose reduction from iterative reconstruction and the effect of through-slice blurring**
  Hsieh, S. S., Pelc, N. J.
  edited by Kontos, D., Flohr, T. G., Lo, J. Y.
  SPIE-INT SOC OPTICAL ENGINEERING.2016
- **Lossless Compression of Projection Data from Photon Counting Detectors**
  Shunhavanich, P., Pelc, N. J.
  edited by Kontos, D., Flohr, T. G., Lo, J. Y.
  SPIE-INT SOC OPTICAL ENGINEERING.2016
- **"Conventional" CT images from spectral measurements**
  Rajbhandary, P. L., Pelc, N. J.
  edited by Kontos, D., Flohr, T. G., Lo, J. Y.
  SPIE-INT SOC OPTICAL ENGINEERING.2016
- **Upper-Bound on Dose Reduction in CT Reconstruction for Nodule Detection** *IEEE ACCESS*
  De Man, R., Wang, G., Kalra, M. K., Otrakji, A., Hsieh, S., Pelc, N.
  2016; 4: 4247-4253
- **Raw data normalization for a multi source inverse geometry CT system** *OPTICS EXPRESS*
  Baek, J., De Man, B., Harrison, D., Pelc, N. J.
  2015; 23 (6): 7514-7526
- **A Dynamic Attenuator Improves Spectral Imaging With Energy-Discriminating, Photon Counting Detectors** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Hsieh, S. S., Pelc, N. J.
  2015; 34 (3): 729-739
- **Multivariate Gaussian Model Based Cramer-Rao Lower Bound Evaluation of the In-Depth PCXD**
  Yao, Y., Pelc, N. J.
  edited by Hoeschen, C., Kontos, D.
  SPIE-INT SOC OPTICAL ENGINEERING.2015
- **Pulse detection logic for multibin photon counting detectors: beyond the simple comparator**
  Hsieh, S. S., Pelc, N. J.
  edited by Hoeschen, C., Kontos, D.
  SPIE-INT SOC OPTICAL ENGINEERING.2015
- **First results from a prototype dynamic attenuator system**
  Hsieh, S. S., Peng, M. V., May, C. A., Shunhavanich, P., Pelc, N. J.
  edited by Hoeschen, C., Kontos, D.
  SPIE-INT SOC OPTICAL ENGINEERING.2015
- **Statistical bias in material decomposition in low photon statistics region**
  Rajbhandary, P. L., Pelc, N. J.
  edited by Hoeschen, C., Kontos, D.

SPIE-INT SOC OPTICAL ENGINEERING.2015

- **Fluid-filled Dynamic Bowtie Filter: a Feasibility Study**
  Shunhavanich, P., Hsieh, S. S., Pelc, N. J.
  edited by Hoeschen, C., Kontos, D.
  SPIE-INT SOC OPTICAL ENGINEERING.2015
- **An algorithm to estimate the object support in truncated images.** *Medical physics*
  Hsieh, S. S., Nett, B. E., Cao, G., Pelc, N. J.
  2014; 41 (7): 071908-?
- **An algorithm to estimate the object support in truncated images.** *Medical physics*
  Hsieh, S. S., Nett, B. E., Cao, G., Pelc, N. J.
  2014; 41 (7): 071908-?
- **The piecewise-linear dynamic attenuator reduces the impact of count rate loss with photon-counting detectors.** *Physics in medicine and biology*
  Hsieh, S. S., Pelc, N. J.
  2014; 59 (11): 2829-2847
- **Control algorithms for dynamic attenuators.** *Medical physics*
  Hsieh, S. S., Pelc, N. J.
  2014; 41 (6): 061907-?
- **Control algorithms for dynamic attenuators.** *Medical physics*
  Hsieh, S. S., Pelc, N. J.
  2014; 41 (6): 061907-?
- **A multi-source inverse-geometry CT system: initial results with an 8 spot x-ray source array** *PHYSICS IN MEDICINE AND BIOLOGY*
  Baek, J., De Man, B., Uribe, J., Longtin, R., Harrison, D., Reynolds, J., Neculaes, B., Frutschy, K., Inzinna, L., Caiafa, A., Senzig, R., Pelc, N. J.
  2014; 59 (5)
- **Efficacy of fixed filtration for rapid kVp-switching dual energy x-ray systems.** *Medical physics*
  Yao, Y., Wang, A. S., Pelc, N. J.
  2014; 41 (3): 031914-?
- **Efficacy of fixed filtration for rapid kVp-switching dual energy x-ray systems.** *Medical physics*
  Yao, Y., Wang, A. S., Pelc, N. J.
  2014; 41 (3): 031914-?
- **Dose reduction using a dynamic, piecewise-linear attenuator.** *Medical physics*
  Hsieh, S. S., Fleischmann, D., Pelc, N. J.
  2014; 41 (2): 021910-?
- **Dose reduction using a dynamic, piecewise-linear attenuator.** *Medical physics*
  Hsieh, S. S., Fleischmann, D., Pelc, N. J.
  2014; 41 (2): 021910-?
- **Recent and Future Directions in CT Imaging** *ANNALS OF BIOMEDICAL ENGINEERING*
  Pelc, N. J.
  2014; 42 (2): 260-268
- **Use of Depth Information from In-depth Photon Counting Detectors for X-ray Spectral Imaging: A Preliminary Simulation Study** *Medical Imaging - Physics of Medical Imaging*
  Yao, Y., Bornefalk, H., Hsieh, S. S., Danielsson, M., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2014
- **UTILIZATION OF IN-DEPTH PHOTON COUNTING DETECTORS TOWARDS X-RAY SPECTRAL IMAGING: THE BENEFITS FROM THE DEPTH INFORMATION**
  Yao, Y., Bornefalk, H., Hsieh, S. S., Danielsson, M., Pelc, N. J., IEEE
  IEEE.2014: 1156–59

- **Enabling Photon Counting Detectors with Dynamic Attenuators** *Medical Imaging - Physics of Medical Imaging*
  Hsieh, S. S., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Algorithms for Optimizing CT Fluence Control** *Medical Imaging - Physics of Medical Imaging*
  Hsieh, S. S., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2014
- **Segmented Targeted Least Squares Estimator for Material Decomposition in Multi-Bin PCXDs** *Medical Imaging - Physics of Medical Imaging*
  Rajbhandary, P. L., Hsieh, S. S., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2014
- **To bin or not to bin? The effect of CT system limiting resolution on noise and detectability** *PHYSICS IN MEDICINE AND BIOLOGY*
  Baek, J., Pineda, A. R., Pelc, N. J.
  2013; 58 (5): 1433-1446
- **The feasibility of an inverse geometry CT system with stationary source arrays.** *Medical physics*
  Hsieh, S. S., Heanue, J. A., Funk, T., Hinshaw, W. S., Wilfley, B. P., Solomon, E. G., Pelc, N. J.
  2013; 40 (3): 031904-?
- **The feasibility of an inverse geometry CT system with stationary source arrays** *MEDICAL PHYSICS*
  Hsieh, S. S., Heanue, J. A., Funk, T., Hinshaw, W. S., Wilfley, B. P., Solomon, E. G., Pelc, N. J.
  2013; 40 (3)
- **The feasibility of a piecewise-linear dynamic bowtie filter** *MEDICAL PHYSICS*
  Hsieh, S. S., Pelc, N. J.
  2013; 40 (3)
- **Novel motor design for rotating anode x-ray tubes operating in the fringe field of a magnetic resonance imaging system** *MEDICAL PHYSICS*
  Lillaney, P., Shin, M., Hinshaw, W., Bennett, N. R., Pelc, N., Fahrig, R.
  2013; 40 (2)
- **Optimized control of a dynamic, pre-patient attenuator**
  Hsieh, S. S., Pelc, N., J.
  2013
- **Dynamic bowtie for fan-beam CT** *JOURNAL OF X-RAY SCIENCE AND TECHNOLOGY*
  Liu, F., Wang, G., Cong, W., Hsieh, S. S., Pelc, N. J.
  2013; 21 (4): 579-590
- **Truncation artifact correction by support recovery** *Conference on Medical Imaging - Physics of Medical Imaging*
  Hsieh, S. S., Cao, G., Nett, B. E., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Optimized control of a dynamic, prepatient attenuator** *Conference on Medical Imaging - Physics of Medical Imaging*
  Hsieh, S. S., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Liver Imaging: Image Quality Evaluation and Comparison between Single and Dual Energy Protocols** *Conference on Medical Imaging - Physics of Medical Imaging*
  Yao, Y., Megibow, A. J., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2013
- **Dynamic Bowtie for Fan-beam CT (PMID: 24191994).** *X-Ray Sci Technol*
  Liu, F., Wang, G., Cong, W., Hsieh, S. S., Pelc, N., J.
  2013; 4 (21): 579-90
- **Liver imaging: image quality evaluation and comparison between single and dual energy protocols**
  Yao, Y., Megibow, A. J., Pelc, N., J.

2013

- **Truncation artifact correction by support recovery**
  Hsieh, S. S., Cao, G., Nett, B. E., Pelc, N., J.
  2013
- **Image-based synthetic CT: simulating arbitrary low dose single and dual energy protocols from dual energy images**
  Wang, A., Feng, C., Pelc, N., J.
  2012
- **Efficacy of fixed filtration for rapid kVp-switching dual energy x-ray systems: experimental verification**
  Yao, Y., Wang, A., Pelc, N., J.
  2012
- **A volumetric reconstruction algorithm for stationary source inverse-geometry CT**
  Hsieh, S. S., Pelc, N., J.
  2012
- **Initial results with a multisource inverse-geometry CT system**
  Baek, J., Uribe, J., Harrison, D., Reynolds, J., Neculaes, B., Inzinna, L., Pelc, N. J.
  2012
- **A Review of Dual Energy CT: Principles, Applications, and Future Outlook** *(Chinese Journal of) CT Theory and Applications*
  Wang, A., S., Hsieh, S., S., Pelc, N., J.
  2012; 3 (21): 367-386
- **A comparison of dual kV energy integrating and energy discriminating photon counting detectors for dual energy x-ray imaging**
  Wang, A., Pelc, N., J.
  2012
- **Initial results with a multi-source inverse-geometry CT system** *Conference on Medical Imaging - Physics of Medical Imaging*
  Baek, J., Pelc, N. J., Deman, B., Uribe, J., Harrison, D., Reynolds, J., Neculaes, B., Inzinna, L., Caiafa, A.
  SPIE-INT SOC OPTICAL ENGINEERING.2012
- **Frequency-combined extended 3D reconstruction for multiple circular cone-beam CT scans.**
  Grimmer, R., Baek, J., Pelc, N., J., Kachelriess, M.
  2012
- **Data normalization method for a multisource inverse geometry CT system**
  Baek, J., Pelc, N., J.
  2012
- **Efficacy of fixed filtration for rapid kVp-switching dual energy x-ray systems: experimental verification**
  Yao, Y., Wang, A., Pelc, N., J.
  2012
- **A volumetric reconstruction algorithm for stationary source inverse-geometry CT**
  Hsieh, S. S., Pelc, N., J.
  2012
- **Initial results with a multisource inverse-geometry CT system**
  Baek, J., Uribe, J., Harrison, D., Reynolds, J., Neculaes, B., Inzinna, L., Pelc, N. J.
  2012
- **A Review of Dual Energy CT: Principles, Applications, and Future Outlook** *(Chinese Journal of) CT Theory and Applications*
  Wang, A., S., Hsieh, S., S., Pelc, N., J.
  2012; 3 (21): 367-386
- **A comparison of dual kV energy integrating and energy discriminating photon counting detectors for dual energy x-ray imaging**
  Wang, A., Pelc, N., J.

2012

- **Synthetic CT: Simulating low dose single and dual energy protocols from a dual energy scan** *MEDICAL PHYSICS*
  Wang, A. S., Pelc, N. J.
  2011; 38 (10): 5551-5562
- **Effect of detector lag on CT noise power spectra** *MEDICAL PHYSICS*
  Baek, J., Pelc, N. J.
  2011; 38 (6): 2995-3005
- **Local and global 3D noise power spectrum in cone-beam CT system with FDK reconstruction** *MEDICAL PHYSICS*
  Baek, J., Pelc, N. J.
  2011; 38 (4): 2122-2131
- **Sufficient Statistics as a Generalization of Binning in Spectral X-ray Imaging** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Wang, A. S., Pelc, N. J.
  2011; 30 (1): 84-93
- **A comparison of four algorithms for metal artifact reduction in CT imaging** *Conference on Medical Imaging 2011 - Physics of Medical Imaging*
  Golden, C., Mazin, S. R., Boas, F. E., Tye, G., Ghanouni, P., Gold, G., Sofilos, M., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2011
- **Use of sphere phantoms to measure the 3D MTF of FDK reconstructions** *Conference on Medical Imaging 2011 - Physics of Medical Imaging*
  Baek, J., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2011
- **An inverse geometry CT system with stationary source arrays** *Conference on Medical Imaging 2011 - Physics of Medical Imaging*
  Hsieh, S. S., Heanue, J. A., Funk, T., Hinshaw, W. S., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2011
- **Synthetic CT: simulating arbitrary low dose single and dual energy protocols** *Conference on Medical Imaging 2011 - Physics of Medical Imaging*
  Wang, A. S., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2011
- **Frequency-Combined Extended 3D Reconstruction for Multiple Circular Cone-Beam CT Scans** *IEEE Nuclear Science Symposium/Medical Imaging Conference (NSS/MIC)/18th International Workshop on Room-Temperature Semiconductor X-Ray and Gamma-Ray Detectors*
  Grimmer, R., Baek, J., Pelc, N., Kachelriess, M.
  IEEE.2011: 4089–4092
- **An inverse geometry CT system with stationary source arrays.**
  Hsieh, S. S., Heanue, J. A., Funk, T., Hinshaw, W. S., Pelc, N., J.
  2011
- **A comparison of four algorithms for metal artifact reduction in CI imaging.**
  Golden, C., Mazin, S. R., Boas, F. E., Tye, G., Ghanouni, P., Sofilos, M., Pelc, N. J.
  2011
- **Synthetic CT: simulating arbitrary low dose single and dual energy protocols.**
  Wang, A. S., Pelc, N., J.
  2011
- **Design for a Dynamic Bowtie Achieving a Piecewise-Linear Attenuation Profile**
  Hsieh, S. S., Pelc, N., J.
  2011
- **Effect of detector lag on CT noise power spectra (PMCID: PMC3162307).** *Med Phys*
  Baek, J., Pelc, N., J.
  2011; 38: 2995-3005
- **Efficacy of Fixed Filtration for Rapid KVp-Switching Dual Energy X-Ray Systems**

Yao, Y., Wang, A., Pelc, N., J.
2011

- **Use of sphere phantoms to measure the 3D MTF of FDK reconstructions.**
  Baek, J., Pelc, N., J.
  2011

- **Synthetic CT: Simulating Low Dose Single and Dual Energy Protocols from a Dual Energy Scan (PMID: 21992373).** *Med Phys*
  Wang, A., S., Pelc, N., J.
  2011; 38: 5551-62

- **A new method to combine 3D reconstruction volumes for multiple parallel circular cone beam orbits** *MEDICAL PHYSICS*
  Baek, J., Pelc, N. J.
  2010; 37 (10): 5351-5360

- **In vivo hemodynamic analysis of intracranial aneurysms obtained by magnetic resonance fluid dynamics (MRFD) based on time-resolved three-dimensional phase-contrast MRI** *NEURORADIOLOGY*
  Isoda, H., Ohkura, Y., Kosugi, T., Hirano, M., Takeda, H., Hiramatsu, H., Yamashita, S., Takehara, Y., Alley, M. T., Bammer, R., Pelc, N. J., Namba, H., Sakahara, et al
  2010; 52 (10): 921-928

- **Comparison of hemodynamics of intracranial aneurysms between MR fluid dynamics using 3D cine phase-contrast MRI and MR-based computational fluid dynamics** *NEURORADIOLOGY*
  Isoda, H., Ohkura, Y., Kosugi, T., Hirano, M., Alley, M. T., Bammer, R., Pelc, N. J., Namba, H., Sakahara, H.
  2010; 52 (10): 913-920

- **The noise power spectrum in CT with direct fan beam reconstruction** *MEDICAL PHYSICS*
  Baek, J., Pelc, N. J.
  2010; 37 (5): 2074-2081

- **Fourier properties of the fan-beam sinogram** *MEDICAL PHYSICS*
  Mazin, S. R., Pelc, N. J.
  2010; 37 (4): 1674-1680

- **Synthetic CT: Generating Images of Arbitrary CT Protocols Using a Dual Energy Scan.** *RSNA 2010 Annual Meeting.*
  Wang, A., S., Pelc, N., J.
  2010: SSC14-09

- **High Power Distributed X-ray Source** *Conference on Medical Imaging - Physics of Medical Imaging*
  Frutschy, K., Neculaes, B., Inzinna, L., Caiafa, A., Reynolds, J., Zou, Y., Zhang, X., Gunturi, S., Cao, Y., Waters, B., Wagner, D., De Man, B., McDevitt, et al
  SPIE-INT SOC OPTICAL ENGINEERING.2010

- **Impact of Photon Counting Detector Spectral Response on Dual Energy Techniques** *Conference on Medical Imaging - Physics of Medical Imaging*
  Wang, A. S., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2010

- **Multisource Inverse-Geometry CT - Prototype System Integration** *IEEE Nuclear Science Symposium (NSS)/Medical Imaging Conference (MIC)/17th International Workshop on Room-Temperature Semiconductor X-ray and Gamma-ray Detectors*
  Uribe, J., Reynolds, J. L., Inzinna, L. P., Longtin, R., Harrison, D. D., De Man, B., Neculaes, B., Caiafa, A., Waters, W., Frutschy, K. J., Senzig, R., Baek, J., Pelc, et al
  IEEE.2010: 2578–2581

- **In vivo hemodynamic analysis of intracranial aneurysms obtained by magnetic resonance fluid dynamics (MRFD) based on time-resolved three-dimensional phase-contrast MRI.** *Neuroradiology*
  Isoda, H., Ohkura, Y., Kosugi, T., Hirano, M., Takeda, H., Hiramatsu, H., Pelc, N. J.
  2010; 10: 921-8

- **Impact of photon counting detector spectral response on dual energy approaches.**
  Wang, A. S., Pelc, N., J.

2010

- **High power distributed x-ray source.**
  Frutschy, K., Neculaes, B., Inzinna, L., Caiafa, A., Reynolds, J., Zou, Y., Pelc, N. J.
  2010
- **Distributed X-ray Source Development.**
  Frutschy, K., Neculaes, B., Inzinna, L., Mani, V., Caiafa, A., Reynolds, J., Pelc, N. J.
  2010
- **Multisource inverse-geometry CT — Prototype system integration**
  Uribe, J., Reynolds, J. L., Inzinna, L. P., Longtin, R., Harrison, D. D., De Man, B., Pelc, N. J.
  2010
- **First Imaging with Gantry-based Multisource Inverse Geometry CT scanner.**
  Uribe, J., Reynolds, J., Longtin, R., Harrison, D., Waters, W., De Man, B., Pelc, N. J.
  2010
- **A High Power Distributed X-ray Source for Multisource Inverse Geometry CT.**
  Neculaes, B. V., Inzinna, L., Caiafa, A., Reynolds, J., Frutschy, K., De Man, B., Pelc, N. J.
  2010
- **Emission Guided Radiation Therapy System: A Feasibility Study.**
  Mazin, S., Nanduri, A., Pelc, N., J.
  2010
- **Understanding and controlling the effect of lossy raw data compression on CT images** *MEDICAL PHYSICS*
  Wang, A. S., Pelc, N. J.
  2009; 36 (8): 3643-3653
- **Simulations of Virtual PET/CT 3-D Bronchoscopy Imaging Using a Physical Porcine Lung-Heart Phantom** *MOLECULAR IMAGING AND BIOLOGY*
  Yerushalmi, D., Mullick, R., Quon, A., Fahrig, R., Pelc, N. J., Fann, J. I., Gambhir, S. S.
  2009; 11 (4): 275-282
- **Direct two-dimensional reconstruction algorithm for an inverse-geometry CT system** *MEDICAL PHYSICS*
  Baek, J., Pelc, N. J.
  2009; 36 (2): 394-401
- **Analytical construction of 3D NPS for a cone beam CT system.**
  Baek, J., Pelc, N., J.
  2009
- **Optimal energy thresholds and weights for separating materials using photon counting x-ray detectors with energy discriminating capabilities.**
  Wang, A., Pelc, N., J.
  2009
- **Balanced SSFP Cisternography in the Cerebellopontine (CP) Angle: Inconsistent Vessel Contrast and a Possible Remedy.**
  Wu, P. H., Lin, C. Y., Cheng, C. C., Chung, H. W., Wu, W. C., Hargreaves, B. A., Pelc, N. J.
  2009
- **Metal Artifact Reduction Algorithm for X-Ray CT Using a Three-Pass Approach.**
  Mazin, S., Pelc, N., J.
  2009
- **SNR efficient 3D reconstruction algorithm for multi-source inverse geometry CT system.**
  Baek, J., Pelc, N., J.
  2009
- **Metal Artifact Reduction Algorithm for X-Ray CT Using a Three-Pass Approach.**

Mazin, S., Pelc, N., J.
2009

- **SNR efficient 3D reconstruction algorithm for multi-source inverse geometry CT system.**
Baek, J., Pelc, N., J.
2009

- **Fourier rebinning algorithm for inverse geometry CT** *MEDICAL PHYSICS*
Mazin, S. R., Pelc, N. J.
2008; 35 (11): 4857-4862

- **Shimming with permanent magnets for the x-ray detector in a hybrid x-ray/MR system** *MEDICAL PHYSICS*
Wen, Z., Fahrig, R., Williams, S. T., Pelc, N. J.
2008; 35 (9): 3895-3902

- **Noise considerations of three-point water-fat separation imaging methods** *MEDICAL PHYSICS*
Wen, Z., Reeder, S. B., Pineda, A. R., Pelc, N. J.
2008; 35 (8): 3597-3606

- **Design, performance, and applications of a hybrid X-Ray/MR system for interventional guidance** *PROCEEDINGS OF THE IEEE*
Fahrig, R., Ganguly, A., Lillaney, P., Bracken, J., Rowlands, J. A., Wen, Z., Yu, H., Rieke, V., Santos, J. M., Pauly, K. B., Sze, D. Y., Frisoli, J. K., Daniel, et al
2008; 96 (3): 468-480

- **Optimal multi-energy binning in photon counting detectors with energy discrimination capabilities.** *RSNA '08*
Wang, A., S., Pelc, N., J.
2008: 1061

- **Effect of the frequency content and spatial location of raw data errors on CT images** *MEDICAL IMAGING 2008: PHYSICS OF MEDICAL IMAGING, PTS 1-3*
Wang, A. S., Xie, Y., Pelc, N. J.
2008; 6913

- **Lossy raw data compression in computed tomography with noise shaping to control image effects** *Medical Imaging 2008 Conference*
Xie, Y., Wang, A. S., Pelc, N. J.
SPIE-INT SOC OPTICAL ENGINEERING.2008

- **Propagation of quantum noise in multiplexed x-ray imaging** *Medical Imaging 2008 Conference*
De Man, B., Pelc, N. J., Dumoulin, C., Bernstein, T.
SPIE-INT SOC OPTICAL ENGINEERING.2008

- **A Fourier rebinning algorithm for cone beam CT** *Medical Imaging 2008 Conference*
Mazin, S. R., Pelc, N. J.
SPIE-INT SOC OPTICAL ENGINEERING.2008

- **On the angular dependence of Bremsstrahlung x-ray emission** *Medical Imaging 2008 Conference*
GANGULY, A., Pelc, N. J.
SPIE-INT SOC OPTICAL ENGINEERING.2008

- **A new reconstruction method to improve SNR for an inverse geometry CT system** *Medical Imaging 2008 Conference*
Baek, J., Pelc, N. J.
SPIE-INT SOC OPTICAL ENGINEERING.2008

- **On the angular dependence of Bremsstrahlung x-ray emission.**
Ganguly, A., Pelc, N., J.
2008

- **A Fourier rebinning algorithm for conebeam CT.**
Mazin, S., Pelc, N., J.
2008

- **A Fourier Rebinning Algorithm for Cone Beam CT.** *Med Phys, (PMCID: PMC2673599).*
  Mazin, S, R., Pelc, N., J.
  2008; 35: 4857-62
- **Lossy raw data compression in computed tomography with noise shaping to control image effects.**
  Xie, Y., Wang, A., S., Pelc, N., J.
  2008
- **Effect of the frequency content and spatial location of raw data errors on CT images.**
  Wang, A. A., Xie, Y., Pelc, N., J.
  2008
- **Fundamentals of flow and hemodynamics.** *In Magnetic Resonance Imaging of the Brain and Spine*
  Pelc, N., J., Alley, M., T., Listerud, J., Atlas, S., W.
  edited by Atlas, S., W.
  Lippincott Williams and Wilkins, Philadelphia.2008; Fourth Edition: 71–93
- **A new reconstruction method to improve SNR for an inverse geometry CT system.**
  Baek, J., Pelc, N., J.
  2008
- **Analytical derivation of the noise power spectrum for a fan-beam CT system.**
  Baek, J., Pelc, N., J.
  2008
- **Propagation of quantum noise in multiplexed x-ray imaging, Bruno De Man.**
  De Man, B., Pelc, N., J., Bernstein, T.
  2008
- **Investigation of electron trajectories of an x-ray tube in magnetic fields of MR scanners** *MEDICAL PHYSICS*
  Wen, Z., Fahrig, R., Conolly, S., Pelc, N. J.
  2007; 34 (6): 2048-2058
- **Imaging with distributed source arrays** *49th Annual Meeting of the American-Association-of-Physicists-in-Medicine*
  Pelc, N.
  AMER ASSOC PHYSICISTS MEDICINE AMER INST PHYSICS.2007: 2518–18
- **Inverse-geometry volumetric CT system with multiple detector arrays for wide field-of-view imaging** *MEDICAL PHYSICS*
  Mazin, S. R., Star-Lack, J., Bennett, N. R., Pelc, N. J.
  2007; 34 (6): 2133-2142
- **Quantitative evaluation of the relaxivity effects of iodine on Gd-DTPA enhanced MR arthrography** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Ganguly, A., Gold, G. E., Pauly, K. B., Mayer, D., Moseley, M. M., Pelc, N. J., Fahrig, R.
  2007; 25 (6): 1219-1225
- **Visualization of hemodynamics in intracranial arteries using time-resolved three-dimensional phase-contrast MRI** *13th Annual Meeting of the International-Society-for-Magnetic-Resonance-in-Medicine*
  Yamashita, S., Isoda, H., Hirano, M., Takeda, H., Inagawa, S., Takehara, Y., Alley, M. T., Markl, M., Pelc, N. J., Sakahara, H.
  JOHN WILEY & SONS INC.2007: 473–78
- **Study of increased radiation when an x-ray tube is placed in a strong magnetic field** *MEDICAL PHYSICS*
  Wen, Z., Pelc, N. J., Nelson, W. R., Fahrig, R.
  2007; 34 (2): 408-418
- **Localized Quantification of Geometry, Hemodynamics, and Histology in a Rat Model of Abdominal Aortic Aneurysm.**
  Greve, J. M., Sho, E., Tedesco, M. M., Draney Blomme, M. T., Wilson, N. M., Dalman, R. L., Pelc, N. J.
  2007
- **Inverse geometry CT: The next-generation CT architecture?** *IEEE Nuclear Science Symposium/Medical Imaging Conference*

De Man, B., Basu, S., Fitzgerald, P., Harrison, D., Iatrou, M., Khare, K., LeBlanc, J., Senzig, B., Wilson, C., Yin, Z., Pelc, N.
IEEE.2007: 2715–2716

- **Multi-source inverse geometry CT : a new system concept for X-ray computed tomography** *Medical Imaging 2007 Conference*
  De Man, B., Basu, S., Beque, D., Claus, B., Edic, P., Iatrou, M., LeBlanc, J., Senzig, B., Thompson, R., Vermilyea, M., Wilson, C., Yin, Z., Pelc, et al
  SPIE-INT SOC OPTICAL ENGINEERING.2007
- **Two-dimensional reconstruction algorithm of an inverse-geometry volumetric CT system** *Medical Imaging 2007 Conference*
  Baek, J., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2007
- **A fast 3D reconstruction algorithm for inverse-geometry CT based on an exact PET rebinning algorithm** *Medical Imaging 2007 Conference*
  Mazin, S. R., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2007
- **Implementation of the Derivative Back Projection - Finite Hilbert Inverse algorithm in projection reconstruction MRI** *IEEE Nuclear Science Symposium/Medical Imaging Conference*
  Barral, J. K., Pelc, N. J., Pauly, J. A., Nishimura, D. G.
  IEEE.2007: 4083–4089
- **A fast 3D reconstruction algorithm for inverse-geometry CT based on an exact PET rebinning algorithm**
  Mazin, S., Pelc, N., J.
  2007
- **the Next Generation CT Architecture?**
  De Man, B., Basu, S., Fitzgerald, P., Harrison, D., Iatrou, M., Khare, K., Pelc, N. J.
  2007
- **Study of increased radiation when an x-ray tube is placed in a strong magnetic field.** *Med. Phys.*
  Wen, Z., Pelc, N., J., Nelson, W., R., Fahrig, R.
  2007; 34: 408-18
- **Implementation of the Derivative Back Projection - Finite Hilbert Inverse Algorithm in Projection Reconstruction MRI.**
  Barral, J. K., Pelc, N., J., Pauly, J., M., Nishimura, D. G.
  2007
- **Accurate Reconstruction in PR-MRI Despite Truncated Data.**
  Barral, J. K., Wu, H. G., Gold, G. E., Pelc, N., J., Pauly, J. M., Nishimura, D. G.
  2007
- **Promises and Limitations of Dual-Energy CT in Lower Extremity CT Angiography** *Annual Scientific Meeting, SCBT/MR, Orlando, Fl, 3/07 (Moncada In-training Award).*
  Tran, D., N., Roos, J., E., Straka, M., Sandner, D., Razavi, H., Chang, M., Pelc, N. J.
  2007
- **Multi-source inverse geometry CT: a new system concept for x-ray computed tomography.**
  De Man, B., Basu, S., Bequé, S., Claus, B., Edic, P., Iatrou, M., Pelc, N. J.
  2007
- **Allometric scaling of wall shear stress from mice to humans: quantification using cine phase-contrast MRI and computational fluid dynamics** *AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY*
  Greve, J. M., Les, A. S., Tang, B. T., Blomme, M. T., Wilson, N. M., Dalman, R. L., Pelc, N. J., Taylor, C. A.
  2006; 291 (4): H1700-H1708
- **T-1- and T-2-weighted fast spin-echo imaging of the brachial plexus and cervical spine with IDEAL water-fat separation** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Reeder, S. B., Yu, H., Johnson, J. W., Shimakawa, A., Brittain, J. H., Pelc, N. J., Beaulieu, C. F., Gold, G. E.
  2006; 24 (4): 825-832
- **Articular cartilage of the knee: Rapid three-dimensional MR imaging at 3.0 T with IDEAL balanced steady-State free precession - Initial experience** *RADIOLOGY*

Gold, G. E., Reeder, S. B., Yu, H., Kornaat, P., Shimakawa, A. S., Johnson, J. W., Pelc, N. J., Beaulieu, C. F., Brittain, J. H.
2006; 240 (2): 546-551

- **A prototype table-top inverse-geometry volumetric CT system** *MEDICAL PHYSICS*
  Schmidt, T. G., Star-Lack, J., Bennett, N. R., Mazin, S. R., Solomon, E. G., Fahrig, R., Pelc, N. J.
  2006; 33 (6): 1867-1878

- **Visualization of hemodynamics in a silicon aneurysm model using time-resolved, 3D, phase-contrast MRI** *43rd Annual Meeting of the American-Society-of-Neuroradiology*
  Isoda, H., Hirano, M., Takeda, H., Kosugi, T., Alley, M. T., Markl, M., Pelc, N. J., Sakahara, H.
  AMER SOC NEURORADIOLOGY.2006: 1119–22

- **Single acquisition water-fat separation: Feasibility study for dynamic imaging** *13th Annual Meeting of the International-Society-for-Magnetic-Resonance-in-Medicine*
  Yu, H. Z., Reeder, S. B., McKenzie, C. A., Brau, A. C., Shimakawa, A., Brittain, J. H., Pelc, N. J.
  JOHN WILEY & SONS INC.2006: 413–22

- **Allometric Scaling of Wall Shear Stress from Mouse to Man: Quantification using Cine Phase-Contrast MRI and Computational Fluid Dynamics.** *Am. J. Physiol.: Heart Circ Physiol*
  Greve, J., M., Les, A., S., Tang, B., T., Draney Blomme, M. T., Wilson, N. M., Dalman, R. L., Pelc, N. J.
  2006; 291: H1700-8

- **Preliminary Study of Wall Shear Stress of an Intracranial Aneurysmal Model Based on the Data of Time-Resolved Three-Dimensional Phase-Contrast MRI.**
  Isoda, H., Yamashita, S., Ohkura, Y., Kosugi, T., Takeda, H., Takehara, Y., Pelc, N. J.
  2006

- **Assessment of the Wall Shear Stress (WSS) of the Abdominal Aortic Aneurysm Using Time-Resolved Three-Dimensional Phase-Contrast MRI (4D-Flow) and a New WSS Mapping Application (Flova).**
  Takehara, Y., Isoda, H., Yamashita, S., Takeda, H., Ohkura, Y., Kosugi, T., Pelc, N. J.
  2006

- **IDEAL Water-Fat Separation with Simultaneous T2* Estimation.**
  Yu, H., McKenzie, C. A., Shimakawa, A., Pelc, N. J., Brittain, J. H., Reeder, S. B.
  2006

- **Time Constant Sensitivity of Eddy Current Characterizing Pulse Sequence.**
  Ennis, D. B., Alley, M. T., Hargreaves, B. A., Pelc, N, J.
  2006

- **Adaptation of a fast 3D PET reconstruction algorithm to an inverse geometry CT system**
  Mazin, S. R., Pelc, N. J.
  2006

- **Single Quadrature Echo Water-Fat Separation with Robust Phase Correction.**
  Yu, H., Reeder, S. B., McKenzie, C. A., Shimakawa, A., Brau, A., Pelc, N. J.
  2006

- **PET-CT Fly-through Virtual Bronchoscopy: A Model for Systematic Investigation of 3D Visualization.**
  Yerushalmi, D., Quon, A., Fahrig, R., Pelc, N., J., Fann, J., Gambhir, S. S.
  2006

- **Implementation, Validation, and Application of Cine PCMRI for Quantifying Blood Flow in Small Animal Models of Cardiovascular Disease.**
  Greve, J. M., Draney, M. T., Les, A. S., Wilson, N., Pelc, N. J., Taylor, C. A.
  2006

- **Single acquisition water-fat separation: Feasibility study for dynamic imaging.** *Mag Res Med*
  Yu., H., Reeder, S., B., McKenzie, C., A., Brau, A. C., Shimakawa, A., Brittain, J. H., Pelc, N. J.
  2006; 55

- **Segmentation and Characterization of Vortical Flow Patterns in MRI Phase-Contrast Velocity Data.**

Wigström, L., Hope, T., Draney, M. T., Heiberg, E., Bolger, A. F., Alley, M, T., Pelc, N. J.
2006

- **Motion artifacts from an inverse-geometry CT system with multiple detector arrays.**
Mazin, S., Pelc, N., J.
2006

- **Preliminary Study of Wall Shear Stress of an Intracranial Aneurysmal Model Based on the Data of Time-Resolved Three-Dimensional Phase-Contrast MRI.**
Isoda, H., Yamashita, S., Ohkura, Y., Kosugi, T., Takeda, H., Takehara, Y., Pelc, N. J.
2006

- **Assessment of the Wall Shear Stress (WSS) of the Abdominal Aortic Aneurysm Using Time-Resolved Three-Dimensional Phase-Contrast MRI (4D-Flow) and a New WSS Mapping Application (Flova).**
Takehara, Y., Isoda, H., Yamashita, S., Takeda, H., Ohkura, Y., Kosugi, T., Pelc, N. J.
2006

- **A three-dimensional reconstruction algorithm for an inverse-geometry volumetric CT system** *MEDICAL PHYSICS*
Schmidt, T. G., Fahrig, R., Pelc, N. J.
2005; 32 (11): 3234-3245

- **Field map estimation with a region growing scheme for iterative 3-point water-fat decomposition** *MAGNETIC RESONANCE IN MEDICINE*
Yu, H. Z., Reeder, S. B., Shimakawa, A., Brittain, J. H., Pelc, N. J.
2005; 54 (4): 1032-1039

- **Stroke volume and cardiac output in juvenile elephant seals during forced dives** *JOURNAL OF EXPERIMENTAL BIOLOGY*
Thornton, S. J., Hochachka, P. W., Crocker, D. E., Costa, D. P., LeBoeuf, B. J., Spielman, D. M., Pelc, N. J.
2005; 208 (19): 3637-3643

- **Iterative decomposition of water and fat with echo asymmetry and least-squares estimation (IDEAL): Application with fast spin-echo imaging** *MAGNETIC RESONANCE IN MEDICINE*
Reeder, S. B., Pineda, A. R., Wen, Z. F., Shimakawa, A., Yu, H. Z., Brittain, J. H., Gold, G. E., Beaulieu, C. H., Pelc, N. J.
2005; 54 (3): 636-644

- **Truly hybrid x-ray/MR imaging: Toward a streamlined clinical system** *5th International Interventional MRI Symposium*
Ganguly, A., Wen, Z. F., Daniel, B. L., Butts, K., Kee, S. T., Rieke, V., Do, H. M., Pelc, N. J., Alley, M. T., Fahrig, R.
ELSEVIER SCIENCE INC.2005: 1167–77

- **Cramer-Rao bounds for three-point decomposition of water and fat** *MAGNETIC RESONANCE IN MEDICINE*
Pineda, A. R., Reeder, S. B., Wen, Z. F., Pelc, N. J.
2005; 54 (3): 625-635

- **Co-registration of x-ray and MR fields of view in a hybrid XMR system** *11th Annual Meeting of the International-Society-for-Magnetic-Resonance-in-Medicine*
Yu, H. Z., Fahrig, R., Pelc, N. J.
JOHN WILEY & SONS INC.2005: 291–301

- **Estimation of renal extraction fraction based on postcontrast venous and arterial differential T-1 values: An error analysis** *MAGNETIC RESONANCE IN MEDICINE*
Levin, Y. S., Chow, L. C., Pec, N. J., Sommer, F. G., Spielman, D. M.
2005; 54 (2): 309-316

- **Time-resolved three-dimensional magnetic resonance velocity mapping of aortic flow in healthy volunteers and patients after valve-sparing aortic root replacement** *30th Annual Meeting of the Western-Thoracic-Surgical-Association*
Markl, M., Draney, M. T., Miller, D. C., Levin, J. M., Williamson, E. E., Pelc, N. J., Liang, D. H., Herfkens, R. J.
MOSBY-ELSEVIER.2005: 456–63

- **Robust x-ray tubes for use within magnetic fields of MR scanners** *MEDICAL PHYSICS*
Wen, Z. F., Fahrig, R., Pelc, N. J.
2005; 32 (7): 2327-2336

- **Robust x-ray tubes for use within magnetic fields of MR scanners.** *Medical physics*
  Wen, Z., Fahrig, R., Pelc, N. J.
  2005; 32 (7Part1): 2327-2336
- **Cardiac CINE imaging with IDEAL water-fat separation and steady-state free precession** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Reeder, S. B., Markl, M., Yu, H. Z., Hellinger, J. C., Herfkens, R. J., Pelc, N. J.
  2005; 22 (1): 44-52
- **Performance of a static-anode/flat-panel x-ray fluoroscopy system in a diagnostic strength magnetic field: A truly hybrid x-ray/MR imaging system** *MEDICAL PHYSICS*
  Fahrig, R., Wen, Z., GANGULY, A., DECRESCENZO, G., Rowlands, J. A., Stevens, G. M., Saunders, R. F., Pelc, N. J.
  2005; 32 (6): 1775-1784
- **X-ray compatible radiofrequency coil for magnetic resonance imaging** *MAGNETIC RESONANCE IN MEDICINE*
  Rieke, V., GANGULY, A., Daniel, B. L., Scott, G., Pauly, J. M., Fahrig, R., Pelc, N. J., Butts, K.
  2005; 53 (6): 1409-1414
- **MR-guided transjugular intrahepatic portosystemic shunt creation with use of a hybrid radiography/MR system** *29th Annual Meeting of the Society-of-Interventional-Radiology (SIR)*
  Kee, S. T., GANGULY, A., Daniel, B. L., Wen, Z. F., Butts, K., Shimikawa, A., Pelc, N. J., Fahrig, R., Dake, M. D.
  ELSEVIER SCIENCE INC.2005: 227–34
- **Reply to "Comment on 'an inverse-geometry volumetric CT system with a large-area scanned source: A feasibility study' [Med. Phys. 32, 635 (2005)]** *MEDICAL PHYSICS*
  Schmidt, T. G., Fahrig, R., Pelc, N. J., Solomon, E. G.
  2005; 32 (2): 636-636
- **Wider Field-of-View Inverse-Geometry CT with Multiple Detector Arrays: Initial Experimental Results.** *RSNA '05*
  Mazin, S. R., Bennet, N. R., Schmidt, T. G., Pelc, N., J.
  2005: 391
- **Estimating 0(th) and 1(th) moments in C-arm CT data for extrapolating truncated projections** *Medical Imaging 2005 Conference*
  Starman, J., Pelc, N., Strobel, N., Fahrig, R.
  SPIE-INT SOC OPTICAL ENGINEERING.2005: 378–387
- **2D simulations of an inverse-geometry volumetric CT system with multiple detector arrays** *Medical Imaging 2005 Conference*
  Mazin, S., Star-Lack, J., Schmidt, T. G., Pelc, N.
  SPIE-INT SOC OPTICAL ENGINEERING.2005: 889–897
- **MTF analysis of a prototype table-top inverse-geometry volumetric CT system** *Medical Imaging 2005 Conference*
  Schmidt, T. G., Bennett, N. R., Mazin, S. R., Star-Lack, J., Solomon, E. G., Pelc, N. J.
  SPIE-INT SOC OPTICAL ENGINEERING.2005: 171–178
- **Cardiac Cine Imaging with "Dixon" Fat-Water Separation and Steady-State Free Precession.** *J Magn. Reson. Imag*
  Reeder, S., B., Markl, M., Yu, H., Hellinger, J. C., Herfkens, R. J., Pelc, N., J.
  2005; 22: 44-52
- **Two-dimensional simulations of an inverse geometry CT system with multiple detector arrays.**
  Mazin, S, R., Star-Lack, J., Schmidt, T. G., Pelc, N., J.
  2005
- **Iterative Decomposition of Water and Fat with Echo Asymmetry and Least-squares Estimation (IDEAL): Application with Fast Spin-echo Imaging.** *Mag Res Me*
  Reeder, S., B., Pineda, A., R., Wen, Z., Shimakawa, A., H, Y., Brittain, J. H., Pelc, N. J.
  2005; 54: 636-44
- **Parallel Imaging Accelerated Single Acquisition Water-Fat Separation for Dynamic Imaging**
  H, Y., McKenzie, C. A., Shimakawa, A., Brau, A. C., Pineda, A. R., Pelc, N., J.
  2005

- **In-Vivo Hemodynamic Analysis of Splanchnic Arteries Affected by Aortic Dissection Using Time-resolved 3D Phase-contrast MR Imaging.**
  Takehara, Y., Isoda, H., Hirano, M., Alley, M. T., Markl, M., Pelc, N., J.
  2005
- **Investigation of Increase in Radiation When an X-ray Tube Is Placed in a Magnetic Field.**
  Wen, Z., Pelc, N., J., Nelson, W. R., Fahrig, R.
  2005
- **Water-Fat Separation with IDEAL-SPGR**
  Reeder, S. B., Pineda, A. R., Yu, H., McKenzie, C. A., Brau, A., GE, G., Pelc, N. J.
  2005
- **Determination of Electronic and Quantum Noise Dominated Regions in a CT System.** *RSNA '05*
  Dormo, J., Pelc, N., J.
  2005: 211
- **Cramér-Rao Bounds for 3-Point Dixon Imaging.** *Mag Res Med*
  Pineda, A., R., Reeder, S., B., Wen, Z., Pelc, Norbert, J.
  2005; 54: 625-35
- **MTF analysis of a prototype table-top inverse-geometry volumetric CT system.**
  Schmidt, T. G., Bennet, N. R., Mazin, S. R., Pelc, N. J.
  2005
- **Investigation of a Prototype Table-top Inverse-geometry Volumetric CT System.**
  Schmidt, T. G., Star-Lack, J., Bennet, N. R., Solomon, E. G., Mazin, S. R., Pelc, N., J.
  2005
- **Optimization of Echo Time Shifts for 3-Pt Fat/Water Separation**
  Pineda, A., R., Reeder, S., B., Wen, Z., Pelc, N., J.
  2005
- **MR Imaging for PolymethylmethacraIate During a Percutaneous Vertebroplasty Procedure**
  H, Y., Fahrig, R., Butts, K., Ganguly, A., Adalsteinsson, E., Mayer, D., Pelc, N. J.
  2005
- **Estimating 0th and 1st moments in C-arm CT data for extrapolating projections.**
  Starman, J. D., Strobel, N., Pelc, N., J., Fahrig, R.
  2005
- **Cartilage Morphology at 1.5T: Comparison of 3D FS-SPGR and IDEAL SPGR Imaging**
  Gold, G. E., Reeder, S. B., Yu, H., Shimakawa, A., Johnson, J. W., Pelc, N., J.
  2005
- **On flow effects in balanced steady-state free precession imaging: Pictorial description, parameter dependence, and clinical implications** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Markl, M., Pelc, N. J.
  2004; 20 (4): 697-705
- **An inverse-geometry volumetric CT system with a large-area scanned source: A feasibility study** *MEDICAL PHYSICS*
  Schmidt, T. G., Fahrig, R., Pelc, N. J., Solomon, E. G.
  2004; 31 (9): 2623-2627
- **Quantification of vessel wall motion and cyclic strain using cine phase contrast MRI: In vivo validation in the porcine aorta** *MAGNETIC RESONANCE IN MEDICINE*
  Draney, M. T., Arko, F. R., Alley, M. T., Markl, M., Herfkens, R. J., Pelc, N. J., Zarins, C. K., Taylor, C. A.
  2004; 52 (2): 286-295
- **Time-resolved 3-dimensional velocity mapping in the thoracic aorta - Visualization of 3-directional blood flow patterns in healthy volunteers and patients** *JOURNAL OF COMPUTER ASSISTED TOMOGRAPHY*

Markl, M., Draney, M. T., Hope, M. D., Levin, J. M., Chan, F. P., Alley, M. T., Pelc, N. J., Herfkens, R. J.
2004; 28 (4): 459-468

- **Steady-state free precession MR imaging: Improved myocardial tag persistence and signal-to-noise ratio for analysis of myocardial motion** *88th Scientific Assembly and Annual Meeting of the Radiological-Society-of-North-America*
Markl, M., Reeder, S. B., Chan, F. P., Alley, M. T., Herfkens, R. J., Pelc, N. J.
RADIOLOGICAL SOC NORTH AMERICA.2004: 852–61

- **Multicoil Dixon chemical species separation with an iterative least-squares estimation method** *MAGNETIC RESONANCE IN MEDICINE*
Reeder, S. B., Wen, Z. F., Yu, H. Z., Pineda, A. R., Gold, G. E., Markl, M., Pelc, N. J.
2004; 51 (1): 35-45

- **Noise simulations for an inverse-geometry volumetric CT system** *Medical Imaging 2004 Conference*
Schmidt, T. G., Fahrig, R., Pelc, N. J.
SPIE-INT SOC OPTICAL ENGINEERING.2004: 420–427

- **Geometry analysis of an inverse-geometry volumetric CT system with multiple detector arrays** *Medical Imaging 2004 Conference*
Mazin, S., Schmidt, T. G., Solomon, E., Fahrig, R., Pelc, N.
SPIE-INT SOC OPTICAL ENGINEERING.2004: 320–329

- **Collimator for a Multiple-Eye Inverse-Geometry Volumetric CT System.**
Mazin, S. R., Schmidt, T. G., Pelc, N., J.
2004

- **X-Ray Compatible RF-Coil for MR Imaging**
Rieke, V., Ganguly, A., Scott, G. C., Daniel, B. L., Pauly, J, M., Fahrig, R., Pelc, N. J.
2004

- **TIPS using Truly Hybrid X-Ray/MR Guidance**
Fahrig, R., Kee, S. T., Daniel, B. L., Ganguly, A., Wen, Z., Butts, K., Pelc, N. J.
2004

- **Parallel Cardiac CINE Imaging: Application to "Dixon" Water-Fat Separation and Steady-State Free Precession**
Reeder, S. B., McKenzie, C. A., Markl, M., Yu, H., Pelc, N. J., Brittain, J. H.
2004

- **Implementation and Noise Analysis of Chemical Shift Correction for Fast Spin Echo Dixon Imaging.**
Yu, H., Reeder, S. B., Shimakawa, A., Gold, G. E., Pelc, N. J., Brittain, J. H.
2004

- **Dixon Water-Fat Separation for Musculoskeletal Imaging with Fast Spin-Echo at 3T.**
Reeder, S. B., Yu, H., Shimakawa, A., Brittain, J. H., Johnson, J. W., Pelc, N. J.
2004

- **Abdominal Three Point Dixon Imaging with Self Calibrating Parallel MRI.**
McKenzie, C. A., Reeder, S. B., Shimakawa, A., Pelc, N. J., Jean, B.
2004

- **First Images from a Table-top Inverse Geometry Volumetric CT System with a Large-area Scanned Source.**
Schmidt, T. G., Bennet, N. R., Mazin, S. R., Star-Lack, J., Solomon, E. G., Pelc, N., J.
2004

- **Permanent Magnet Shimming for the X-Ray Detector in a Hybrid X-Ray/MR System**
Wen, Z., Fahrig, R., Pelc, N. J.
2004

- **Noise simulations for an inverse geometry volumetric CT system.**
Schmidt, T. G., Fahrig, R., Pelc, N., J.
2004

- **Cramér-Rao Bounds for 3-Point Dixon Imaging**
  Pineda, A. R., Wen, Z., Reeder, S. B., Yu, H., Pelc, N. J.
  2004
- **Contrast Agent Optimization for Imaging with MR/X-Ray Hybrid Systems**
  Ganguly, A., Mayer, D., Fahrig, R., Pelc, N. J.
  2004
- **Pictorial Description, Parameter Dependence and Clinical Implications.** *J Magn Reson Imaging*
  Markl, M., Pelc, N., J.
  2004; 20: 697-705
- **Asymmetric Echoes for Optimal SNR Performance of "Dixon" Water-Fat Separation with Fast Spin-Echo Imaging.**
  Reeder, S. B., Pineda, A., H, Y., Wen, Z., Shimakawa, A., Pelc, N., J.
  2004
- **Time-Resolved 3D Magnetic Resonance Velocity Mapping Of Aortic Outflow In Volunteers And Patients After Valve Sparing Aortic Root Replacement.**
  Markl, M., Draney, M. T., Levin, J. M., Williamson, E. E., Pelc, N. J., Liang, D.
  2004
- **Single Acquisition Water Fat Separation for SSFP Cardiac CINE Imaging: Feasibility Study**
  Yu, H., Reeder, S. B., Markl, M., Pelc, N. J.
  2004
- **Rapid Cartilage Morphology at 3.0T: Comparison of FS-SPGR, FS-SSFP, and "Dixon" SSFP Imaging**
  Gold, G. E., Reeder, S. B., Yu, H., Shimakawa, A., Johnson, J. W., Pelc, N. J.
  2004
- **Geometry analysis of an inverse geometry volumetric CT system with multiple detector arrays.**
  Mazin, S. R., Schmidt, T. G., Solomon, E. G., Fahrig, R., Pelc, N., J.
  2004
- **Cardiac CINE Imaging with "Dixon" Water-Fat Separation and Steady-State Free Precession**
  Reeder, S. B., Markl, M., Yu, H., Hellinger, J. C., Herfkens, R. J., Pelc, N. J.
  2004
- **Extrapolating Truncated Projections Using 0th and 1st Moment Constraints.**
  Starman, J., Strobel, N., Pelc, N., J., Fahrig, R.
  2004
- **Time-Resolved 3D Velocity Mapping in the Thoracic Aorta: Three-Directional Blood Flow Patterns in Healthy Volunteers and Patients.**
  Markl, M., Draney, M. T., Hope, M. D., Levin, J. M., Alley, M. T., Chan, F. P., Pelc, N. J.
  2004
- **Robust Field Map Estimation in a Dixon Water-Fat Separation Algorithm with Short Echo Time Increments**
  Yu, H., Reeder, S. B., Shimakawa, A., Brittain, J. H., Pelc, N. J.
  2004
- **Asymmetric Echoes for Robust Fast Spin-Echo "Dixon" Water-Fat Separation**
  Reeder, S. B., Wen, Z., Yu, H., Pineda, A. R., Shimakawa, A., Brittain, J. H., Pelc, N. J.
  2004
- **"Musculoskeletal Imaging with "Dixon" Water-Fat Separation at 3T"**
  Reeder, S. B., Gold, G. E., Yu, H., Shimakawa, A., Brittain, J. H., Pelc, N. J.
  2004
- **To Bin or Not to Bin? A Question Regarding the Noise Properties of CT Reconstructions with or without Binned Projections.** *RSNA '04*
  Pineda, A., R., Pelc, N., J.
  2004: 354

- **Time-Resolved 3D Velocity Mapping in the Thoracic Aorta: Visualization of Three-Directional Blood Flow Patterns in Healthy Volunteers and Patients.** *J Comput Assist Tomogr*
  Markl, M., Draney, M., T., Hope, M., D., Levin, J. M., Chan, F. P., Alley, M. T., Pelc, N. J.
  2004; 28: 459-468
- **Measurement of renal extraction fraction using contrast-enhanced computed tomography** *MEDICAL PHYSICS*
  Sommer, G., Chow, L., Pelc, N.
  2004; 31 (1): 37-38
- **Flow effects in balanced steady state free precession imaging** *MAGNETIC RESONANCE IN MEDICINE*
  Markl, M., Alley, M. T., Elkins, C. J., Pelc, N. J.
  2003; 50 (5): 892-903
- **First use of a truly-hybrid X-ray/MR imaging system for guidance of brain biopsy** *ACTA NEUROCHIRURGICA*
  Fahrig, R., Heit, G., Wen, Z., Daniel, B. L., Butts, K., Pelc, N. J.
  2003; 145 (11): 995-997
- **Generalized reconstruction of phase contrast MRI: Analysis and correction of the effect of gradient field distortions** *MAGNETIC RESONANCE IN MEDICINE*
  Markl, M., Bammer, R., Alley, M. T., Elkins, C. J., Draney, M. T., Barnett, A., Moseley, M. E., Glover, G. H., Pelc, N. J.
  2003; 50 (4): 791-801
- **Analysis and generalized correction of the effect of spatial gradient field distortions in diffusion-weighted imaging** *MAGNETIC RESONANCE IN MEDICINE*
  Bammer, R., Markl, M., Barnett, A., Acar, B., Alley, M. T., Pelc, N. J., Glover, G. H., Moseley, M. E.
  2003; 50 (3): 560-569
- **Circular tomosynthesis: Potential in imaging of breast and upper cervical spine - Preliminary phantom and in vitro study** *86th Scientific Assembly and Annual Meeting of the Radiological-Society-of-North-America (RSNA)*
  Stevens, G. M., Birdwell, R. L., Beaulieu, C. F., Ikeda, D. M., Pelc, N. J.
  RADIOLOGICAL SOC NORTH AMERICA.2003: 569–75
- **Fast algorithms for GS-model-based image reconstruction in data-sharing Fourier imaging** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Liang, Z. P., Madore, B., Glover, G. H., Pelc, N. J.
  2003; 22 (8): 1026-1030
- **Balanced phase-contrast steady-state free precession (PC-SSFP): A novel technique for velocity encoding by gradient inversion** *10th Annual Meeting of the International-Society-for-Magnetic-Resonance-in-Medicine (ISMRM)*
  Markl, M., Alley, M. T., Pelc, N. J.
  JOHN WILEY & SONS INC.2003: 945–52
- **4D Magnetic resonance velocimetry for mean velocity measurements in complex turbulent flows** *EXPERIMENTS IN FLUIDS*
  Elkins, C. J., Markl, M., Pelc, N., Eaton, J. K.
  2003; 34 (4): 494-503
- **Time-resolved three-dimensional phase-contrast MRI** *10th Annual Meeting of the International-Society-for-Magnetic-Resonance-in-Medicine (ISMRM)*
  Markl, M., Chan, F. P., Alley, M. T., Wedding, K. L., Draney, M. T., Elkins, C. J., Parker, D. W., Wicker, R., Taylor, C. A., Herfkens, R. J., Pelc, N. J.
  JOHN WILEY & SONS INC.2003: 499–506
- **Rapid MR imaging of articular cartilage with steady-state free precession and multipoint fat-water separation.** *AJR. American journal of roentgenology*
  Reeder, S. B., Pelc, N. J., Alley, M. T., Gold, G. E.
  2003; 180 (2): 357-362
- **Rapid imaging cartilage with precession and of articular steady-state free multipoint fat water separation** *AMERICAN JOURNAL OF ROENTGENOLOGY*
  Reeder, S. B., Pelc, N. J., Alley, M. T., Gold, G. E.
  2003; 180 (2): 357-362
- **A Novel Technique for Velocity Encoding by Gradient Inversion** *Magn. Res. Med*

Markl, M., Alley, M., T., Pelc., N., J.
2003; 49: 945-952

- **Fast tomosynthesis for lung cancer detection using the SBDX geometry.**
  Fahrig, R., Pineda, A., R., Solomon, E., G., Leung, A., N., Pelc, N., J.
  2003
- **Combined Evaluation of Ventricular Wall Motion and Delayed Myocardial Enhancement Using a 3D-CINE Technique**
  Chan, F., P., Levin, J., M., Alley, M., T., Herfkens, R., J., Pelc, N., J.
  2003
- **Artifacts Caused by Transient Effects in Multi-Shot EPI**
  Lew, C., Pelc, N., J.
  2003
- **A Method for MR Eddy Current Characterization and Compensation**
  Alley, M., T., Pineda, A., R., Bammer, R., Markl, M., Pelc, N., J.
  2003
- **X-ray Image Quality Assessment in X-ray/MR Hybrid System.** *RSNA '03*
  Ganguly, A., Fahrig, R., Wen, Z., Pelc, N., J.
  2003: 391
- **Magnetic Resonance Velocimetry for Mean Velocity Measurements in Complex Turbulent Flows.** *Experiments in Fluids*
  Elkins, C., J, Markl, M., Pelc, N., J., Eaton, J., K.
  2003; 34: 494–503
- **Generalized reconstruction of phase contrast MRI: Analysis and correction of the effect of gradient field distortions.** *Mag Reson Med*
  Markl, M., Bammer, R., Alley, M., T., Elkins, C., J., Draney, M., T., Barnett, A., Pelc, N. J.
  2003; 50: 791-801
- **Generalized Modeling of Gradient Field Non-Linearities and Reconstruction of Phase Contrast MRI Measurements**
  Markl, M., Bammer, R., Alley, M., T., Moseley, M., E., Glover, G., H., Pelc, N., J.
  2003
- **X-ray tube in parallel magnetic fields.**
  Wen, Z., Fahrig, R., Pelc, N., J.
  2003
- **Hybrid x-ray/MR system and other hybrid imaging modalities.**
  Pelc, N., J.
  2003
- **Technical Development: First use of a truly-hybrid X-ray/MR imaging system for guidance of brain biopsy.** *Acta Neurochir (Wien)*
  Fahrig, R., Heit, G., Wen, Z., Daniel, B., L., Butts, K., Pelc, N., J.
  2003; 145: 995-997
- **Noise Performance Study of Symmetric Three Point Dixon Method**
  Wen, Z., Reeder, S., B., Pineda, A., R., Glover, G., H., Pelc, N., J.
  2003
- **Multi-Point "Dixon" Fat-Water Separation with Steady-State Free Precession at 3T: Application to Musculoskeletal Imaging**
  Reeder, S. R., Shimakawa, A., Brittain, J., Yu, H., Pelc, N., J., Gold, G.
  2003
- **Application of Cine Phase Contrast Magnetic Resonance Imaging and SPAMM-Tagging for Assessment of Endoleaks and Aneurysm Sac Motion**
  Hellinger, J., Draney, M., Markl, M., Pelc, N., J., Herfkens, R. J.
  2003

- **Initial Clinical Experience using a Truly Hybrid X-ray/MR Imaging System**
  Fahrig, R., Wen, Z., Daniel, B., L., Butts, K., Kee, S., T., Heit, G., Pelc, N. J.
  2003
- **Imaging of Articular Cartilage at 3T with Multi-Point “Dixon” Fat-Water Separation and SSFP**
  Reeder, S., B., Brittain, J., H., Shimakawa, A., Wen, Z., Gold, G., E., Pelc, N., J.
  2003
- **Fast tomosynthesis for lung cancer detection using the SBDX geometry.**
  Fahrig, R., Pineda, A., R., Solomon, E., G., Leung, A., N., Pelc, N., J.
  2003
- **Combined Evaluation of Ventricular Wall Motion and Delayed Myocardial Enhancement Using a 3D-CINE Technique**
  Chan, F., P., Levin, J., M., Alley, M., T., Herfkens, R., J., Pelc, N., J.
  2003
- **Artifacts Caused by Transient Effects in Multi-Shot EPI**
  Lew, C., Pelc, N., J.
  2003
- **A Method for MR Eddy Current Characterization and Compensation**
  Alley, M., T., Pineda, A., R., Bammer, R., Markl, M., Pelc, N., J.
  2003
- **X-ray Image Quality Assessment in X-ray/MR Hybrid System.** *RSNA '03*
  Ganguly, A., Fahrig, R., Wen, Z., Pelc, N., J.
  2003: 391
- **Magnetic Resonance Velocimetry for Mean Velocity Measurements in Complex Turbulent Flows.** *Experiments in Fluids*
  Elkins, C., J, Markl, M., Pelc, N., J., Eaton, J., K.
  2003; 34: 494–503
- **Generalized reconstruction of phase contrast MRI: Analysis and correction of the effect of gradient field distortions.** *Mag Reson Med*
  Markl, M., Bammer, R., Alley, M., T., Elkins, C., J., Draney, M., T., Barnett, A., Pelc, N. J.
  2003; 50: 791-801
- **Multi-point "Dixon" fat-water separation and steady-state free precession** *88th Scientific Assembly and Annual Meeting of the Radiological-Society-of-North-America*
  Reeder, S. B., Wen, Z., Gold, G. E., Alley, M. T., Markl, M., Pelc, N. J.
  RADIOLOGICAL SOC NORTH AMERICA.2002: 313–313
- **Integrated-modality imaging: The best of both worlds** *ACADEMIC RADIOLOGY*
  von Schulthess, G. K., Pec, N. J.
  2002; 9 (11): 1241–44
- **Development of a hybrid X-ray/MR system for interventional guidance: Verification of x-ray tube behavior in large magnetic fields produces surprising results** *88th Scientific Assembly and Annual Meeting of the Radiological-Society-of-North-America*
  Fahrig, R., Wen, Z., Nelson, W. R., Pelc, N. J.
  RADIOLOGICAL SOC NORTH AMERICA.2002: 545–545
- **Quantification of vessel wall cyclic strain using cine phase contrast magnetic resonance imaging** *ANNALS OF BIOMEDICAL ENGINEERING*
  Draney, M. T., Herfkens, R. J., Hughes, T. J., Pelc, N. J., Wedding, K. L., Zarins, C. K., Taylor, C. A.
  2002; 30 (8): 1033-1045
- **In vivo validation of numerical prediction of blood flow in arterial bypass grafts** *ANNALS OF BIOMEDICAL ENGINEERING*
  Ku, J. P., Draney, M. T., Arko, F. R., Lee, W. A., Chan, F. P., Pelc, N. J., Zarins, C. K., Taylor, C. A.
  2002; 30 (6): 743-752
- **New approach to 3D time-resolved angiography** *MAGNETIC RESONANCE IN MEDICINE*
  Madore, B., Pelc, N. J.

2002; 47 (5): 1022-1025

- **Measurement of vessel wall strain using cine phase contrast MRI** *9th Annual Meeting of the ISMRM*
  Wedding, K. L., Draney, M. T., Herfkens, R. J., Zarins, C. K., Taylor, C. A., Pelc, N. J.
  JOHN WILEY & SONS INC.2002: 418–28
- **Noninvasive measurement of extraction fraction and single-kidney glomerular filtration rate with MR imaging in swine with surgically created renal artery stenoses** *RADIOLOGY*
  Coulam, C. H., Lee, J. H., Wedding, K. L., Spielman, D. M., Pelc, N. J., Kee, S. T., Hill, B. B., Bouley, D. M., Derby, G. C., Myers, B. D., Sawyer-Glover, A. M., Sommer, F. G.
  2002; 223 (1): 76-82
- **Rapid Cartilage Imaging with SSFP and Four-Point Dixon Techniques**
  Reeder, S. B., Alley, M. T., Pelc, N. J., Gold, G. E.
  2002
- **Improved image reconstruction from sensitivity-encoded data by wavelet denoising and Tikhonov regularization** *IEEE International Symposium on Biomedical Imaging*
  Liang, Z. P., Bammer, R., Ji, J., Pelc, N. J., Glover, G. H.
  IEEE.2002: 493–496
- **X-ray tube for Use in Magnetic Fields**
  Wen, Z., Fahrig, R., Wang, N. S., Pelc, N. J.
  2002
- **Recovery of Signal Acquired through UNFOLD with Slice Interleaving**
  Lew, C., Chan, F. P., Alley, M. T., Pelc, N. J.
  2002
- **Four point Dixon fat-water separation and steady-state free precession.** *Radiology 255(P)*
  Reeder, S., B., Wen, Z., Gold, G., E., Alley, M. T., Markl, M., Pelc, N., J.
  2002: 313
- **Integrated-modality imaging: the best of both worlds.** *Acad. Radiol.*
  von Schultess, G., K., Pelc, N., J.
  2002; 9: 1241-4
- **Making Better SENSE: Wavelet Denoising, Tikhonov Regularization, and Total Least Squares**
  Liang, Z. P., Bammer, R., Ji, J., Pelc, N., J., Glover, G. H.
  2002
- **Analysis and Correction of the Effect of Spatial Gradient Field Distortions on Velocity Measurements with Phase Contrast MRI**
  Markl, M., Draney, M. T., Pelc, N. J.
  2002
- **Volumetric CT with a large array scanned source.** *Radiology 255(P)*
  Gilat, T., Fahrig, R., Pelc, N. J.
  2002: 404
- **Improved image reconstruction from sensitivity-encoded data by wavelet denoising and Tikhonov regularization.** *In IEEE EMBS Summer School Book Series*
  Liang, Z. P., R, R. B., Ji, J., Pelc, N. J., Glover, G. H.
  edited by M, A.
  IEEE Press and John Wiley & Sons, Somerset, NJ.2002: 493–496
- **Time Resolved 3D Phase-Contrast MRI (4D Flow): Assessment of Three Directional Velocity Vector Fields**
  Markl, M., Chan, F. P., Alley, M. T., Wedding, K. L., Draney, M. T., Elkins, C., Pelc, N. J.
  2002
- **In Vivo Quantification of Porcine Aortic Wall Motion Using Cine PC-MRI**
  Draney, M. T., Arko, F. R., Alley, M. T., Markl, M., Herfkens, R. J., Pelc, N. J.

2002

- **Dynamic Breast Cancer Imaging with High Spatiotemporal Resolution by Reduced-Encoding**
  Stables, L. A., Glover, G. H., Pelc, N. J., Liang, Z. P.
  2002
- **Clinical Assessment and Applications of 4D-Flow Imaging**
  Chan, F. P., Markl, M., Alley, M. T., Daniel, B. L., Herfkens, R. J., Pelc, N. J.
  2002
- **Assessment of Gradient Field Distortion in Diffusion-Weighted Imaging**
  Bammer, R., Markl, M., Pelc, N. J., Moseley, M. E.
  2002
- **Development of a hybrid x-ray/MR system for interventional guidance: verification of x-ray tube behavior in large magnetic fields produces surprising results.** *Radiology 255(P)*
  Fahrig, R., Wen, Z., Nelson, W., R., Pelc, N., J.
  2002: 545
- **Balanced SSFP and myocardial tagging for improved tag-tissue contrast and SNR.** *Radiology 255(P)*
  Markl, M., Reeder, S., B., Alley, M., T., Herfkens, R. J., Pelc, N., J.
  2002: 539
- **Improved Image Reconstruction from Sensitivity-Encoded Data by Wavelet Denoising and Tikhonov Regularization.**
  Liang, Z. P., Bammer, R., Ji, J., Pelc, N., J., Glover, G. H.
  2002
- **Velocity Encoding in the Steady State: Combining Phase Contrast MRI and Balanced Steady State Free Precession (PC-SSFP)**
  Markl, M., Alley, M. T., Pelc, N., J.
  2002
- **Water and Fat SSFP Imaging with Four-Point Dixon Techniques**
  Reeder, S. B., Alley, M. T., Pelc, N. J.
  2002
- **Truly hybrid interventional MR/x-ray system: Investigation of in vivo applications** *ACADEMIC RADIOLOGY*
  Fahrig, R., Butts, K., Wen, Z. F., Saunders, R., Kee, S. T., Sze, D. Y., Daniel, B. L., Laerum, F., Pelc, N. J.
  2001; 8 (12): 1200-1207
- **Effects of forced diving on the spleen and hepatic sinus in northern elephant seal pups** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*
  Thornton, S. J., Speilman, D. M., Pelc, N. J., Block, W. F., Crocker, D. E., Costa, D. P., LeBoeuf, B. J., Hochachka, P. W.
  2001; 98 (16): 9413-9418
- **Alignment of a volumetric tomography system** *MEDICAL PHYSICS*
  Stevens, G. M., Saunders, R., Pelc, N. J.
  2001; 28 (7): 1472-1481
- **SMASH and SENSE: Experimental and numerical comparisons** *MAGNETIC RESONANCE IN MEDICINE*
  Madore, B., Pelc, N. J.
  2001; 45 (6): 1103-1111
- **Filtered backprojection for modifying the impulse response of circular tomosynthesis** *MEDICAL PHYSICS*
  Stevens, G. M., Fahrig, R., Pelc, N. J.
  2001; 28 (3): 372-380
- **A truly hybrid interventional MR/X-ray system: Feasibility demonstration** *8th Annual Meeting of the ISMRM*
  Fahrig, R., Butts, K., Rowlands, J. A., Saunders, R., Stanton, J., Stevens, G. M., Daniel, B. L., Wen, Z. F., Ergun, D. L., Pelc, N. J.
  JOHN WILEY & SONS INC.2001: 294–300
- **Filtered backprojection for modifying the impulse response of circular tomosynthesis.** *Medical Physics*

Stevens, G., M., Fahrig, R., Pelc, N., J.
2001; 28: 372-380

- **Phase contrast measurements of aortic wall strain in vivo.**
  Wedding, K. L., Draney, M. T., Herfkens, R. J., Zarins, C. K., Taylor, C. A., Pelc, N. J.
  2001
- **Left ventricular function measurement and visualization of endocardium using noncontrast-enhanced cardiac cine SSFP imaging.**
  Chan, F. P., Alley, M. T., Coulam, C., Shimakawa, A., Wedding, K. L., Pelc, N. J.
  2001
- **Fundamentals of flow and motion.** *In Magnetic Resonance Imaging of the Brain and Spine*
  Pelc, N., J., Alley, M., T., Listerud, J., Atlas, S., W.
  edited by Atlas, S., W.
  Lippincott Williams and Wilkins, Philadelphia.2001; Third Edition: 101–125
- **Sampling strategies for flow quantification with phase contrast MRI**
  Markl, M.
  2001
- **Investigation of electron trajectories of an x-ray tube in a magnetic field.**
  Wen, Z., Fahrig, R., Pelc, N. J.
  2001
- **Calculation of Time-Dependent Vessel Strain from Cine Phase Contrast Magnetic Resonance Imaging Data.**
  Draney, M. T., Pelc, N. J., Zarins, C. K., Taylor, C. A.
  2001
- **A truly hybrid x-ray/MR system for guidance of minimally invasive procedures: In vivo validation.**
  Fahrig, R., Butts, K., Wen, Z., Saunders, R., Kee, S., Pelc, N. J.
  2001
- **Myocardial Spatiotemporal Tracking.** *In Measurement of Cardiac Deformations from MRI: Physical and Mathematical Models*
  Zhu, Y., Pelc, N., J.
  edited by Amini, A., A., Prince, J., L.
  Kluwer Academic Publishers, Dordrecht, the Netherlands.2001: 257–288
- **Partial fat-saturated contrast-enhanced three-dimensional MR angiography compared with non-fat-saturated and conventional fat-saturated MR angiography** *RADIOLOGY*
  Hilfiker, P. R., Herfkens, R. J., Heiss, S. G., Alley, M. T., Fleischmann, D., Pelc, N. J.
  2000; 216 (1): 298-303
- **Depth-segmented detector for x-ray absorptiometry** *MEDICAL PHYSICS*
  Stevens, G. M., Pelc, N. J.
  2000; 27 (5): 1174-1184
- **A reduced field-of-view method to increase temporal resolution or reduce scan time in cine MRI** *MAGNETIC RESONANCE IN MEDICINE*
  Madore, B., Fredrickson, J. O., Alley, M. T., Pelc, N. J.
  2000; 43 (4): 549-558
- **Three-dimensional cardiac cine magnetic resonance imaging with an ultrasmall superparamagnetic iron oxide blood pool agent (NC100150)** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Amano, Y., Herfkens, R. J., Shifrin, R. Y., Alley, M. T., Pelc, N. J.
  2000; 11 (2): 81-86
- **Filtered-Backprojection for Improved Blurring in Circular Tomosynthesis** *Radiology 217(P)*
  Stevens, G. M., Fahrig, R., Pelc, N. J.
  2000: 314
- **On the feasibility of using the scanning-beam digital X-ray system (SBDX) for lung nodule screening** *22nd Annual International Conference of the IEEE-Engineering-in-Medicine-and-Biology-Society*

Fahrig, R., Stevens, G. M., Solomon, E. G., Pelc, N. J.
IEEE.2000: 1652–1655

- **On the Feasibility of Integrating a Flat-Panel X-Ray Fluoroscopy System into an Open MRI System**
  Fahrig, R., Butts, K., Rowlands, J. A., Saunders, R., Ergun, D. L., Stanton, J., Pelc, N. J.
  2000
- **Measurement of T1 of flowing blood, extraction fraction of Gd-DTPA and single-kidney GFR using interleaved spiral acquisition.**
  Sommer, F. G., Alley, M. T., Kee, S. T., Coulam, C. H., Spielman, D. M., Fredrickson, J. O., Pelc, N. J.
  2000
- **SMASH vs SENSE**
  Madore, B., Pelc, N. J.
  2000
- **A New Way to Perform 3D Time-Resolved Angiography**
  Madore, B., Pelc, N. J.
  2000
- **A truly hybrid interventional MR/x-ray system: Feasibility demonstration.** *JMRI*
  Fahrig, R., Butts, K., Rowlands, J., A., Saunders, R., Stanton, J., Stevens, G., M., Pelc, N. J.
  2000; 13: 294-300
- **On the Feasibility of Using the Scanning-Beam Digital X-Ray System (SBDX) for Lung Nodule Screening.**
  Fahrig, R., Stevens, G. M., Solomon, E. G., Pelc, N. J.
  2000
- **Measurements of In Vivo Vessel Wall Motion and Strain with Cine Phase Contrast MRI**
  Wedding, K. L., Draney, M. T., Herfkens, R. J., Zarins, C. K., Taylor, C. A., Pelc, N. J.
  2000
- **Integrating a Flat-Panel X-ray Fluoroscopy System into an Open MRI System: Technical Considerations** *Radiology 217(P)*
  Fahrig, R., Rowlands, J. A., Pelc, N. J., Stanton, J. P., Saunders, R. F., Stevens, G. M.
  2000: 348
- **Unaliasing by Fourier-encoding the overlaps using the temporal dimension (UNFOLD), applied to cardiac imaging and fMRI** *MAGNETIC RESONANCE IN MEDICINE*
  Madore, B., Glover, G. H., Pelc, N. J.
  1999; 42 (5): 813-828
- **A spatiotemporal model of cyclic kinematics and its application to analyzing nonrigid motion with MR velocity images** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Zhu, Y. D., Pelc, N. J.
  1999; 18 (7): 557-569
- **Fast 3D cardiac cine MR imaging** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Alley, M. T., Napel, S., Amano, Y., Paik, D. S., Shifrin, R. Y., Shimakawa, A., Pelc, N. J., Herfkens, R. J.
  1999; 9 (5): 751-755
- **Three-dimensional motion tracking with volumetric phase contrast MR velocity imaging** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Zhu, Y. D., Pelc, N. J.
  1999; 9 (1): 111-118
- **Haemodynamics of the phocid spleen as determined by Magnetic Resonance Imaging (MRI).** *Comparative Biochemistry and Physiology Part A Molecular & Integrative Physiology*
  Thornton, S. J., Block, W. F., Spielman, D. M., Crocker, D. E., Costa, D. P., Pelc, N. J.
  1999; 124: S22
- **Fast Fat Suppression for 3D Angiographic Imaging.**
  Alley, M. T., Heiss, S. G., Pelc, N., J., Herfkens, R. J.
  1999

- **System Alignment for a Volumetric Tomography System** *Radiology 213(P)*
  Stevens, G., M., Pelc, N., J.
  1999; 320
- **Measurement of Gd-DTPA Concentration in Flowing Blood.**
  Fredrickson, J. O., Sommer, F. G., Pelc, N. J.
  1999
- **An In Vivo Method for Measuring Vessel Wall Motion and Cyclic Strain Using Magnetic Resonance Imaging.**
  Draney, M. T., Wedding, K. L., Taylor, C. A., Pelc, N. J.
  1999
- **A Reduced FOV Method for Spiral Cine Cardiac MR Imaging** *Radiology 213(P)*
  Madore, B., Fredrickson, J. O., Alley, M. T., Pelc, N. J.
  1999; 136
- **Vessel Wall Strain with Cine Phase Contrast MR Imaging** *Radiology 213(P)*
  Wedding, K. L., Draney, M. T., Taylor, C. A., Pelc, N. J.
  1999; 478
- **UNFOLD used to Speed Up Cardiac Imaging and fMRI.**
  Madore, B., Glover, G, H., Pelc., N, J.
  1999
- **Comparison of PC-MRI to Computational Simulations and Digital Particle Image Velocimetry.**
  Wedding, K. L., Draney, M. T., Fredrickson, J. O., Taylor, C. A., Pelc, N. J.
  1999
- **3D myocardial motion tracking with volumetric MR velocity imaging.** *JMRI*
  Zhu, Y., Pelc, N., J.
  1999; 9: 111-118
- **A Reduced-FOV Method for CINE MRI.**
  Madore, B., Alley, M. T., Fredrickson, J. O., Pelc, N. J.
  1999
- **In vitro verification of myocardial motion tracking from phase-contrast velocity data** *MAGNETIC RESONANCE IMAGING*
  Drangova, M., Zhu, Y. D., Bowman, B., Pelc, N. J.
  1998; 16 (8): 863-870
- **Renal blood flow: Measurement in vivo with rapid spiral MR imaging** *RADIOLOGY*
  Sommer, G., Corrigan, G., Fredrickson, J., Sawyer-Glover, A., Liao, J. R., Myers, B., Pelc, N.
  1998; 208 (3): 729-734
- **Gradient characterization using a Fourier-transform technique** *MAGNETIC RESONANCE IN MEDICINE*
  Alley, M. T., Glover, G. H., Pelc, N. J.
  1998; 39 (4): 581-587
- **Ultrafast contrast-enhanced three-dimensional MR angiography: State of the art** *83rd Scientific Assembly and Annual Meeting of the Radiological-Society-of-North-America*
  Alley, M. T., Shifrin, R. Y., Pelc, N. J., Herfkens, R. J.
  RADIOLOGICAL SOC NORTH AMERICA.1998: 273–85
- **Concomitant gradient terms in phase contrast MR: Analysis and correction** *MAGNETIC RESONANCE IN MEDICINE*
  Bernstein, M. A., Zhou, X. H., Polzin, J. A., King, K. F., Ganin, A., Pelc, N. J., Glover, G. H.
  1998; 39 (2): 300-308
- **In-vitro comparative study by MRI and DPIV of flow through normal and thrombosed bileaflet aortic valve: Velocity and vorticity mapping and shear stress analysis**
  Rambod, E., Gharib, M., Zarandi, M., Pelc, N., Sahn, D. J.

ELSEVIER SCIENCE INC.1998: 111A–111A

- **Development of Volumetric Tomosynthesis and Tomography System.** *Radiology 209(P)*
  Stevens, G. M., Saunders, R. F., Pelc, N. J.
  1998: 280
- **Measurement of Renal Blood Flow in-vivo Using Rapid Spiral Acquisition.** *Radiology*
  Sommer, F., G, Corrigan, G., Fredrickson, J., O, Sawyer-Glover, A., M., Liao, J. R., Meyers, B., Pelc, N. J.
  1998; 208: 729-734
- **Gradient characterization using a Fourier transform technique.** *Magn. Res. Med.*
  Alley, M., T., Glover, G., H., Pelc, N., J.
  1998; 39: 581-587
- **Contrast Enhanced 4D Phase Contrast Imaging.**
  Fredrickson, J., O., Alley, M., T., Moseley, M., E., Herfkens, R., J., Pelc, N., J.
  1998
- **A Lagrangian Strain Approach to Velocity-Based Quantification of Myocardial Function and Tissue Deformation.**
  Zhu, Y., Herfkens, R. J., Pappas, G., Drace, J. E., Pelc, N., J.
  1998
- **3D Cine Cardiac Ventriculography with a Iron Oxide Blood Pool Agent.**
  Alley, M., T., Amano, Y., Shifrin, R. Y., Pelc, N., J., Herfkens, R. J.
  1998
- **3D Cine Cardiac Ventriculography with a Iron Oxide Blood Pool Agent.**
  Alley, M., T., Amano, Y., Shifrin, R. Y., Pelc, N., J., Herfkens, R. J.
  1998
- **Estimation of deformation gradient and strain from cine-PC velocity data** *IEEE TRANSACTIONS ON MEDICAL IMAGING*
  Zhu, Y. D., Drangova, M., Pelc, N. J.
  1997; 16 (6): 840-851
- **MRI using piecewise-linear spiral trajectory** *MAGNETIC RESONANCE IN MEDICINE*
  Liao, J. R., Pauly, J. M., Pelc, N. J.
  1997; 38 (2): 246-252
- **Effect of artifacts due to flowing blood on the reproducibility of phase-contrast measurements of myocardial motion** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Drangova, M., Zhu, Y. D., Pelc, N. J.
  1997; 7 (4): 664-668
- **Reduction of motion artifacts in cine MRI using variable-density spiral trajectories** *MAGNETIC RESONANCE IN MEDICINE*
  Liao, J. R., Pauly, J. M., Brosnan, T. J., Pelc, N. J.
  1997; 37 (4): 569-575
- **Angiographic imaging with 2D RF pulses** *MAGNETIC RESONANCE IN MEDICINE*
  Alley, M. T., Pauly, J. M., Sommer, F. G., Pelc, N. J.
  1997; 37 (2): 260-267
- **A Fast 3D-Cine Acquisition for Cardiac Imaging.**
  Alley, M., T., Shifrin, R., Y., Pelc, N., J., Herfkens, R., J.
  1997
- **A spatiotemporal finite element mesh model of cyclical deforming motion and its application in myocardial motion analysis using phase contrast MR images** *International Conference on Image Processing*
  Zhu, Y. D., Pelc, N. J.
  I E E E, COMPUTER SOC PRESS.1997: 117–120
- **Optimisation of flip angle for T1 dependent contrast: A closed form solution (Letter).** *Magn Res Med*

Pelc, N., J.
1997; 38: 518

- **Vascular Flow Dynamics in a Diving Elephant Seal (Mirounga angustirostric)**
  Thornton, S., J., Pelc, N., J., Liao, J. R., Costa, D., P., Spielman, D., M., Crocker, D., E.
  1997
- **On the Use of Spiral Ring Trajectories for Dynamic Imaging.**
  Liao, J. R., Pelc, N., J.
  1997
- **A Method for MR Gradient Characterization in Four Dimensions.**
  Alley, M., T., Pelc, N., J.
  1997
- **Ultrafast Contrast Enhanced 3D Magnetic Resonance Angiography: State of the Art.** *Radiology 205P*
  Shifrin, R., Y, Alley, M., T., Herfkens, R., J., Pelc, N., J.
  1997: 552
- **In Vivo Renal Blood Flow Measurement with Rapid Spiral Acquisition Techniques.**
  Sommer, F., G., Corrigan, G., Sawyer, A., M., Fredrickson, J., O., Liao, J. R., Myers, B., Pelc, N. J.
  1997
- **Shading Artifacts in Phase Contrast Angiography Induced by Maxwell Terms: Analysis and Correction.**
  Bernstein, M., A., Zhou, X., King, K., F., Ganin, A., Pelc, N., J., Glover, G., H.
  1997
- **Sampling Density Optimization for Motion Artifact Reduction in Variable-Density Spiral Scanning.**
  Liao, J. R., Pelc, N., J.
  1997
- **An Improved Method for Coronary Flow Measurement Using Simultaneous Resolution Of The Cardiac And Respiratory Cycles.**
  Drangova, M., Fredrickson, J., O., Pelc, N., J.
  1997
- **Reduction of motion artifacts in cine MRI using variable-density spiral trajectories.** *Mag Res Med*
  Liao, J. R., Pauly, J., M., Brosnan, T., J., Pelc, N., J.
  1997; 37: 569-575
- **A Rapid 3D Cine MR Sequence for Cardiac Imaging.** *Radiology 205P*
  Alley, M., T., Shifrin, R., Y., Pelc, N., J., Herfkens, R., J.
  1997: 212
- **Myocardial Function Analysis Using a Spatial Temporal Finite Element Mesh Model and Cine-PC Velocity Data.**
  Zhu, Y., Pelc, N., J.
  1997
- **MR Imaging in a Diving Seal.**
  Thornton, S., J., Spielman, D., M., Block, W., F., Hochachka, P., W., Crocker, D., E., Le Boeuf, B., J., Pelc, N. J.
  1997
- **Flow Effects of Spectral Spatial Excitation.**
  Fredrickson, J., O, Meyer, C., H., Pelc, N., J.
  1997
- **Diminishing Variance Algorithm Respiratory Compensation for Fast Spin Echo.**
  Block, W., F., Sachs, T., S., Thornton, S., J., Spielman, D., M., Nishimura, D., G., Pelc, N., J.
  1997
- **A Spatiotemporal Finite Element Mesh Model of Cyclical Deforming Motion and Its Application in Myocardial Motion Analysis Using Phase Contrast MR Images.**

Zhu, Y., Pelc, N., J.
1997

- **Dynamic contrast-enhanced breath-hold MR imaging of thoracic malignancy using cardiac compensation** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Low, R. N., Sigeti, J. S., Song, S. Y., Shimakawa, A., Pelc, N. J.
  1996; 6 (4): 625-631
- **Physiologic motion phantom for MRI applications** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Drangova, M., Bowman, B., Pelc, N. J.
  1996; 6 (3): 513-518
- **Fourier tracking of myocardial motion using Cine-PC data** *MAGNETIC RESONANCE IN MEDICINE*
  Zhu, Y. D., Drangova, M., Pelc, N. J.
  1996; 35 (4): 471-480
- **Temporal resolution improvement in dynamic imaging** *MAGNETIC RESONANCE IN MEDICINE*
  Fredrickson, J. O., Pelc, N. J.
  1996; 35 (4): 621-625
- **Artifacts and signal loss due to flow in the presence of B-0 inhomogeneity** *MAGNETIC RESONANCE IN MEDICINE*
  Drangova, M., Pelc, N. J.
  1996; 35 (1): 126-130
- **Improved Temporal Resolution with View Ordered Phase Contrast Magnetic Resonance Imaging.**
  Sheehan, F., Fredrickson, J., Pelc, N., Zhu, Y., Drace, J.
  1996
- **Image Reconstruction of Generalized Spiral Trajectory.**
  Liao, J., R., Pelc, N., J.
  1996
- **Performance Assessment of a Cine-Phase-Contrast-Velocity-Data-Based Strain Estimation Method.** *Radiology 201P*
  Zhu, Y., Pelc, N., J.
  1996: 404
- **Fast Gradient Characterization and K-Space Measurement Technique.** *Radiology 201P*
  Alley, M., T., Kerr, A., B., Pelc, N., J., Glover, G., H.
  1996: 152
- **Estimation of Deformation Gradient and Strain from Densely Sampled Velocity Data.**
  Zhu, Y., Pelc, N.
  1996
- **Fourier tracking of myocardial motion using Cine-PC data.** *Mag Res Med*
  Y, Y., Zhu, Drangova, M., Pelc, N., J.
  1996; 35: 471-480
- **MR Imaging Using Piecewise-Linear Spiral Trajectory.**
  Liao, J., R., Pauly, J., M., Pelc, N., J.
  1996
- **Simultaneous Resolution of Cardiac and Respiratory Motion with a Rapid Spiral Acquisition.**
  Frederickson, J., O., Drangova, M., Liao, J., R., Pelc, N., J.
  1996
- **Application of Phase Contrast MR Imaging to the Study of Musculoskeletal Motion.**
  Drace, J., E., Sheehan, F., T., Pelc, N., J.
  1996

- **Measurement of Renal Blood Flow In Vivo using Simultaneous Resolution of Cardiac and Respiratory Motion.** *Radiology 201P*
  Sommer, F., G., Merchant, N., Fredrickson, J., O., Drangova, M., Liao, J. R., Pelc, N., J.
  1996: 217
- **Artifacts and signal loss due to flow in the presence of Bo inhomogeneity.** *Mag Res Med*
  Drangova, M., Pelc, N., J.
  1996; 35: 126-130
- **CINE SPIRAL IMAGING** *MAGNETIC RESONANCE IN MEDICINE*
  Liao, J. R., Sommer, F. G., Herfkens, R. J., Pelc, N. J.
  1995; 34 (3): 490-493
- **Flow quantification and analysis methods.** *Magnetic resonance imaging clinics of North America*
  Pelc, N. J.
  1995; 3 (3): 413-424
- **T-1-WEIGHTED SIGNAL CONTRAST OPTIMIZATION BY RF PULSE SEQUENCES - RESPONSE** *MAGNETIC RESONANCE IN MEDICINE*
  Pelc, N. J., Sumanaweera, T. S.
  1995; 34 (1): 134-135
- **TRACKING OF CYCLIC MOTION WITH PHASE-CONTRAST CINE MR VELOCITY DATA** *JMRI-JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Pelc, N. J., Drangova, M., Pelc, L. R., Zhu, Y., Noll, D. C., BOWMAN, B. S., Herfkens, R. J.
  1995; 5 (3): 339-345
- **PHASE UNWRAPPING OF MR PHASE IMAGES USING POISSON EQUATION** *IEEE TRANSACTIONS ON IMAGE PROCESSING*
  Song, S. M., Napel, S., Pelc, N. J., Glover, G. H.
  1995; 4 (5): 667-676
- **SIMULTANEOUS TEMPORAL RESOLUTION OF CARDIAC AND RESPIRATORY MOTION IN MR-IMAGING** *RADIOLOGY*
  Fredrickson, J. O., WEGMULLER, H., Herfkens, R. J., Pelc, N. J.
  1995; 195 (1): 169-175
- **3-POINT PHASE-CONTRAST VELOCITY-MEASUREMENTS WITH INCREASED VELOCITY-TO-NOISE RATIO** *MAGNETIC RESONANCE IN MEDICINE*
  Lee, A. T., Pike, G. B., Pelc, N. J.
  1995; 33 (1): 122-126
- **Impact of artifacts due to flowing blood on the reproducibility of phase-contrast measurements of myocardial motion.**
  Drangova, M., Pelc, N., J.
  1995
- **Tracking of cyclical motion using phase contrast cine MRI velocity data.** *JMRI*
  Pelc, N., J., Drangova, M., Pelc, L., R., Zhu, Y., Noll, D., C., Bowman, B., S.
  1995; 5: 339-345
- **PHASE-CONTRAST MRI ASSESSMENT OF PEDAL BLOOD-FLOW** *EUROPEAN RADIOLOGY*
  Debatin, J. F., Dalman, R., Herfkens, R. J., Harris, E. J., Pelc, N. J.
  1995; 5 (1): 36-42
- **Improved angiographic imaging with 2D spatially selective RF pulses.**
  Alley, M., T., Pauly, J., M., Sommer, F., G., Pelc, N., J.
  1995
- **Preoperative planning of muscle-tendon transfers with phase-contrast MR imaging.** *Radiology 197P*
  Drace, J., E., Sheehan, F., T., Pelc, N., J.
  1995: 296
- **Three-point phase-contrast velocity measurements with increased velocity-to-noise ratio.** *Mag Res Med*
  Lee, A., T., Pike, G., B., Pelc, N., J.

1995; 33: 122-126

- **Simultaneous temporal resolution of cardiac and respiratory motion.** *Radiology*
  Fredrickson, J., O., Wegmüller, H., Herfkens, R., J., Pelc, N., J.
  1995; 195: 169-175
- **Reply to T1 weighted signal contrast optimization by RF pulses (Letter).** *Mag Res Med*
  Pelc, N., J., Sumanaweera, T.
  1995; 34: 134-135
- **View order phase contrast magnetic resonance imaging: A new technique for measuring in-vivo muscle kinematics and kinetics.**
  Sheehan, F., T., Fredrickson, J., O., Pelc, N., J., Zajac, F., E., Drace, J., E.
  1995
- **Validation of cine phase-contrast for motion analysis.** *JMRI*
  Lingamneni, A., Hardy, P., A., Powell, K., A., Pelc, N., J., White, R., D.
  1995; 5: 331-338
- **Retrospective flow measurement from 3D all-direction phase-contrast MR imaging.** *Radiology 197P*
  Brosnan, T., J., Drangova, M., Pelc, N., J., Enzmann, D., R., Napel, S., A.
  1995: 391
- **Flow-induced spatial displacement artifact in phase-contrast imaging.**
  Fredrickson, J., O., Drangova, M., Pelc, N., J.
  1995
- **Improved temporal resolution of phase-contrast imaging of muscle dynamics by using view ordering.** *Radiology 197P*
  Drace, J., E., Sheehan, F., T., Pelc, N., J.
  1995: 389
- **Concentric, eccentric, and isometric muscle contraction with electromyography and phase-contrast MR imaging.** *Radiology 197P*
  Drace, J., E., Sheehan, F., T., Pelc, N., J.
  1995: 296
- **Impact of spatial resolution and interpolation on myocardial tracking from Cine-PC data.**
  Zhu, Y., Drangova, M., Pelc, N., J.
  1995
- **Impact of artifacts due to flowing blood on the reproducibility of phase-contrast measurements of myocardial motion.**
  Drangova, M., Pelc, N., J.
  1995
- **Tracking of cyclical motion using phase contrast cine MRI velocity data.** *JMRI*
  Pelc, N., J., Drangova, M., Pelc, L., R., Zhu, Y., Noll, D., C., Bowman, B., S.
  1995; 5: 339-345
- **PHASE-CONTRAST MRI ASSESSMENT OF PEDAL BLOOD-FLOW** *EUROPEAN RADIOLOGY*
  Debatin, J. F., Dalman, R., Herfkens, R. J., Harris, E. J., Pelc, N. J.
  1995; 5 (1): 36-42
- **EVALUATION OF MYOCARDIAL MOTION TRACKING WITH CINE-PHASE CONTRAST MAGNETIC-RESONANCE-IMAGING** *INVESTIGATIVE RADIOLOGY*
  Pelc, L. R., Sayre, J., Yun, K., Castro, L. J., Herfkens, R. J., Miller, D. C., Pelc, N. J.
  1994; 29 (12): 1038-1042
- **MAGNETIC-RESONANCE-IMAGING EVALUATION OF PULMONARY VASCULAR MALFORMATIONS** *CHEST*
  Silverman, J. M., JULIEN, P. J., Herfkens, R. J., Pelc, N. J.
  1994; 106 (5): 1333-1338
- **SKELETAL-MUSCLE CONTRACTION - ANALYSIS WITH USE OF VELOCITY DISTRIBUTIONS FROM PHASE-CONTRAST MR-IMAGING** *RADIOLOGY*

Drace, J. E., Pelc, N. J.
1994; 193 (2): 423-429

- **TRACKING THE MOTION OF SKELETAL-MUSCLE WITH VELOCITY-ENCODED MR-IMAGING** *JMRI-JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Drace, J. E., Pelc, N. J.
  1994; 4 (6): 773-778
- **MAGNETIC-RESONANCE VELOCITY IMAGING USING A FAST SPIRAL PHASE-CONTRAST SEQUENCE** *MAGNETIC RESONANCE IN MEDICINE*
  Pike, G. B., Meyer, C. H., Brosnan, T. J., Pelc, N. J.
  1994; 32 (4): 476-483
- **RECONSTRUCTIONS OF PHASE-CONTRAST, PHASED-ARRAY MULTICOIL DATA** *MAGNETIC RESONANCE IN MEDICINE*
  Bernstein, M. A., Grgic, M., Brosnan, T. J., Pelc, N. J.
  1994; 32 (3): 330-334
- **QUANTITATIVE MAGNETIC-RESONANCE FLOW IMAGING** *MAGNETIC RESONANCE QUARTERLY*
  Pelc, N. J., Sommer, F. G., Li, K. C., Brosnan, T. J., Herfkens, R. J., Enzmann, D. R.
  1994; 10 (3): 125-147
- **SINGLE BREATH-HOLD PULMONARY MAGNETIC-RESONANCE ANGIOGRAPHY - OPTIMIZATION AND COMPARISON OF 3 IMAGING STRATEGIES** *INVESTIGATIVE RADIOLOGY*
  Rubin, G. D., Herfkens, R. J., Pelc, N. J., Foo, T. K., Napel, S., Shimakawa, A., Steiner, R. M., Bergin, C. J.
  1994; 29 (8): 766-772
- **THE ANATOMY OF THE POSTERIOR COMMUNICATING ARTERY AS A RISK FACTOR FOR ISCHEMIC CEREBRAL INFARCTION** *NEW ENGLAND JOURNAL OF MEDICINE*
  Schomer, D. F., Marks, M. P., Steinberg, G. K., Johnstone, I. M., Boothroyd, D. B., Ross, M. R., Pelc, N. J., Enzmann, D. R.
  1994; 330 (22): 1565-1570
- **ELASTIC-DEFORMATION IN TENDONS AND MYOTENDINOUS TISSUE - MEASUREMENT BY PHASE-CONTRAST MR-IMAGING** *RADIOLOGY*
  Drace, J. E., Pelc, N. J.
  1994; 191 (3): 835-839
- **DETERMINATION OF BLOOD-FLOW TO THE TRANSPLANTED KIDNEY - A NOVEL APPLICATION OF PHASE-CONTRAST, CINE MAGNETIC-RESONANCE-IMAGING** *TRANSPLANTATION*
  Myers, B. D., Sommer, F. G., Li, K., Tomlanovich, S., Pelc, N., McDonnell, C., PAGTALUNAN, E., Newton, L., Jamison, R.
  1994; 57 (10): 1445-1450
- **MEASUREMENT OF SKELETAL-MUSCLE MOTION IN-VIVO WITH PHASE-CONTRAST MR-IMAGING** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Drace, J. E., Pelc, N. J.
  1994; 4 (2): 157-163
- **TIME-RESOLVED MR-IMAGING BY AUTOMATIC DATA SEGMENTATION** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Fredrickson, J. O., Pelc, N. J.
  1994; 4 (2): 189-196
- **RENAL-ARTERY BLOOD-FLOW - QUANTITATION WITH PHASE-CONTRAST MR-IMAGING WITH AND WITHOUT BREATH-HOLDING** *RADIOLOGY*
  Debatin, J. F., Ting, R. H., WEGMULLER, H., Sommer, F. G., Fredrickson, J. O., Brosnan, T. J., BOWMAN, B. S., Myers, B. D., Herfkens, R. J., Pelc, N. J.
  1994; 190 (2): 371-378
- **SHUNT FLOW MEASUREMENT AND EVALUATION OF VALVE OSCILLATION WITH A SPIN-ECHO PHASE-CONTRAST MR SEQUENCE** *RADIOLOGY*
  Norbash, A. M., Pelc, N. J., Shimakawa, A., Enzmann, D. R.
  1994; 190 (2): 560-564

- **BLOOD-FLOW IN MAJOR CEREBRAL-ARTERIES MEASURED BY PHASE-CONTRAST CINE MR** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  Enzmann, D. R., Ross, M. R., Marks, M. P., Pelc, N. J.
  1994; 15 (1): 123-129
- **Renal arterial blood flow: Quantitation with phase-contrast MR imaging with and without breath-holding.** *Radiology*
  Debatin, J., F., Ting, R., H., Wegmüller, H., Sommer, F., G., Fredrickson, J., O., Brosnan, T., J., Pelc, N. J.
  1994; 190: 371-378
- **Quantitative Magnetic Resonance flow imaging.** *Magn Reson Quarterly*
  Pelc, N., J., Sommer, F., G., Li, K., C.P., Brosnan, T., J., Herfkens, R., J., Enzmann, D., R.
  1994; 10: 125-147
- **Voxel Size Effects on Vascular Shear Measurement.**
  Strang, J., Herfkens, R., J., Pelc, N., J.
  1994
- **MR Signal Loss due to Flow in the Presence of Bo Inhomogeneities.**
  Drangova, M., Pelc, N., J.
  1994
- **Quantitative Patellar Tracking with MR velocity distributions.** *Radiology 193P*
  Drace, J., E., Sheehan, F., T., Pelc., N., J.
  1994: 370
- **Verification of myocardial wall motion tracking from phase-contrast velocity data.** *Radiology 193P*
  Drangova, M., Zhu, Y., Bowman, B., S., Pelc, N., J.
  1994: 199
- **Phase-contrast phased array reconstruction.** *Soc. Mag. Res. WIP Supplement*
  Bernstein, M., A., Grgic, M., Brosnan, T., J., Pelc, N., J.
  1994: S9
- **Differences in CSF Flow and Brain Motion in Atrophy and Hydroecphalus.** *ASNR*
  Norbash, A., M., Pelc, N., J., Enzmann., D., R.
  1994
- **Cine phase-contrast MRI assessment of pedal blood flow.** *JMRI, 4P*
  Debatin, J., F., Dalman, R., Pelc, N., J., Harris, E., J.
  1994: 66
- **Breath-hold phase-contrast MR quantification of renal artery blood flow.** *JMRI, 4P*
  Debatin, J., F., Ting, R., H., Wegmüller, H., Sommer, F., G, Fredrickson, J., O., Brosnan, T., J., Pelc, N. J.
  1994: 44
- **Phase-contrast velocity measurements with increased signal-to-noise ratio.** *JMRI, 4P*
  Lee, A., T., Pelc, N., J.
  1994: 45
- **Influence of respiratory motion on cine phase contrast based flow measurements.** *JMRI, 4P*
  Debatin, J., F., Wegmüller, H., Bowman, B., S., Sommer, F., G, Pelc, N., J., Herfkens, R., J.
  1994: 44
- **Quantitative 3D time-resolved phase contrast MR imaging.**
  Fredrickson, J., O., Irarrazabal, P., Pelc, N., J.
  1994
- **Time resolved MR imaging by automatic data segmentation.** *JMRI*
  Fredrickson, J., O., Pelc, N., J.
  1994

- **Elastic deformation in tendons and myotendinous tissue: Measurement by phase contrast MR imaging.** *Radiology*
  Drace, J., E., Pelc, N., J.
  1994; 191: 835-839
- **CSF Dynamics in Chiari I Syringomyelia.** *ASNR*
  Ginier, B., L., Chappell, P., M., Pelc, N., J., Enzmann., D., R.
  1994
- **CHRONIC MESENTERIC ISCHEMIA - EVALUATION WITH PHASE-CONTRAST CINE MR-IMAGING** *RADIOLOGY*
  Li, K. C., Whitney, W. S., McDonnell, C. H., Fredrickson, J. O., Pelc, N. J., Dalman, R. L., Jeffrey, R. B.
  1994; 190 (1): 175-179
- **VELOCITY AND FLOW QUANTITATION IN THE SUPERIOR SAGITTAL SINUS WITH UNGATED AND CINE (GATED) PHASE-CONTRAST MR-IMAGING** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Jordan, J. E., Pelc, N. J., Enzmann, D. R.
  1994; 4 (1): 25-28
- **COMPARISON OF LESION ENHANCEMENT ON SPIN-ECHO AND GRADIENT-ECHO IMAGES** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  CHAPPELL, P. M., Pelc, N. J., Foo, T. K., Glover, G. H., HAROS, S. P., Enzmann, D. R.
  1994; 15 (1): 37-44
- **Time resolved MR imaging by automatic data segmentation.** *JMRI*
  Fredrickson, J., O., Pelc, N., J.
  1994
- **Elastic deformation in tendons and myotendinous tissue: Measurement by phase contrast MR imaging.** *Radiology*
  Drace, J., E., Pelc, N., J.
  1994; 191: 835-839
- **CSF Dynamics in Chiari I Syringomyelia.** *ASNR*
  Ginier, B., L., Chappell, P., M., Pelc, N., J., Enzmann., D., R.
  1994
- **CHRONIC MESENTERIC ISCHEMIA - EVALUATION WITH PHASE-CONTRAST CINE MR-IMAGING** *RADIOLOGY*
  Li, K. C., Whitney, W. S., McDonnell, C. H., Fredrickson, J. O., Pelc, N. J., Dalman, R. L., Jeffrey, R. B.
  1994; 190 (1): 175-179
- **VELOCITY AND FLOW QUANTITATION IN THE SUPERIOR SAGITTAL SINUS WITH UNGATED AND CINE (GATED) PHASE-CONTRAST MR-IMAGING** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Jordan, J. E., Pelc, N. J., Enzmann, D. R.
  1994; 4 (1): 25-28
- **COMPARISON OF LESION ENHANCEMENT ON SPIN-ECHO AND GRADIENT-ECHO IMAGES** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  CHAPPELL, P. M., Pelc, N. J., Foo, T. K., Glover, G. H., HAROS, S. P., Enzmann, D. R.
  1994; 15 (1): 37-44
- **QUANTITATIVE DIFFERENTIAL PULMONARY PERFUSION - MR-IMAGING VERSUS RADIONUCLIDE LUNG-SCANNING** *1992 ANNUAL SCIENTIFIC ASSEMBLY OF THE RADIOLOGICAL-SOC-OF-NORTH-AMERICA*
  Silverman, J. M., JULIEN, P. J., Herfkens, R. J., Pelc, N. J.
  RADIOLOGICAL SOC NORTH AMERICA.1993: 699–701
- **CEREBROSPINAL-FLUID FLOW MEASURED BY PHASE-CONTRAST CINE MR** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  Enzmann, D. R., Pelc, N. J.
  1993; 14 (6): 1301-1307
- **COMPARISON OF CEREBRAL-ARTERY BLOOD-FLOW MEASUREMENTS WITH GATED CINE AND UNGATED PHASE-CONTRAST TECHNIQUES** *JMRI-JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Enzmann, D. R., Marks, M. P., Pelc, N. J.
  1993; 3 (5): 705-712

- **NOISE-REDUCTION IN 3-DIMENSIONAL PHASE-CONTRAST MR VELOCITY-MEASUREMENTS** *JMRI-JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Song, S. M., Napel, S., Glover, G. H., Pelc, N. J.
  1993; 3 (4): 587-596

- **MR CHARACTERIZATION OF BLOOD-FLOW IN NATIVE AND GRAFTED INTERNAL MAMMARY ARTERIES** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Debatin, J. F., Strong, J. A., Sostman, H. D., NEGROVILAR, R., Paine, S. S., Douglas, J. M., Pelc, N. J.
  1993; 3 (3): 443-450

- **OPTIMIZATION OF FLIP ANGLE FOR T1 DEPENDENT CONTRAST IN MRI** *MAGNETIC RESONANCE IN MEDICINE*
  Pelc, N. J.
  1993; 29 (5): 695-699

- **FAST MULTIPLANAR SPOILED GRADIENT-RECALLED IMAGING OF THE LIVER - PULSE SEQUENCE OPTIMIZATION AND COMPARISON WITH SPIN-ECHO MR IMAGING** *AMERICAN JOURNAL OF ROENTGENOLOGY*
  Low, R. N., Francis, I. R., Herfkens, R. J., Jeffrey, R. B., Glazer, G. M., Foo, T. K., Shimakawa, A., Pelc, N. J.
  1993; 160 (3): 501-509

- **MAGNETIC-RESONANCE-IMAGING OF BLOOD-FLOW WITH A PHASE SUBTRACTION TECHNIQUE - INVITRO AND INVIVO VALIDATION** *INVESTIGATIVE RADIOLOGY*
  Evans, A. J., Iwai, F., GRIST, T. A., Sostman, H. D., Hedlund, L. W., Spritzer, C. E., NEGROVILAR, R., Beam, C. A., Pelc, N. J.
  1993; 28 (2): 109-115

- **QUALITATIVE PHASE-CONTRAST MRA IN THE NORMAL AND ABNORMAL CIRCLE OF WILLIS** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  Ross, M. R., Pelc, N. J., Enzmann, D. R.
  1993; 14 (1): 19-25

- **A LEAST-SQUARES BASED PHASE UNWRAPPING ALGORITHM FOR MRI** *Nuclear Science Symposium and Medical Imaging Conference (NSS-MIC 93)*
  Song, S. M., Napel, S., Pelc, N. J., Glover, G. H.
  IEEE.1993: 1784–1788

- **CSF Dynamics in Chiari I Syringomyelia.**
  Enzmann, D., R., Chappell, P., M., Pelc, N., J.
  1993

- **Spiral phase-contrast velocity MR imaging.** *93 RSNA, Radiology 189P*
  Pike, G., B., Meyer, C., H., McDonnell, C., Pelc, N., J.
  1993: 291

- **Rapid quantitative flow imaging using a spiral phase contrast sequence.**
  Pike, G., B., Meyer, C., H., Pelc, N., J.
  1993

- **Dynamic range extension of phase contrast velocity measurements.**
  Song, S., M., Napel, S., Pike, G., B., Pelc, N., J., Glover., G., H.
  1993

- **Cine phase contrast versus respiratory resolved TRIADS in the portal vein. Flow quantification and flow profile analysis.**
  Wegmüller, H., Fredrickson, J., O., Brosnan, T., J., Pelc, N., J., Debatin, J., F., Herfkens., R., J.
  1993

- **High-resolution phase-contrast sequence for very slow flow.** *Soc. Mag. Res. Imaging*
  Pelc, N., J., Norbash, A., M., Shimakawa, A., Enzmann, D., R.
  1993: S31

- **Breathheld phase contrast MRI flow quantification in the portal vein.**
  Wegmüller, H., Fredrickson, J., O., Brosnan, T., J., Pelc, N., J., Debatin, J., F., Herfkens., R., J.

1993

- **Portal venous flow analysis with respiratory-resolved phase-contrast MR imaging.** *93 RSNA, Radiology 189P*
  Wegmüller, H., Fredrickson, J., O., Brosnan, T., J., Pelc, N., J., Debatin, J., F., Herfkens, R., J.
  1993: 306
- **Optimization of xenon-enhanced helical CT for acquisition of 3D regional cerebral blood flow maps of the brain.** *93 RSNA, Radiology 189P*
  Napel, S., A., Marks, M., P., Pelc, N., J.
  1993: 217
- **Phase sensitive flow imaging.** *In Magnetic Resonance Angiography: Concepts and Applications*
  Dumoulin, C., L., Souza, S., P., Pelc, N., J.
  edited by Potchen, E., J., Siebert, J., E., Haacke, E., M.
  Mosby, St. Louis.1993: 173–186
- **SE phase-contrast sequence for measurement of cerebrospinal fluid shunt flow.** *93 RSNA, Radiology 189P*
  Pelc, N., J., Shimakawa, A., Norbash, A., Enzmann, D., R.
  1993: 292
- **Determination of shunt flow with SE phase-contrast MR imaging. '93 RSNA** *Radiology 189P*
  Norbash, A., M., Pelc, N., J., Shimakawa, A., Enzmann, D., R.
  1993: 223
- **Cerebrospinal fluid flow in hydrocephalus and atrophy.**
  Enzmann, D., R., Norbash, A., M., Pelc, N., J.
  1993
- **A least squares based phase unwrapping algorithm for MRI**
  Song, S., M., Napel, N., Pelc, N., J., Glover, G., H.
  1993
- **A stroll through k-space.** *In The Physics of MRI*
  Pelc, N., J., Glover, G., H.
  edited by Sprawls, P., Bronskill, M., J.
  AAPM, Woodbury NY.1993: 771–784
- **Spin preparation and manipulation techniques.** *In The Physics of MRI*
  Pelc, N., J.
  edited by Sprawls, P., Bronskill, M., J.
  AAPM, Woodbury NY.1993: 268–287
- **Phase-contrast cine MR imaging determination of renal blood flow in the transplanted kidney** *JMRI 3P*
  Sommer, F., G., Li, K., C.P, Pelc, N., J., Meyers, B., Jamison, R., Pagtalunan, E.
  1993: 55
- **Obtaining spatial pressure distributions from phase-contrast velocity data.** *93 RSNA, Radiology 189P*
  Song, S., M., Hu, B., S., Napel, S., A., Pelc, N., J., Glover, G., H.
  1993: 270
- **MR imaging of blood flow with a phase subtraction technique: In-vitro and in-vivo validation.** *Invest. Radiol.*
  Evans, A., J., Iwai, F., Grist, T., A., Sostman, H., D., Hedlund, L., A., Spritzer, C., E., Pelc, N. J.
  1993; 28: 109-115
- **ARTERIAL AND VENOUS-BLOOD FLOW - NONINVASIVE QUANTITATION WITH MR IMAGING** *RADIOLOGY*
  Pelc, L. R., Pelc, N. J., Rayhill, S. C., Castro, L. J., Glover, G. H., Herfkens, R. J., Miller, D. C., Jeffrey, R. B.
  1992; 185 (3): 809-812
- **BRAIN MOTION - MEASUREMENT WITH PHASE-CONTRAST MR IMAGING** *RADIOLOGY*
  Enzmann, D. R., Pelc, N. J.
  1992; 185 (3): 653-660

- **MINIMIZING TE IN MOMENT-NULLED OR FLOW-ENCODED 2-DIMENSIONAL AND 3-DIMENSIONAL GRADIENT-ECHO IMAGING** *JMRI-JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Bernstein, M. A., Shimakawa, A., Pelc, N. J.
  1992; 2 (5): 583-588
- **Minimizing TE in moment-nulled or flow-encoded two- and three-dimensional gradient-echo imaging.** *Journal of magnetic resonance imaging : JMRI*
  Bernstein, M. A., Shimakawa, A., Pelc, N. J.
  1992; 2 (5): 583-588
- **NORMAL RENAL BLOOD-FLOW MEASUREMENT USING PHASE-CONTRAST CINE MAGNETIC-RESONANCE-IMAGING** *INVESTIGATIVE RADIOLOGY*
  Sommer, G., NOORBEHESHT, B., Pelc, N., Jamison, R., Pinevich, A. J., Newton, L., Myers, B.
  1992; 27 (6): 465-470
- **DETERMINATION OF CEREBRAL BLOOD-FLOW WITH A PHASE-CONTRAST CINE MR IMAGING TECHNIQUE - EVALUATION OF NORMAL SUBJECTS AND PATIENTS WITH ARTERIOVENOUS-MALFORMATIONS** *RADIOLOGY*
  Marks, M. P., Pelc, N. J., Ross, M. R., Enzmann, D. R.
  1992; 182 (2): 467-476
- **Elastic properties of tendon and myotendinous tissue: Measurement with phase-contrast MR imaging. '92 RSNA** *Radiology 185P*
  Drace, J., E., Herfkens, R., J., Pelc, N., J.
  1992: 177
- **Flexible and rapid time-resolved imaging by view-order selection.** *Book of Abstracts SMRM*
  Fredrickson, J., O., Shimakawa, A., Pelc, N., J.
  1992: 3921
- **3D analysis of myocardial motion and deformation with phase contrast cine MRI.** *Book of Abstracts SMRM*
  Pelc, N., J., Herfkens, R., J., Pelc, L., R.
  1992: 18
- **Evaluation of cerebral blood flow with phase-contrast cine MR in patients with atherosclerotic carotid artery disease.** *92 RSNA, Radiology 185P*
  Marks, M., P., Liddell, R., P., Pelc, N., J., Enzmann, D., R.
  1992: 181
- **Comparison of ungated and cine-gated 2D phase contrast MR measurements of blood flow in major cerebral arteries.** *92 RSNA, Radiology 185P*
  Enzmann, D., R., Pelc, N., J.
  1992: 182
- **Brain motion: measurement with phase-contrast MR Imaging.** *Radiology*
  Enzmann, D., R., Pelc, N., J.
  1992; 185: 653-660
- **Quantitative differential pulmonary perfusion: MR imaging versus radionuclide scanning versus lung scanning.**
  Silverman, J., M., Julien, P., J., Herfkens, R., J., Pelc, N., J.
  1992
- **Right ventricular strain measured by phase contrast MRI.** *Book of Abstracts SMRM*
  Herfkens, R., J., Pelc, N., J., Pelc, L., R., Sayre, J., R.
  1992: 163
- **MR imaging displacement and velocity profiles in skeletal muscle correlate with developed force.** *92 RSNA, Radiology 185P*
  Drace, J., E., Herfkens, R., J., Pelc, N., J.
  1992: 332
- **Comparison of ungated and cine-gated 2D phase contrast MR measurements of blood flow in major cerebral arteries.** *92 RSNA, Radiology 185P*
  Enzmann, D., R., Pelc, N., J.

1992: 182

- **Brain motion: measurement with phase-contrast MR Imaging.** *Radiology*
  Enzmann, D., R., Pelc, N., J.
  1992; 185: 653-660
- **Quantitative differential pulmonary perfusion: MR imaging versus radionuclide scanning versus lung scanning.**
  Silverman, J., M., Julien, P., J., Herfkens, R., J., Pelc, N., J.
  1992
- **Right ventricular strain measured by phase contrast MRI.** *Book of Abstracts SMRM*
  Herfkens, R., J., Pelc, N., J., Pelc, L., R., Sayre, J., R.
  1992: 163
- **MR imaging displacement and velocity profiles in skeletal muscle correlate with developed force.** *92 RSNA, Radiology 185P*
  Drace, J., E., Herfkens, R., J., Pelc, N., J.
  1992: 332
- **Phase contrast cine magnetic resonance imaging.** *Magnetic resonance quarterly*
  Pelc, N. J., Herfkens, R. J., Shimakawa, A., Enzmann, D. R.
  1991; 7 (4): 229-254
- **ENCODING STRATEGIES FOR 3-DIRECTION PHASE-CONTRAST MR IMAGING OF FLOW** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Pelc, N. J., Bernstein, M. A., Shimakawa, A., Glover, G. H.
  1991; 1 (4): 405-413
- **SIMULTANEOUS ACQUISITION OF PHASE-CONTRAST ANGIOGRAMS AND STATIONARY-TISSUE IMAGES WITH HADAMARD ENCODING OF FLOW-INDUCED PHASE-SHIFTS** *JOURNAL OF MAGNETIC RESONANCE IMAGING*
  Dumoulin, C. L., Souza, S. P., Darrow, R. D., Pelc, N. J., Adams, W. J., Ash, S. A.
  1991; 1 (4): 399-404
- **DURAL SINUS OCCLUSION - EVALUATION WITH PHASE-SENSITIVE GRADIENT-ECHO MR IMAGING** *AMERICAN JOURNAL OF ROENTGENOLOGY*
  Tsuruda, J. S., Shimakawa, A., Pelc, N. J., Saloner, D.
  1991; 157 (1): 139-146
- **DURAL SINUS OCCLUSION - EVALUATION WITH PHASE-SENSITIVE GRADIENT-ECHO MR IMAGING** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  Tsuruda, J. S., Shimakawa, A., Pelc, N. J., Saloner, D.
  1991; 12 (3): 481-488
- **NORMAL FLOW PATTERNS OF INTRACRANIAL AND SPINAL CEREBROSPINAL-FLUID DEFINED WITH PHASE-CONTRAST CINE MR IMAGING** *RADIOLOGY*
  Enzmann, D. R., Pelc, N. J.
  1991; 178 (2): 467-474
- **EVALUATION OF ACUTE-RENAL-FAILURE WITH MAGNETIC-RESONANCE-IMAGING USING GRADIENT-ECHO AND GD-DTPA** *INVESTIGATIVE RADIOLOGY*
  Munechika, H., SULLIVAN, D. C., Hedlund, L. W., Beam, C. A., Sostman, H. D., Herfkens, R. J., Pelc, N. J.
  1991; 26 (1): 22-27
- **Phase contrast Magnetic Resonance Imaging accurately tracks myocardial motion in a canine model.**
  Sayre, J., R., Pelc, L., R., Herfkens, R., J., Castro, L., J., Rayhill, S., R., Miller, D., C.
  1991
- **Brain motion during the cardiac cycle.**
  Enzmann, D., R., Pelc, N., J.
  1991
- **Noninvasive quantitation of arterial and venous blood flow with MR imaging.** *Radiology 181P*
  Pelc, L., R., Pelc, N., J., Rayhill, S., C., Castro, L., J., Glover, G., H., Jeffrey et al, R., B.

1991: 263

- **Initial experience with myocardial motion analysis by means of phase-contrast MR imaging.** *91 RSNA, Radiology 181P*
  Herfkens, R., J., Pelc, N., J., Sayre, J., R., Pelc, L., R.
  1991: 219
- **Dural sinus occlusion: evaluation with phase sensitive gradient echo MR imaging.** *AJNR*
  Tsuruda, J., S., Shimakawa, A., Pelc, N., J., Saloner, D.
  1991; 12: 481-488
- **Determination of cerebral blood flow with a phase-contrast cine MR technique: Evaluation of normal and AVM patients.** *Society of Magnetic Resonance in Medicine*
  Marks, M., P., Pelc, N., J., Enzmann, D., R.
  1991: 260
- **Improved diagnostic accuracy of aortic dissection with phase contrast cine MRI.**
  Herfkens, R., J., Trefelner, E., Jeffrey, R., B., Steiner, R., M., Francis, I., R., Pelc, N., J.
  1991
- **Simultaneous acquisition of phase-contrast angiograms and stationary-tissue images with Hadamard encoding of flow-induced phase shifts.** *JMRI*
  Dumoulin, C., L., Souza, S., P., Darrow, R., D., Pelc, N., J., Adams, W., J., Ash, S., A.
  1991; 1: 399-404
- **Reduced pulsatility artifacts in MR angiography.** *Society of Magnetic Resonance in Medicine*
  Pelc, N., J., Shimakawa, A.
  1991: 821
- **Phase-contrast MR imaging measurement of myocardial motion.** *JMRI*
  Pelc, N., J., Herfkens, R., J., Pelc, L., R.
  1991; 1: 181
- **MR imaging of the pulmonary vasculature: Optimization with a breath-holding spoiled gradient-echo technique.** *91 RSNA, Radiology 181P*
  Rubin, G., D., Steiner, R., M., Pelc, N., J., Herfkens, R., J., Francis, I., R., Low, R., N.
  1991: 156
- **Measurement of cerebrospinal fluid flow with phase-contrast cine MR.** *91 RSNA, Radiology 181P*
  Enzmann, D., R., Pelc, N., J.
  1991: 171
- **Aortic dissection: Velocity encoded pulse sequence improves diagnostic accuracy.** *Society of Computed Body Tomography. Am. J. Roentg*
  Herfkens, R., J., Jeffrey, R., B, Trefelner, E., Pelc, N., J., Lucas:, D.
  1991; 157: 616
- **Renal blood flow measurement using phase-contrast cine MRI.** *Society of Magnetic Resonance in Medicine*
  Sommer, F., G., Noorbehesht, B., Pelc, N., J., Jamison, R., L., Pinevich, A., J., Newton, L.
  1991: 966
- **Myocardial motion analysis with phase contrast cine MRI.** *Society of Magnetic Resonance in Medicine*
  Pelc, N., J.
  1991: 17
- **Measurement of CSF flow using a phase-contrast cine MR pulse sequence.** *Society of Magnetic Resonance in Medicine*
  Enzmann, D., R., Ross, M., R., Pelc, N., J.
  1991: 155
- **Angiography of the portal venous system: Optimizing technique.** *Society of Computed Body Tomography. Am. J. Roentg*
  Jeffrey, R., B., Pelc, N., J., Trefelner, E.
  1991; 157: 616
- **Accuracy and precision of phase-contrast flow measurements.** *Radiology 181P*

Pelc, N., J., Sommer, F., G., Enzmann, D., R., Pelc, L., R., Glover, G., H.
1991: 189

- **RAPID MR IMAGING OF BLOOD-FLOW WITH A PHASE-SENSITIVE, LIMITED-FLIP-ANGLE, GRADIENT RECALLED PULSE SEQUENCE - PRELIMINARY EXPERIENCE** *RADIOLOGY*
  Spritzer, C. E., Pelc, N. J., Lee, J. N., Evans, A. J., Sostman, H. D., Riederer, S. J.
  1990; 176 (1): 255-262
- **ANALYSIS OF T2 LIMITATIONS AND OFF-RESONANCE EFFECTS ON SPATIAL-RESOLUTION AND ARTIFACTS IN ECHO-PLANAR IMAGING** *MAGNETIC RESONANCE IN MEDICINE*
  Farzaneh, F., Riederer, S. J., Pelc, N. J.
  1990; 14 (1): 123-139
- **Methods to achieve very short echo times for volume magnetic resonance angiography.** *Radiology*
  Schmalbrock, P., Yuan, C., Charkeres, D., W., Kohli, J., Pelc, N., J.
  1990; 175: 861-865
- **Reduced scan time with improved signal-to-noise in phase-contrast flow MR imaging.** *Radiology, 177P*
  Pelc, N., J., Bernstein, M., A.
  1990: 171
- **Measurement of myocardial motion dynamics with phase-contrast cine MRI.** *Radiology, 177P*
  Pelc, N., J., Pelc, L., R., Herfkens, R., J., Glover, G., H.
  1990: 171
- **Application of velocity imaging and gradient-recalled echo in neuroimaging.** *Radiology, 177P*
  Boyko, O., B., Pelc, N., J., Shimakawa, A.
  1990: 256
- **Multiphase respiratory gated MRI - Study of normal respiratory motion.**
  Pelc, N., J., Fitzpatrick, M., E., Shimakawa, A., Herfkens, R., J.
  1990
- **MR measurement of portal blood flow in chronic liver disease: Application to predicting clinical outcome.** *Book of Abstracts SMRM*
  Rubin, D., L, Herfkens, R., J., Pelc, N., J., Jeffrey, R., B.
  1990: 90
- **Modeling of hand function by mapping the motion of individual muscle voxels with MR velocity tagging.** *Radiology, 177P*
  Drace, J., Pelc, N., J., Herfkens, R., J.
  1990: 224
- **Optimized encoding for phase contrast flow measurement.** *Book of Abstracts SMRM*
  Pelc, N., J., Bernstein, M., A.
  1990: 475
- **Preliminary experience with rapid MR blood flow imaging using a phase sensitive limited flip angle gradient refocussed pulse sequence.** *Radiology*
  Spritzer, C., E., Pelc, N., J., Lee, J., N., Evans, A., J., Sostman, H., D., Riederer, S., J.
  1990; 176: 255-262
- **Normal CSF flow dynamics in the brain and spine.** *American Society of Neuroradiology, Los Angeles*
  Enzmann, D., R., Pelc, N., J.
  1990
- **FLOW-COMPENSATED LIMITED FLIP ANGLE MR ANGIOGRAPHY** *MAGNETIC RESONANCE IN MEDICINE*
  Lee, J. N., Riederer, S. J., Pelc, N. J.
  1989; 12 (1): 1-13
- **Cine phase contrast maps of cervical cerebrospinal fluid motion.** *Radiology, 173P*
  Enzmann, D., R., Rubin, J., Pelc, N., J.
  1989: 157

- **Visualization of supratentorial perivascular spaces with VB pulse sequence.** *Society of Magnetic Resonance Imaging, Los Angeles*
  Boyko, O., B., Pelc, N., J., Shimakawa et. al., A.
  1989
- **Phase contrast cine MRI.** *Book of Abstracts SMRM*
  Pelc, N., J., Shimakawa, A., Glover, G., H.
  1989: 101
- **MRI of normal/ abnormal brain iron using a combined spin and gradient echo acquisition.** *Society of Magnetic Resonance Imaging, Los Angeles*
  Boyko, O., B., Pelc, N., J., Herfke et al, R., J.
  1989
- **Flow compensated limited flip angle MR angiography.** *Mag. Res. Med.*
  Lee, J., N., Riederer, S., J., Pelc, N., J.
  1989; 12: 1-13
- **CSF dynamics in normal and syringomyelia patients using phase contrast cine MR.** *Book of Abstracts SMRM*
  Enzmann, D., R., Pelc, N., J.
  1989: 11
- **Cine velocity encoded MR imaging: Initial clinical experience.** *Radiology, 173P*
  Herfkens, R., J., Pelc, N., J., Shimakawa, A.
  1989: 275
- **MRI of normal/ abnormal brain iron using a combined spin and gradient echo acquisition.** *Society of Magnetic Resonance Imaging, Los Angeles*
  Boyko, O., B., Pelc, N., J., Herfke et al, R., J.
  1989
- **Flow compensated limited flip angle MR angiography.** *Mag. Res. Med.*
  Lee, J., N., Riederer, S., J., Pelc, N., J.
  1989; 12: 1-13
- **CSF dynamics in normal and syringomyelia patients using phase contrast cine MR.** *Book of Abstracts SMRM*
  Enzmann, D., R., Pelc, N., J.
  1989: 11
- **Cine velocity encoded MR imaging: Initial clinical experience.** *Radiology, 173P*
  Herfkens, R., J., Pelc, N., J., Shimakawa, A.
  1989: 275
- **VALVULAR REGURGITATION - DYNAMIC MR IMAGING** *RADIOLOGY*
  UTZ, J. A., Herfkens, R. J., HEINSIMER, J. A., Shimakawa, A., Glover, G., Pelc, N.
  1988; 168 (1): 91-94
- **A software approach to variable bandwidth multiecho imaging.** *Book of Abstracts SMRM*
  Pelc, N., J., Shimakawa, A.
  1988: 1048
- **A rapid-gated cine MRI technique.** *Magnetic resonance annual*
  Glover, G. H., Pelc, N. J.
  1988: 299-333
- **A rapid gated cine MRI technique.** *In Magnetic Resonance Annual 1988*
  Glover, G., H., Pelc, N., J.
  edited by Kressel, H., Y.
  Raven Press, New York.1988: 299–333
- **Correction for spatially dependent phase shifts for partial Fourier imaging.** *Mag. Res. Imag.*

MacFall, J., R., Pelc, N., J., Vavrek, R.
1988; 6: 143-155

- **A method for mapping T2' and for improved T2 measurements.** *Book of Abstracts SMRM.*
  Pelc, N., J., Shimakawa, A., Boyko, O., B.
  1988: 746
- **A rapid flow imaging method.** *Radiology, 169P*
  Pelc, N., J., Spritzer, C., E., Lee, J., N.
  1988: 343
- **High speed reprojection and its applications.**
  Crawford, C., R., Colsher, J., G., Pelc, N., J.
  1988
- **Preliminary experience with a rapid phase sensitive limited flip angle gradient refocussed pulse sequence to determine blood flow.** *Radiology, 169P*
  Spritzer, C., E., Pelc, N., J., Lee et. al., J., N.
  1988: 108
- **Improved magnetic resonance images of the brain using a variable bandwidth pulse sequence.** *American Society of Neuro Radiology, Chicago*
  Curnes, J., T., Boyko, O., B., Yeates, A., E., Pelc, N., J., Shimakawa, A.
  1988
- **Clinical experience of detecting hemorrhage using an acquisition combining gradient and spin echo imaging generating T2 prime maps.** *Book of Abstracts SMRM*
  Boyko, O., B., Pelc, N., J., Herfkens et al, R., J.
  1988: 74
- **CINE MR DETERMINATION OF LEFT-VENTRICULAR EJECTION FRACTION** *AMERICAN JOURNAL OF ROENTGENOLOGY*
  UTZ, J. A., Herfkens, R. J., HEINSIMER, J. A., Bashore, T., Califf, R., Glover, G., Pelc, N., Shimakawa, A.
  1987; 148 (5): 839-843
- **2-SECOND MR IMAGES - COMPARISON WITH SPIN-ECHO IMAGES IN 29 PATIENTS** *AMERICAN JOURNAL OF ROENTGENOLOGY*
  UTZ, J. A., Herfkens, R. J., Johnson, C. D., Shimakawa, A., Pelc, N., Glover, G., Johnson, G. A., Spritzer, C. E.
  1987; 148 (3): 629-633
- **RAPID CALCULATION OF T1 USING VARIABLE FLIP ANGLE GRADIENT REFOCUSED IMAGING** *MAGNETIC RESONANCE IMAGING*
  Fram, E. K., Herfkens, R. J., Johnson, G. A., Glover, G. H., Karis, J. P., Shimakawa, A., PERKINS, T. G., Pelc, N. J.
  1987; 5 (3): 201-208
- **Applications of high speed reprojection algorithms.**
  Crawford, C., R., Colsher, J., G., Pelc, N., J.
  edited by et al, L.
  1987
- **Grass movie technique for gated studies.**
  Glover, G., H., Pelc, N., J., Shimakawa, A.
  1987
- **Rapid calculation of T1 using variable flip angle gradient refocused imaging.** *Magn Reson Imaging*
  Fram, E., K., Herfkens, R., J., Johnson, G., A., Glover, G., H., Karis, J., P., Shimakawa, A., Pelc, N. J.
  1987; 5: 201-8
- **Principles of x-ray computed tomography.** *In Radiology*
  Pelc, N., J., Colsher, J., G.
  edited by Taveras, J., M., Ferrucci, J., T.
  J. B. Lippincott Co., Philadelphia.1987: 1

- **Two-second MR images: Comparison with spin-echo images in 29 patients.** *AJR*
  Utz, J., A., Herfkens, R., J., Johnson, C., D., Shimakawa, A., Pelc, N., J., Glover, G., H.
  1987; 148: 629-633
- **Applications of high speed reprojection algorithms.** *Computer Assisted Radiology International Symposium and Exhibition, Berlin, 1987.*
  Crawford, C., R., Colsher, J., G., Pelc, N., J.
  edited by et al, L.
  Springer Verlag, Berlin.1987: 142
- **Computed tomography systems and performance.** *In Radiology*
  Colsher, J., G., Pelc, N., J.
  edited by Taveras, J., M., Ferrucci, J., T.
  J. B. Lippincott Co., Philadelphia.1987: 1
- **CT reconstruction with angular integration and inter-projection correlation.** *Radiology, 161P*
  Crawford, C., R., Pelc, N., J.
  1986: 244
- **Dynamic MR imaging of the heart.** *Radiology, 161P*
  Utz, J., A., Herfkens, R., J., Glover, G., H., Pelc, N., J., Shimakawa, A.
  1986: 185
- **An attenuated projector-backprojector for iterative SPECT reconstruction.** *Phys. Med. Biol.*
  Gullberg, G., T., Huesman, R., H., Malko, J., A., Pelc, N., J., Budinger, T., F.
  1985; 30: 799-816
- **CHEMICAL-SHIFT MAGNETIC-RESONANCE IMAGING OF 2-LINE SPECTRA BY GRADIENT REVERSAL** *MAGNETIC RESONANCE IN MEDICINE*
  Axel, L., Glover, G., Pelc, N.
  1985; 2 (5): 428-436
- **COMPARISON OF LINEAR AND CIRCULAR-POLARIZATION FOR MAGNETIC-RESONANCE IMAGING** *JOURNAL OF MAGNETIC RESONANCE*
  Glover, G. H., Hayes, C. E., Pelc, N. J., Edelstein, W. A., Mueller, O. M., HART, H. R., Hardy, C. J., ODONNELL, M., Barber, W. D.
  1985; 64 (2): 255-270
- **Respiration artifacts in MRI.**
  Pelc, N., J., Glover, G., H., Charles, H., C.
  1985
- **Comparison of linear and circular polarization for magnetic resonance imaging.** *J. Mag. Res.*
  Glover, G., H., Hayes, C., E., Pelc, N., J., Edelstein, W., A., Mueller, O., M., Hart, H., R.
  1985; 64: 2
- **Chemical shift magnetic resonance imaging of two-line spectra by gradient reversal.** *Mag. Res. Med.*
  Axel, L., Glover, G., H., Pelc, N., J.
  1985; 2: 428-436
- **Progress in ECG gated CT. Testing with a motion phantom and comparison with the Imatron 50 msec scanner.** *Radiology, 153P*
  Godwin, J., D., Pelc, N., J., Johnson et. al., G., A.
  1984: 268
- **Statistical aspects of digital x-ray imaging.** *In Electronic Imaging in Medicine*
  Pelc, N., J.
  edited by et al, F.
  AAPM Monograph 11, Am. Inst. Phys., New York.1984: 1
- **Improved cardiac gated CT using a GE CT-9800.** *Association of University Radiologists*
  Pelc, N., J., Godwin, J., D., Teeter, B., C.
  1984

- **Retrospective cardiac gating with a CT-9800.** *International Workshop on cardiac reconstruction.Santa Cruz, 1983, J. Comput. Assist. Tomogr.*
  Pelc, N., J.
  1984; 8: 361-2
- **INTRAARTERIAL DIGITAL SUBTRACTION SPINAL ANGIOGRAPHY** *AMERICAN JOURNAL OF NEURORADIOLOGY*
  Enzmann, D. R., Brody, W. R., DJANG, W. T., Riederer, S., Keyes, G., Collins, W., Pelc, N.
  1983; 4 (1): 25-26
- **Spectral variations in tissues and phantoms.** *Ultrasound in medicine and biology*
  FLAX, S. W., Glover, G. H., Pelc, N. J., Gutmann, F. D., McLachlan, M.
  1983: 127-131
- **SPECTRAL CHARACTERIZATION AND ATTENUATION MEASUREMENTS IN ULTRASOUND** *ULTRASONIC IMAGING*
  FLAX, S. W., Pelc, N. J., Glover, G. H., Gutmann, F. D., McLachlan, M.
  1983; 5 (2): 95-116
- **Textural variations in B-mode ultrasonography.**
  Flax, S., W., Pelc, N., J.
  1983
- **Spectral variations in tissues and phantoms.** *Ultrasound Med Biol*
  Flax, S., W., Glover, G., H., Pelc, N., J., Gutmann, F., D., McLachlan, M.
  1983; 2: 127-131
- **Spectral characterization and attenuation measurements in ultrasound.** *Ultrason Imaging*
  Flax, S., W., Pelc, N., J., Glover, G., H., Gutmann, F., D., McLachlan, M.
  1983; 5: 95-116
- **The application of matched filtering to x-ray exposure reduction in digital subtraction angiography: clinical results.** *Radiology*
  Riederer, S., J., Enzmann, D., R., Hall, A., L., Pelc, N., J., Djang, W., T.
  1983; 146: 349-354
- **Experimental retrospective cardiac gating using a G.E. CT 9800 scanner.** *Radiology, 149P*
  Pelc, N., J., Godwin, J., D., Cann, C., E., Teeter, B., C.
  1983: 239
- **THE APPLICATION OF MATCHED FILTERING TO X-RAY-EXPOSURE REDUCTION IN DIGITAL SUBTRACTION ANGIOGRAPHY - CLINICAL-RESULTS** *RADIOLOGY*
  Riederer, S. J., Enzmann, D. R., Hall, A. L., Pelc, N. J., DJANG, W. T.
  1983; 146 (2): 349-354
- **THE TECHNICAL CHARACTERISTICS OF MATCHED FILTERING IN DIGITAL SUBTRACTION ANGIOGRAPHY** *MEDICAL PHYSICS*
  Riederer, S. J., Hall, A. L., Maier, J. K., Pelc, N. J., Enzmann, D. R.
  1983; 10 (2): 209-217
- **INTRA-CRANICAL INTRAVENOUS DIGITAL SUBTRACTION ANGIOGRAPHY** *NEURORADIOLOGY*
  Enzmann, D. R., Brody, W. R., Riederer, S., Keyes, G., Collins, W., Pelc, N.
  1982; 23 (5): 241-251
- **CONTRAST SENSITIVITY OF DIGITAL FLUOROGRAPHIC SYSTEMS** *PROCEEDINGS OF THE SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS*
  Riederer, S. J., Hall, A. L., KEYES, G. S., Pelc, N. J.
  1982; 372: 66-73
- **INTRAVENOUS ARTERIOGRAPHY USING DIGITAL SUBTRACTION TECHNIQUES** *JAMA-JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*
  Brody, W. R., Enzmann, D. R., Miller, D. C., GUTHANER, D. F., Pelc, N. J., KEYES, G. S., Riederer, S. J.
  1982; 248 (6): 671-674
- **DUAL-KVP RADIOGRAPHY** *PROCEEDINGS OF THE SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS*

Brody, W. R., Sommer, F. G., LEHMANN, L. A., Macovski, A., Alvarez, R. E., Pelc, N. J., Riederer, S. J., Hall, A.
1981; 273: 239-243

- **TEXTURAL VARIATIONS IN B-MODE ULTRASONOGRAPHY - A STOCHASTIC-MODEL** *ULTRASONIC IMAGING*
  FLAX, S. W., Glover, G. H., Pelc, N. J.
  1981; 3 (3): 235-257
- **AN ALGORITHM FOR THE REDUCTION OF METAL CLIP ARTIFACTS IN CT RECONSTRUCTIONS** *MEDICAL PHYSICS*
  Glover, G. H., Pelc, N. J.
  1981; 8 (6): 799-807
- **Performance characteristics of a digital fluorographic system.**
  Riederer, S., J., DiBianca, F., A., Georges, J, P.J., Jensen, G., A., Keyes, G., S., Pelc, N., J.
  1981
- **Textural variations in B-mode ultrasonography: a stochastic model.** *Ultrasonic Imag.*
  Flax, S., W., Glover, G., H., Pelc, N., J.
  1981; 3: 235-257
- **An algorithm for the reduction of metal clip artifacts in CT reconstructions.** *Med. Phys.*
  Glover, G., H., Pelc, N., J.
  1981; 8: 6
- **Experimental system for dual energy scanned projection radiography.**
  Hall, A., L., Pelc, N., J., Riederer, S., J., Keyes, G., S., Brody, W., R., Lehmann, L., A.
  1981
- **Generalized image combinations in dual kVp digital radiography.** *Med. Phys.*
  Lehmann, L., A., Alvarez, R., E., Macovski, A., Pelc, N., J., Riederer, S., J., Hall, A., L.
  1981; 8: 5
- **IODINE SENSITIVITY OF DIGITAL IMAGING-SYSTEMS** *PROCEEDINGS OF THE SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS*
  Riederer, S. J., BELANGER, B. F., KEYES, G. S., Pelc, N. J.
  1981; 314: 132-139
- **AN UNDERSTANDING OF DIGITAL RADIOGRAPHY THROUGH IMAGE COMPUTER-SIMULATION** *PROCEEDINGS OF THE SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS*
  GEORGES, J. P., KEYES, G. S., Pelc, N. J., Riederer, S. J.
  1981; 273: 96-102
- **PERFORMANCE-CHARACTERISTICS OF A DIGITAL FLUOROGRAPHIC SYSTEM** *PROCEEDINGS OF THE SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS*
  Riederer, S. J., DiBianca, F. A., GEORGES, J. P., Jensen, G. A., KEYES, G. S., Pelc, N. J., STEINIKE, E. R., WESBEY, W. H.
  1981; 273: 88-95
- **INTRAVENOUS ARTERIOGRAPHY USING SCANNED PROJECTION RADIOGRAPHY** *RADIOLOGY*
  Brody, W. R., Macovski, A., Pelc, N. J., Lehmann, L., Joseph, R. A., Edelheit, L. S.
  1981; 141 (2): 509-514
- **BEAM HARDENING, NOISE, AND CONTRAST CONSIDERATIONS IN SELECTIVE IODINE DIGITAL RADIOGRAPHY** *IEEE TRANSACTIONS ON NUCLEAR SCIENCE*
  Riederer, S. J., Pelc, N. J., GEORGES, J. P., KEYES, G. S., LEHMANN, L. A., Hall, A. L.
  1981; 28 (1): 213-218
- **DUAL-KVP RADIOGRAPHY**
  Brody, W. R., Sommer, F. G., Macovski, A., Lehmann, L., Alvarez, R., Pelc, N., Hall, A.
  AMER ROENTGEN RAY SOC.1981: 1277–77
- **EXCRETORY UROGRAPHY USING DUAL-ENERGY SCANNED PROJECTION RADIOGRAPHY** *RADIOLOGY*
  Sommer, F. G., Brody, W. R., Gross, D., Macovski, A., Hall, A., Pelc, N.

1981; 141 (2): 529-532

- **GENERALIZED IMAGE COMBINATIONS IN DUAL KVP DIGITAL RADIOGRAPHY** *MEDICAL PHYSICS*
  LEHMANN, L. A., Alvarez, R. E., Macovski, A., Brody, W. R., Pelc, N. J., Riederer, S. J., Hall, A. L.
  1981; 8 (5): 659-667
- **EXPERIMENTAL SYSTEM FOR DUAL ENERGY SCANNED PROJECTION RADIOGRAPHY** *PROCEEDINGS OF THE SOCIETY OF PHOTO-OPTICAL INSTRUMENTATION ENGINEERS*
  Hall, A. L., Pelc, N. J., Riederer, S. J., KEYES, G. S., Brody, W. R., LEHMANN, L. A., Macovski, A., Alvarez, R. E.
  1981; 314: 155-159
- **DUAL-ENERGY PROJECTION RADIOGRAPHY - INITIAL CLINICAL-EXPERIENCE** *AMERICAN JOURNAL OF ROENTGENOLOGY*
  Brody, W. R., CASSEL, D. M., Sommer, F. G., LEHMANN, L. A., Macovski, A., Alvarez, R. E., Pelc, N. J., Riederer, S. J., Hall, A. L.
  1981; 137 (2): 201-205
- **INTRAVENOUS CAROTID ARTERIOGRAPHY USING LINE-SCANNED DIGITAL RADIOGRAPHY** *RADIOLOGY*
  Brody, W. R., Enzmann, D. R., Deutsch, L. S., Hall, A., Pelc, N.
  1981; 139 (2): 297-300
- **DUAL ENERGY DIGITAL RADIOGRAPHY**
  Pelc, N. J., Riederer, S. J., GEORGES, J. P., KEYES, G. S., Macovski, A., LEHMANN, L. A., Alvarez, R. E., Brody, W. R.
  LIPPINCOTT-RAVEN PUBL.1981: 944–45
- **SOURCE LIMITATIONS IN SCANNED PROJECTION RADIOGRAPHY**
  LEHMANN, L. A., Brody, W. R., Macovski, A., STRUHL, B., DIBIANCA, R. A., Pelc, N.
  AMER ROENTGEN RAY SOC.1980: 853–54
- **NON-LINEAR PARTIAL VOLUME ARTIFACTS IN X-RAY COMPUTED-TOMOGRAPHY** *MEDICAL PHYSICS*
  Glover, G. H., Pelc, N. J.
  1980; 7 (3): 238-248
- **A higher resolution fan-beam reconstruction algorithm for rotate-rotate CT systems.** *J. Comput. Assist. Tomogr.*
  Pelc, N., J., Glover, G., H., Griffie, T., R.
  1980; 5: 4
- **Recent improvements in transmission CT reconstruction algorithms. 3-rd Symp. on Phys. and Tech.** *Aspects of Trans. and Emis. Comput. Tomog., Tokyo*
  Pelc, N., J., Glover, G., H.
  1980
- **Non-linear partial volume artifacts in x-ray computed tomography.** *Med. Phys.*
  Glover, G., H., Pelc, N., J.
  1980; 7 (3)
- **Removal of "starburst" artifacts from metal clips in CT reconstruction.**
  Glover, G., H., Pelc, N., J.
  1980
- **A dynamically switching dual kVp digital scanned projection radiography system.**
  Pelc, N., J., Joseph, R., A., Daniels et al, H., E.
  1980
- **Generalized image combination in dual kVp digital radiography.**
  Lehmann, L., A., Pelc, N., J., Riederer et al, S., J.
  1980
- **Removal of "metal-clip" artifacts in CT reconstruction.** *J. Comput. Assist. Tomogr.*
  Glover, G., H., Pelc, N., J.
  1980; 5: 4
- **INTRAVENOUS CAROTID ARTERIOGRAPHY USING SCANNED PROJECTION RADIOGRAPHY**

Brody, W. R., ENZMANN, D., Deutsch, L. S., Macovski, A., Pelc, N., Joseph, R., Edelheit, L. S.
LIPPINCOTT-RAVEN PUBL.1980: 409–

- **UTILIZATION OF CROSS-PLANE RAYS FOR 3-DIMENSIONAL RECONSTRUCTION BY FILTERED BACK-PROJECTION** *JOURNAL OF COMPUTER ASSISTED TOMOGRAPHY*
  Pelc, N. J., CHESLER, D. A.
  1979; 3 (3): 385-395
- **A higher resolution reconstruction algorithm for third generation CT systems.**
  Pelc, N., J., Glover, G., H., Griffie, T., R., Acharya, K., C.
  1979
- **Three dimensional reconstruction using "in-plane" and "cross-plane" rays.** *V Intl Conf on Med. Phys., Jerusalem*
  Pelc, N., J., Chesler, D., A.
  1979
- **The non-linear partial volume artifact.** *J. Comput. Assist. Tomogr.*
  Glover, G., H., Pelc, N., J.
  1979; 3: 4
- **Comparison of computed radiography, standard radiography, and computed tomography.** *J. Comput. Assist. Tomogr.*
  DiBianca, F., A., Carmean, R., E., Pelc, N., J., Cohen, G.
  1979; 3: 4
- **Non-linear partial volume artifacts.** *V Intl Conf on Med. Phys., Jerusalem*
  Pelc, N., J., Glover, G., H.
  1979
- **Utilization of cross-plane rays for three-dimensional reconstruction by filtered backprojection.** *J. Comput. Assist. Tomog.*
  Pelc, N., J., Chesler, D., A.
  1979; 3 (3): 385
- **A reconstruction algorithm for higher sensitivity positron emission tomography.** *J. Comput. Assist.Tomogr.*
  Pelc, N., J., Chesler, D., A.
  1979; 3: 4
- **NOISE POWER SPECTRUM IN COMPUTED X-RAY TOMOGRAPHY** *PHYSICS IN MEDICINE AND BIOLOGY*
  Riederer, S. J., Pelc, N. J., CHESLER, D. A.
  1978; 23 (3): 446-454
- **Three dimensional reconstruction from rays not lying on parallel planes.** *J. Comput. Assist.Tomogr.*
  Pelc, N., J., Chesler, D., A.
  1978; 2: 3
- **The noise power spectrum in computed x-ray tomography.** *Phys. Med. Biol.*
  Riederer, S., J., Pelc, N., J., Chesler, D., A.
  1978; 23 (3): 446
- **Comparison of transmission detection CT systems with scatter detection CT systems.** *J. Comput. Assist. Tomogr.*
  Chesler, D., A., Pelc, N., J.
  1978; 2: 3
- **NOISE DUE TO PHOTON-COUNTING STATISTICS IN COMPUTED X-RAY TOMOGRAPHY** *JOURNAL OF COMPUTER ASSISTED TOMOGRAPHY*
  CHESLER, D. A., Riederer, S. J., Pelc, N. J.
  1977; 1 (1): 64-74
- **The contribution of x-ray tube focal spots to the resolution of CT systems.** *J. Comput. Assist. Tomogr.*
  Pelc, N., J., Chesler, D., A.
  1977; 1: 3

- **Statistical properties and simulation studies of transverse section algorithms.** *In Reconstruction Tomography in Diagnostic Radiology and Nuclear Medicine*
  Chesler, D., A., Aronow, S., Correll, J., E., Riederer, S., J., Pelc, N., J.
  edited by Ter Pogossian et. al., M., M.
  University Park Press, Baltimore, MD.1977: 1
- **Results of computer simulation studies of computerized tomography.**
  Pelc, N., J., Chesler, D., A., Riederer, S., J.
  1976
- **Statistical aspects of computed x-ray tomography.**
  Chesler, D., A., Riederer, S., J., Pelc, N., J.
  1976
- **The progress in dual photon absorptiometry of bone.**
  Mazess, R., B., Hanson, J., Kan, W., Madsen, M., Pelc, N., J., Wilson, C., R.
  edited by Schmelling, P.
  1974
- **Simple groups of orders less than 1000.** *J. Undergrad. Math.*
  Cornell, G., Pelc, N., J., Wage, M., L.
  1973; 5 (2)
- **Breathheld phase-contrast MR for the diagnosis of mesenteric ischemia.**
  VanDalsem, W., J., Li, K., C.P., McDonnell, C., H., Fredrickson, J., O., Pelc, N., J., Whitney, W., S.
- **Human Tissue X-Ray Diffraction: Breast, Brain, and Prostate World Congress on Medical Physics and Biomedical Engineering (Chicago)** *FR-Ea325-06.*
  Lazarev, P., Paukshto, M., Pelc, N., Sakharova, A.
- **Measurement of Myocardial Motion and Deformation with Phase Contrast Cine MRI. Association for the Advancement of Medical Instrumentation** *Bethesda, MD*
  Pelc, N., J., Herfkens, R., J., Pelc, L., R., Ni, C., Sayre, J., R., Miller, D., C.
- **Method for decreasing CT simulation time of complex phantoms and systems through separation of material specific projection data** *SPIE Medical Imaging 2017: Physics of Medical Imaging*
  Divel, S. E., Christensen, S., Wintermark, M., Lansberg, M. G., Pelc, N. J.
  2017: 1013259
- **Development of a realistic, dynamic digital brain phantom for CT Perfusion validation** *SPIE Medical Imaging 2016: Physics of Medical Imaging*
  Divel, S. E., Segars, W. P., Christensen, S., Wintermark, M., Lansberg, M. G., Pelc, N. J.
  2016
- **Image-domain insertion of spatially correlated, locally varying noise in CT images** *SPIE Medical Imaging 2019: Physics of Medical Imaging*
  Divel, S. E., Pelc, N. J.
  2019