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8317 23  **Classification of CT examinations for COPD visual severity analysis** [8317-74]
J. Tan, Washington Univ. in St. Louis (United States); B. Zheng, X. Wang, J. Pu, D. Gur, F. C. Sciurba, J. K. Leader, Univ. of Pittsburgh Medical Ctr. (United States)

8317 24  **Validation of geometric measurements of the left atrium and pulmonary veins for analysis of reverse structural remodeling following ablation therapy** [8317-75]
M. E. Rettmann, D. R. Holmes III, Mayo Clinic (United States); M. S. Gunawan, Georgetown Univ. (United States); X. Ge, R. A. Karwoski, J. F. Breen, D. L. Packer, R. A. Robb, Mayo Clinic (United States)

8317 25  **A new approach for real-time analysis of biomolecular interactions using surface plasmon resonance imaging SPRi** [8317-76]
H. Mezlini, TELECOM & Management SudParis (France) and Lab. de Spectroscopie Atomique Moléculaire et Applications (Tunisia) and Ecole Nationale d'Ingénieurs de Tunis (Tunisia); C. Fetita, TELECOM & Management SudParis (France) and Lab. MAPS, CNRS (France); M. Canva, J. Moreau, Lab. Charles Fabry, Institut d'Optique Graduate School (France); H. Ghallil, Lab. de Spectroscopie Atomique Moléculaire et Applications (Tunisia); S. Ghallil, Lab. MAPS, CNRS (France) and Ecole Nationale d'Ingénieurs de Tunis (Tunisia) and Comité de Pilotage du CEA Linklab, Technocentre TELNET (Tunisia)
A novel shape similarity based elastography system for prostate cancer assessment (Cum Laude Poster Award) [8317-77]
H. Wang, S. R. Mousavi, The Univ. of Western Ontario (Canada); A. Samani, The Univ. of Western Ontario (Canada) and Imaging Research Labs., Robarts Research Institute (Canada)

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Conference Committee

Symposium Chairs

Joseph M. Reinhardt, The University of Iowa (United States)
Nico Karssemeijer, Radboud University Nijmegen Medical Center (Netherlands)

Conference Chairs

Robert C. Molthen, Zablocki VA Medical Center (United States)
John B. Weaver, Dartmouth Hitchcock Medical Center (United States)

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Thorsten M. Buzug, Universität zu Lübeck (Germany)
Juan R. Cebral, George Mason University (United States)
Yu Chen, University of Maryland, College Park (United States)
Anne Clough, Marquette University (United States)
Andreas H. Hielscher, Columbia University (United States)
Xiaoping P. Hu, Emory University (United States)
John F. LaDisa, Marquette University (United States)
Armando Manuduca, Mayo Clinic College of Medicine (United States)
Erik L. Ritman, Mayo Clinic (United States)
Merryn H. Tawhai, The University of Auckland (New Zealand)
Nicholas J. Tustison, University of Virginia (United States)
Axel Wismueller, University of Rochester Medical Center (United States)

Session Chairs

1 Functional Magnetic Resonance Imaging
   Axel Wismüller, University of Rochester Medical Center (United States)
   John B. Weaver, Dartmouth Hitchcock Medical Center (United States)
   Xiaoping P. Hu, Emory University (United States)

2 Magnetic Resonance Imaging of Brain Structure and Function
   Xiaoping P. Hu, Emory University (United States)
   Axel Wismueller, University of Rochester Medical Center (United States)
   Juan R. Cebral, George Mason University (United States)

3 Cardiovascular Hemodynamics and Biomechanics
   Amir A. Amini, University of Louisville (United States)
   Juan R. Cebral, George Mason University (United States)
   John F. LaDisa, Marquette University (United States)
4  Image Segmentation and Morphological Analysis
   Erik L. Ritman, Mayo Clinic (United States)
   Robert C. Molthen, Medical College of Wisconsin (United States)

5  Nano-Scale Sensing, Therapy, and Imaging
   John B. Weaver, Dartmouth Hitchcock Medical Center (United States)
   Thorsten M. Buzug, Universität zu Lübeck (Germany)

6  Brain Function, Pathophysiology, and Neural Connectivity
   Armando Manduca, Mayo Clinic College of Medicine (United States)
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7  Optical Imaging and Analysis of Tissue, Cells, and Biological Samples
   Yu Chen, University of Maryland, College Park (United States)
   Andreas H. Hielscher, Columbia University (United States)

8  Skeletal and Bone Microstructure: Analysis and Assessment
   Erik L. Ritman, Mayo Clinic (United States)
   Axel Wismüller, University of Rochester Medical Center (United States)
   Robert C. Molthen, Medical College of Wisconsin (United States)

9  Keynote and Hyperpolarized-Gas Magnetic Resonance Imaging and Analysis
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   John B. Weaver, Dartmouth Hitchcock Medical Center (United States)
   Nicholas J. Tustison, University of Virginia (United States)

10 Lung Imaging and Motion Registration
    Nicholas J. Tustison, University of Virginia (United States)

11 Imaging and Analysis of Breast and Thoracic Tissue
    Armando Manduca, Mayo Clinic College of Medicine (United States)
    John B. Weaver, Dartmouth Hitchcock Medical Center (United States)
Fortieth Anniversary of SPIE Medical Imaging Meeting

Robert M. Nishikawa*
Carl J. Vyborny Translation Laboratory for Breast Imaging Research
Department of Radiology, and the Committee on Medical Physics, The University of Chicago, 5841 S. Maryland Ave. MC-2026, Chicago, IL 60637

This meeting marked the 40th year from the first SPIE Medical Imaging meeting. This paper presents a brief summary of the 40-year history of the meeting, with an emphasis on the Physics Conference. That is, when the meeting split into multiple conferences, data are presented mostly for the Physics conference only.

The first conference was held in 1972 in Chicago and it was called: Application of Optical Instrumentation in Medicine.

"We have endeavored, by way of the seminar, to provide a communication link between those with expertise in the various technologies associated with image forming devices and those in the medical field who rely on the fruits of these technologies for many of their diagnostic tools...there is a genuine interest among those in the medical field for a better understanding of the fundamental technology of imaging systems." William C. Zarnstroff, General Chairman

For the next 40 years, with the exception of 1978 the meeting was held annually.

The first 13 conferences were entitled: Application of Optical Instrumentation in Medicine, appended with a roman numeral. The 14th meeting (1986) was modified to recognize the growing importance of PACS to the meeting: Application of Optical Instrumentation in Medicine XIV and Picture Archiving and Communication Systems (PACS IV) for Medical Applications. The following year, the conference name changed to “Medical Imaging” as it is known today, although the first 6 were denoted by roman numerals. Starting in 1993, the year was appended to the title.

The meeting started as a single track, two-day conference, and now has 8 distinct conferences covering five days plus an additional day of courses.

In 1988, the proceedings were published in two volumes, 914A and 914B. The former covering physics, image processing, and perception and the latter display and PACS. The following year (1989) each of those two split in two so that there were now four conferences:

1. Medical Imaging III: Image Formation
2. Medical Imaging III: Image Capture and Display
3. Medical Imaging III: Image Processing
4. Medical Imaging III: PACS System Design and Evaluation

These sessions were partially overlapping and, thus, for the first time, the meeting had parallel session.

This configuration of conferences remained until 1994 when Image Perception and Physiology and Function from Multidimensional Images were added. In 1997, Ultrasonic Transducer Engineering was added. In 2007, Computer-Aided Diagnosis was added.

From 1976 to 1983, the meeting was held in conjunction with or preceding the American Roentgen Ray Society. As a result, the location of the meeting changed annually. Starting in 1985, the meeting was held in Newport Beach, CA, and this was home for the next 10 years, except in 1991, the meeting was held in San Jose in conjunction with the Electronic Imaging meeting. In 1995, the meeting was then moved to San Diego, and then returned once more to Newport Beach, before moving to San Diego till 2009. Since 2009 the meeting has been alternating between San Diego and Lake Buena Vista, FL.

In the Introduction to the proceedings in 1984, Chairman Roger Schneider wrote:

This meeting, the twelfth in the series ... was intended to be a change in direction from recent meetings in the series, a reversion to the attack on fundamental problems in imaging which earlier meetings represented. We also desired to bring onto the floor a recognition that the scientific interest in imaging

* r-nishikawa@uchicago.edu| phone: 1-773-702-9047
is more broad and active now than it was a decade ago and that substantial progress has been made in formulating at least the structure of an understanding of the conveyance of information to human observers through imaging channels. ... We recognized the current intense interest in development of medical systems based upon the most contemporary image communication and storage technologies, and included that topic. The design goal was to address the physics and statistics of image encoding by modality; and the processing, display, archiving, management, and psychophysical considerations independently of modality, as far as possible.

It took 2 years for this new emphasis to flourish. Beginning in 1986, the attendance and the number of papers increased rapidly (as can be seen in the plots below).

Finally, it is important to note that every year for the past 40 years, the Center for Devices and Radiological Health, FDA (formerly, the Bureau for Radiological Health) has been a cosponsor or supporting organization. Further, many members of the CDRH/BRH have helped organize the meeting, such as Robert Wagner, Robert Jennings, Roger Schneider, David Brown and several others. Their contributions to this meeting mirror the impact that the CDRH/BRH have had on the field.

![Figure 1](https://example.com/figure1.png)

Figure 1. These plots capture some of the statistics from the meeting over time.

1.1 Fun Facts

Bob Wagner dubbed 1984-1987, the Palindrome Years.

The first digital mammography paper and the first dual-energy mammography paper were presented in 1983.

The first computer-aided diagnosis (CAD) paper was presented in 1985.

The first Proceedings (Vol. 35) had a black cover and was hard bound. All subsequent Proceedings had a yellow cover and were soft bound.

The first posters were in 1988. Each poster had 3 full poster boards and wine was served at the poster session.
Although there was no “Medical Imaging” meeting in 1978, there was another medical imaging themed conferences: Recent and Future Developments in Medical Imaging I; edited by Norman A. Baily.

In 2001, the proceedings were distributed on CD for the first time.

Table 1. Number of years serving as a Conference Chair (includes all Conferences) or serving on the Physics Committee (including being Chair). Years on Physics Committee includes committee membership when there was only a single conference and only the Physics Committee when there were multiple conferences.

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<th>Years Served as a Conference Chair</th>
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<td>Roger H. Schneider</td>
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<td>Bruce R. Whiting</td>
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<td>William F. Walker</td>
<td>Jacob Beutel</td>
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1.2 Summary of Each Meeting

Following is a brief summary of each meeting from 1972-2012. When there were multiple conferences at the meeting, the summary focuses mainly on the Physics Conference. I also have most of this information in an excel spreadsheet. It is available from the author to those who would like it.
Overview of the 40-Year History of the SPIE Medical Imaging Meeting

1972
Application of Optical Instrumentation In Medicine (In-depth-Seminar)
Chicago Nov 29-30
Vol. 35 29 papers Attendance: n/a
Sponsors, Co-Sponsors & Supporting Organizations
SPIE, BRH, ASNR, SMM, UWMS; AAPM
Chairs
William C. Zarnstorff, William R. Hendee, Paul L. Carson
Program Committee
Not listed
Sessions
Electro-Optical Instrumentation - William R. Hendee
Image Analysis, Enhancement and Evaluation - Paul L. Carson
Holographic and Video Images - William R. Hendee
Special Topics - William C. Zarnstorff
Panel Discussion - Jock S. Kuhner

1973
Application of Optical Instrumentation in Medicine II
Chicago Nov 29-30
Vol. 43 35 papers Attendance: n/a
Sponsors, Co-Sponsors & Supporting Organizations
SPIE, AAPM, ASNR, AAMI, BRH-EMBG, OSA; SMM, SRE, SPSE
Chairs
William R. Hendee, William C. Zarnstorff, Paul L. Carson
Program Committee
Not listed
Sessions
Nuclear Medicine Imaging
Image Enhancement and Pattern Recognition
Panel Discussion: Image Enhancement for Medical Diagnosis Can It Be Effective?
Special Topics
Image Intensifier Systems
Transmission, Storage, Retrieval and Reconstruction of Images
Panel Discussion: Performance Standards and Possible Field Evaluation of Image Intensifiers
Performace Standards of Image Intensifiers

1974
Application of Optical Instrumentation in Medicine III
Kansas City, MO Aug 1-2
Vol. 47 45 papers Attendance: n/a
Sponsors, Co-Sponsors & Supporting Organizations
SPIE, BRH, AAPM, ARRIS, EMBG
Chairs
Paul L. Carson, Edward L. Chaney, William R. Hendee
Program Committee
Not listed
Sessions
Transmission 3-Dimensional Image Reconstruction and Computerized Axial Tomography - William R. Hendee, Joseph Gallagher
Advanced Techniques of Imaging With Ultrasound - Paul L. Carson
Acoustic Exposure Determination In Diagnostic Ultrasound - James A. Rooney
Noise, Objective, and Psychophysical Measures - Joel E. Gray
Special Topics - Jacques Oudria
Ray Tube Focal Spot Size and Intensity Distributions: Important Pratical Considerations - Sargent E. Bryngdahl
Automatic Brightness Control In Image-Intensified Fluoroscopy - William R. Hendee

1975
Application of Optical Instrumentation in Medicine IV
Atlanta, GA Sept. 25-27
Vol. 70 55 papers Attendance: n/a
Sponsors, Co-Sponsors & Supporting Organizations
SPIE, BRH, AAPM, ARRIS, ACR, SRE
Chairs
Joel E. Gray, William R. Hendee
Program Committee
Not listed
Sessions
Quality Assurance, Film Handling & Film Processing - Joel E. Gray
Loading, Heat Rating, Other Characteristics of X-Ray Tubes - Edward L. Chaney
Information Extraction & Utilization From Radiologic Images - Marvin E. Haskin
Quality Assurance in Diagnostic Radiology: Why Doesn't Every Department Have A Complete Program?
Panel Discussion - Robert G. Waggener
Quality Assurance for Diagnostic Radiologic Instrumentation - James J. Vucic
Exposure Initiation/Termination Mechanisms and Automatic Exposure Timers In Diagnostic Radiology - Robert G. Waggener
Panel Discussion: Performance Specifications for Diagnostic Radiologic Equipment - Gray-Scale Ultrasound Imaging & Tissue Identification - Paul L. Carson
Physical Evaluation of Computerized Axial Tomography - Raymond P. Rossi
Special Topics - Robert Rohner
Performance Evaluation of Mammographic Imaging Systems - Gregory L. Dubque
1976

Application of Optical Instrumentation in Medicine V

Washington, DC  Sept. 16-19
Vol. 96  76 papers  Attendance: n/a

Sponsors, Co-Sponsors & Supporting Organizations
SPIE; BRH; ARRS; SRE

Chairs

Program Committee
Same as Editors

Sessions
Quality Assurance in Diagnostic Radiology I - Raymond P. Rossi
Quality Assurance in Diagnostic Radiology II - Thomas Stone
Computed Tomography I - Norman A. Bally
Radiographic Images and Dose - Arthur G. Haus
Computed Tomography II - Rodney A. Brooks
Computed Tomography III - Kenneth Weiner
Diagnostic Ultrasound I - Paul L. Canon
Quality Assurance in Diagnostic Radiology III - Robert K. Carak
Current Topics in Mammography - Gregory Dubuque

1977

Application of Optical Instrumentation in Medicine VI

Brenton, MA  Sept. 25-27
Vol. 127  80 papers  Attendance: n/a

Sponsors, Co-Sponsors & Supporting Organizations
SPIE; BRH; ARRS; SRE

Chairs
Joel E. Gray, William R. Hendee

Program Committee
Robert F. Wagner, William Properzio, Arthur G. Haus, Joe Pierce Jones, Raymond Rossi

Sessions
The Laboratory/Clinical Interface in Image Evaluation - Robert Wagner
Sensitometry Up-Date - Joel Gray
Screen Film Systems and Photopositive Materials - Arthur G. Haus
Approaches to Equipment Service, Equipment Specification and Performance Evaluation - Raymond P. Rossi
New Developments in Medical Imaging - William Hendee
Quality Control in Medical Imaging - William S. Properzio
Performance Characteristics of CT Scanners - Robert K. Carak
Small Group Sessions on Special Topics - Joint Session with ARRS

1978

No Meeting

1979

Application of Optical Instrumentation in Medicine VII

Toronto, Canada  Mar. 25-27
Vol. 173  55 papers  Attendance: n/a

Sponsors, Co-Sponsors & Supporting Organizations
SPIE; SPIE; ARRS; BRH; SRE

Chairs
Joel E. Gray

Program Committee

Sessions
Imaging Systems: Physical Evaluation - Joel Gray
Imaging Systems: Perception Evaluation - Joel Gray
Imaging Systems: Special Topics - Arthur Haus
Mammography - William Properzio
Special Topics - Raymond Rossi
Computed Tomography: Practical Considerations - William R. Hendee
Computed Tomography: Theoretical Considerations - William R. Hendee
X-Ray Imaging Research in Toronto - K. W. Taylor
Joint Session with the ARRS - Joel Gray; William R. Hendee; Harry Z. Melone
### 1992
**Medical Imaging VI: Instrumentation**
Newport Beach, CA 23-24 February
Vol. 1651 221 papers (7 in Physics) Attendance: 539

**Sponsors, Co-Sponsors & Supporting Organizations**
SPIE, AAPM, CDRH, NEMA, IS&T

**Chairs**
Rodney Shaw

**Program Committee**

**Sessions**
- Image Instrumentation I - David G. Brown
- Image Instrumentation II - Arthur E. Bursage
- Image Instrumentation III - William J. Dallas
- Image Instrumentation IV - Hans Roehrig
- Poster Session

### Other Conferences

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<td>Murray H. Loew</td>
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<td>Image Capture, Formatting, and Display</td>
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<td>PACS Design and Evaluation</td>
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### 1993
**Medical Imaging 1993: Physics of Medical Imaging**
Newport Beach, CA 14-15 February
Vol. 1896 250 papers (45 in Physics) Attendance: 754

**Sponsors, Co-Sponsors & Supporting Organizations**
SPIE, AAPM, CDRH, NEMA, IS&T, SCAR

**Chairs**
Rodney Shaw

**Program Committee**
Jacob Beutel, Arthur E. Bursage, Robert J. Jennings, Hans Roehrig, Richard L. Van Meter, Robert F. Wagner

**Sessions**
- Physics of Medical Imaging I - Robert F. Wagner
- Physics of Medical Imaging II - Rodney Shaw
- Physics of Medical Imaging III - Hans Roehrig
- Physics of Medical Imaging IV - Robert F. Wagner
- Physics of Medical Imaging V - Robert J. Jennings
- Physics of Medical Imaging VI - Jacob Beutel
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### 1994
**Medical Imaging 1994: Physics of Medical Imaging**
Newport Beach, CA 13-14 February
Vol. 2163 349 papers (45 in Physics) Attendance: 1073

**Sponsors, Co-Sponsors & Supporting Organizations**
SPIE, AAPM, CDRH, NEMA, IS&T, RSC, RSNA, SCAR

**Chairs**
Rodney Shaw

**Program Committee**
Jacob Beutel, John M. Boone, Randall P. Brown, Robert J. Jennings, Hans Roehrig, Richard L. Van Meter, Robert F. Wagner, Martin J. Yaffe

**Sessions**
- Physics of Medical Imaging I - Hans Roehrig
- Physics of Medical Imaging II - Martin J. Yaffe
- Physics of Medical Imaging III - Randall P. Brown
- Physics of Medical Imaging IV - Robert J. Jennings
- Physics of Medical Imaging V - John M. Boone
- Physics of Medical Imaging VI - Jacob Beutel
- Physics of Medical Imaging VII - Richard L. Van Meter

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<td>Harold L. Kundel</td>
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<td>Image Processing</td>
<td>Murray H. Loew</td>
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<td>Physiology and Function from Multidimensional Images</td>
<td>Eric A. Hoffman, Raj S. Acharya</td>
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### 1995
**Medical Imaging 1995: Physics of Medical Imaging**
San Diego, CA 26-27 February
Vol. 2432 349 papers (45 in Physics) Attendance: 1074

**Sponsors, Co-Sponsors & Supporting Organizations**
SPIE, AAPM, APS CDRH, IS&T, NEMA, RSC, RSNA, SCAR

**Chairs**
Richard L. Van Meter, Jacob Beutel

**Program Committee**

**Sessions**
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- Image Quality and X-Ray Physics II - Robert J. Jennings
- Image Quality and X-Ray Physics III - Hans Roehrig
- Novel Detectors for Digital Radiography I - Martin J. Yaffe
- Novel Detectors for Digital Radiography II - Frank A. D’Angelo
- Novel Detectors for Digital Radiography III - Ian A. Cunningham
- Digital Radiography System Performance - Larry A. Antonuk

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<td>Murray H. Loew</td>
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<td>PACS Design and Evaluation</td>
<td>R. Gilbert Jost, Samuel J. Dwyer III</td>
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<tr>
<td>2436</td>
<td>Image Perception</td>
<td>Harold L. Kundel</td>
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### 1996

**Medical Imaging 1996: Physics of Medical Imaging**  
Newport Beach, CA  
11-13 February  
Vol. 2708  
362 papers (79 in Physics)  
Attendance: 866

**Sponsors, Co-Sponsors & Supporting Organizations**  
SPIE; AAPM; APS; CDRH; IS&T; NEMA; RISC; RSNA; SCAR

**Chairs**  
Richard L. Van Metter, Jacob Beutel

**Program Committee**  
Larry E. Antonuk; Gary T. Barnes; John M. Boone; Randall P. Brown; Ian A. Cunningham; Frank A. DiBianca; James T. Dobbins III; Robert J. Endorff; Hans Roeherig; Robert F. Wagner; Martin J. Yaffe; Herbert D. Zeman

### Sessions

**Plenary Session - Robert Wagner**  
New Concepts in Information Theory - Hans Roeherig  
Image Quality and X-Ray Physics I - John M. Boone  
Image Quality and X-Ray Physics II - John M. Boone  
Mammographic Imaging - Martin J. Yaffe  
Ultrasound - Herbert D. Zeman  
Volume Imaging I - Frank A. DiBianca  
Volume Imaging II - Frank A. DiBianca

**Detectors for Digital Radiography I - Larry E. Antonuk**  
Detectors for Digital Radiography II - James T. Dobbins III

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### 1997

**Medical Imaging 1997: Physics of Medical Imaging**  
San Jose, CA  
Feb 23-25  
Vol. 3032  
451 papers (57 in Physics)  
Attendance: 1021

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SPIE; AAPM; APS; CDRH; IS&T; NEMA; RISC; RSNA; SCAR

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### Sessions

Image Acquisition I - John M. Boone  
Image Acquisition II - Frank A. DiBianca  
Image Physics I - Robert F. Wagner  
Image Physics II - Hans Roeherig  
Volume Imaging I - Herbert D. Zeman  
Volume Imaging II - Robert J. Endorff  
Mammographic Imaging - Martin J. Yaffe

**Film-Screen and CR Imaging - Ian A. Cunningham**

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<td>Ultrasonic Transducer Engineering</td>
<td>K. Kirk Shung</td>
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### 1998

**Medical Imaging 1998: Physics of Medical Imaging**  
San Diego, CA  
Feb 22-24  
Vol. 3336  
454 papers (66 in Physics)  
Attendance: 1153

**Sponsors, Co-Sponsors & Supporting Organizations**  
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**Chairs**  
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### Sessions

X-Ray Detectors I - Richard L. Van Metter  
X-Ray Physics - Gary S. Keys  
X-Ray Imaging - Robert F. Wagner  
Mammographic Imaging - John M. Boone  
Image Processing - Steven C. Horii, G. James  
Ultrasound - Hans A. Cunningham  
Real-Time X-Ray Detectors - Frank A. DiBianca

### Other Conferences

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### 1999

**Medical Imaging 1999: Physics of Medical Imaging**  
San Diego, CA  
Feb 21-23  
Vol. 3659 (in 2 vol)  
499 papers (80 in Physics)  
Attendance: 1123

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### Sessions

Direct X-Ray Detectors - Richard L. Van Metter  
X-Ray Imaging - Robert F. Wagner  
Image Processing - Martin J. Yaffe  
Mammography - Martin J. Yaffe  
Ultrasound - Hans A. Cunningham  
X-Ray Physics - Frank A. DiBianca  
New Frontiers - Hans Roeherig

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2000
Medical Imaging 2000: Physics of Medical Imaging
San Diego, CA Feb 13-15
Vol. 3997, 493 papers (71 in Physics) Attendance: 1052
Sponsors, Co-Sponsors & Supporting Organizations
SPIE; AAPM; APS; CDRH; EMBS; IS&T; NEMA; RSNA; SCAR

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Optimization of Image Quality - Robert F. Wagner

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4976 Source Display and Visualization Seong K. Min 62
4978 Physiology and Function from Multidimensional Images Chien-Tu Chen, Anne V. Clough 57
4979 Image Processing Kenneth M. Hanson 166
4980 PACS Design and Evaluation: G. James Blaine, Eliot L. Siegel 50
4981 Image Perception and Performance Elizabeth A. Kupinski 36
4982 Ultrasonic Imaging & Signal Processing K. Kirk Shung, Michael F. Insana 46

2001
Medical Imaging 2001: Physics of Medical Imaging
San Diego, CA Feb 17-23
Vol. 4320, 602 papers (103 in Physics) Attendance: 1195
Sponsors, Co-Sponsors & Supporting Organizations
SPIE; AAPM; APS; CDRH; IS&T; NEMA; RSNA; SCAR

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4321 Physiology and Function from Multidimensional Images Chien-Tu Chen, Anne V. Clough 62
4322 Image Processing Michael Sonka, Kenneth M. Hanson 209
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4324 Image Perception and Performance E. A. Kupinski, Dev P. Chakraborty 31
4325 Ultrasonic Imaging & Signal Processing Michael F. Insana, K. Kirk Shung 58

2002
Medical Imaging 2002: Physics of Medical Imaging
San Diego, CA 23 - 28 February
Vol. 4982, 564 papers (90 in Physics) Attendance: 1142
Sponsors, Co-Sponsors & Supporting Organizations
SPIE; AAPM; APS; CDRH; IS&T; NEMA; RSNA; SCAR

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2003
Medical Imaging 2003: Physics of Medical Imaging
San Diego, CA Feb 15-20
Vol. 5630, 636 papers (103 in Physics) Attendance: 1373
Sponsors, Co-Sponsors & Supporting Organizations
SPIE; AAPM; APS; CDRH; IS&T; NEMA; RSNA; SCAR

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5631 Physiology and Function: Methods, Systems, and Applications Anne V. Clough, Arvind Arora 63
5632 PACS and Integrated Medical Information Systems Design & Evaluation Michael Sonka, J. Michael Fitzpatrick 105
5633 Image Perception, Observer Performance, and Technology Assessment Dev P. Chakraborty, Elizabeth A. Kupinski 57
5634 Ultrasonic Imaging and Signal Processing Michael F. Insana, William F. Walker 56

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2011

Medical Imaging 2011: Physics of Medical Imaging

Lake Buena Vista, FL 13–17 February
Vol. 7961 864 papers (204 in Physics) Attendance: 1136

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Program Committee
Guang-Hong Chen; Dianna Cody; Mats Danielsson; Maria Drangova; Thomas Flohr; Stephen J. Glick; Michael Grass; Christoph Hoeschen; Marc Kachelriess; Karim S. Karim; Hee-Joung Kim; Despina Kontos; Iacovos Kyprianou; Jinyi Qi; John A. Rowlands; John M. Sabol; Taly Gilat Schmidt; Jeffrey H. Siewerdsen; Katsuyuki Taguchi; Anders Tingberg; Bruce R. Whiting; John Yorkston;

Sessions
Keynote and Imaging and Health Economics - Norbert J. Pelc; Ehsan Samei
X-ray Imaging - John A. Rowlands; Christoph Hoeschen
Metrology - Robert M. Nishikawa; John Yorkston
Iterative and Statistical Reconstruction - Jinyi Qi; Guang-Hong Chen
Detectors I & II- John Yorkston; John A. Rowlands / Karim S. Karim; Mats Danielsson
Breast Imaging - Anders Tingberg; Stephen J. Glick
Tomosynthesis I: Reconstruction - John M. Sabol; Michael Grass
Tomosynthesis II - Despina Kontos; Anders Tingberg
X-ray Imaging: Phase Contrast Diffraction - Jeffrey H. Siewerdsen; Taly Gilat Schmidt
Image Reconstruction - Bruce R. Whiting; Katsuyuki Taguchi
CT III: Multi-energy - Thomas G. Flohr; John M. Sabol
Novel Systems - Mats Danielsson; Taly Gilat Schmidt
CT IV: Cone Beam - Maria Drangova; Marc Kachelriess
Dose - Iacovos S. Kyprianou; Hee-Joung Kim
Two Special Sessions on Dose with a Panel Discussion - Ehsan Samei; Dianna D. Cody / Christoph Hoeschen; Michael F. McNitt-Gray / Ehsan Samei

7962 Image Processing
7963 Computer-Aided Diagnosis
7964 Visualization, Image-Guided Procedures, and Modeling
7965 Biomedical Applications in Molecular, Structural, and Functional Imaging
7966 Image Perception, Observer Performance, and Technology Assessment
7967 Medical Imaging: New Discoveries and Clinical Impact
7968 Cardiovascular Imaging, Intervention, and Therapeutic Applications
7969 Ultrasonic Imaging, Tomography, and Therapy

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2012

Medical Imaging 2012: Physics of Medical Imaging

San Diego, CA  Feb 5-9
Vol. 8313  909 papers (233 in Physics)  Attendance: ?

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Program Committee
Hilde Bosmans; Guang-Hong Chen; Dianna D Cody; Mats E Danielsson; Maria Drangova; Thomas G. Flohr; Stephen J. Glick; Michael Grass; Christoph Hoeschen; Marc Kachelriess; Karim S Karim; Hee-Joung Kim; Despina Kontos; Iacovos S. Kyprianou; Joseph Y Lo; Jinyi Qi; John A Rowlands; John M Sabol; Taly G. Schmidt; Jeffrey H. Siewerdsen; Anders Tingberg; John Yorkston

Sessions
Keynote and 3D Breast Imaging - Norbert J. Pelc; Robert M. Nishikawa
3D Breast Imaging - Hilde Bosmans; Joseph Y. Lo
Breast Multi-Energy/Photon Counting - Mats E. Danielsson; Stephen J. Glick
Mammography - Anders Tingberg; Despina Kontos
X-Ray Imaging - Hee-Joung Kim; Karim S. Karim
Small Animal Imaging - John Yorkston; Maria Drangova
Photon Counting Systems and Techniques - Taly G. Schmidt; Jeffrey H. Siewerdsen
General Radiography and Fluoroscopy - John A. Rowlands; Hee-Joung Kim
Cone Beam CT - Iacovos S. Kyprianou; John Yorkston
CT - Dianna D. Cody; Marc Kachelriess
CT Detection Performance - Jinyi Qi; Bruce R. Whiting
Dose - Christoph Hoeschen; Dianna D. Cody
Reconstruction I & II - Guang-Hong Chen; Michael Grass/ Thomas Flohr; Jeff Siewerdsen
Tomosynthesis Reconstruction - John M. Sabol; Iacovos S. Kyprianou

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8315  Computer-Aided Diagnosis  Bram van Ginneken, Carol L. Novak  129
8316  Image-Guided Procedures, Robotic Interventions and Modeling  David R. Holmes III, Kenneth H. Wong  123
8317  Biomedical Applications in Molecular, Structural, and Functional Imaging  Robert C. Mothen, John B. Weaver  78
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8319  Advanced PACS-based Imaging Informatics and Therapeutic Applications  William W. Boorin, Brent J. Liu  38
8320  Ultrasonic Imaging, Tomography, and Therapy  Johan G. Bosch, Marvin M. Doyley  57
### Abbreviations

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<td>AAMI</td>
<td>Association for the Advancement of Medical Instrumentation</td>
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<td>AAPM</td>
<td>American Association of Physicists in Medicine</td>
</tr>
<tr>
<td>ACR</td>
<td>American College of Radiology</td>
</tr>
<tr>
<td>APS</td>
<td>American Physiological Society</td>
</tr>
<tr>
<td>ARRS</td>
<td>American Roentgen Ray Society</td>
</tr>
<tr>
<td>ASNR</td>
<td>American Society of Neuroradiology</td>
</tr>
<tr>
<td>BIOS</td>
<td>Biomedical Optics Society</td>
</tr>
<tr>
<td>BRH</td>
<td>Bureau of Radiological Health, Department of Health, Education And Welfare</td>
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<td>CARS</td>
<td>Computer Assisted Radiology and Surgery</td>
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<tr>
<td>CDRH</td>
<td>Center for Devices and Radiological Health, FDA</td>
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<td>DICOM</td>
<td>The DICOM Standards Committee</td>
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<tr>
<td>EFOMP</td>
<td>European Federation of Organizations for Medical Physics</td>
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<tr>
<td>EMBG</td>
<td>IEEE Engineering in Medicine and Biology Group</td>
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<tr>
<td>EMBS</td>
<td>IEEE—The Institute of Electrical and Electronics Engineers/Engineering in Medicine and Biology Society</td>
</tr>
<tr>
<td>IEEE-CS</td>
<td>IEEE Computer Society, Technical Committee on Computational Medicine</td>
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<tr>
<td>IRS</td>
<td>Institute for Regulatory Science</td>
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<tr>
<td>IS&amp;T</td>
<td>The Society for Imaging Science and Technology</td>
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<td>JPL</td>
<td>Jet Propulsion Laboratory</td>
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<td>MIPS</td>
<td>Medical Image Perception Society</td>
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<td>NEMA</td>
<td>National Electrical Manufacturers Association/Diagnostic Imaging and Therapy, Systems Division</td>
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<tr>
<td>OSA</td>
<td>The Optical Society of America</td>
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<td>RISC</td>
<td>Radiology Information System Consortium</td>
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<td>RSNA</td>
<td>Radiological Society of North America</td>
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<td>SCAR</td>
<td>Society for Computer Applications in Radiology</td>
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<td>SIIM</td>
<td>Society for Imaging Informatics in Medicine</td>
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<td>SMI</td>
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