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Vol. 13, No. 29

Medical Imaging 2012

Physics of Medical Imaging

Norbert J. Pelc
Robert M. Nishikawa
Bruce R. Whiting
Editors

5–8 February 2012
San Diego, California, United States

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The CID number appears on each page of the manuscript. The complete citation is used on the first page, and an abbreviated version on subsequent pages. Numbers in the index correspond to the last two digits of the six-digit CID number.

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Robert M. Nishikawa, The University of Chicago (United States)

2 3D Breast Imaging
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Joseph Y. Lo, Duke University (United States)

3 Breast Multi-Energy/Photon Counting
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Stephen J. Glick, University of Massachusetts Medical School (United States)

4 Mammography
Anders Tingberg, Scanias University Hospital (Sweden)
Despina Kontos, The University of Pennsylvania Health System (United States)

5 X-Ray Imaging
Hee-Joung Kim, Yonsei University (Korea, Republic of)
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6 Small Animal Imaging
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Bruce R. Whiting, University of Pittsburgh (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*

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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.

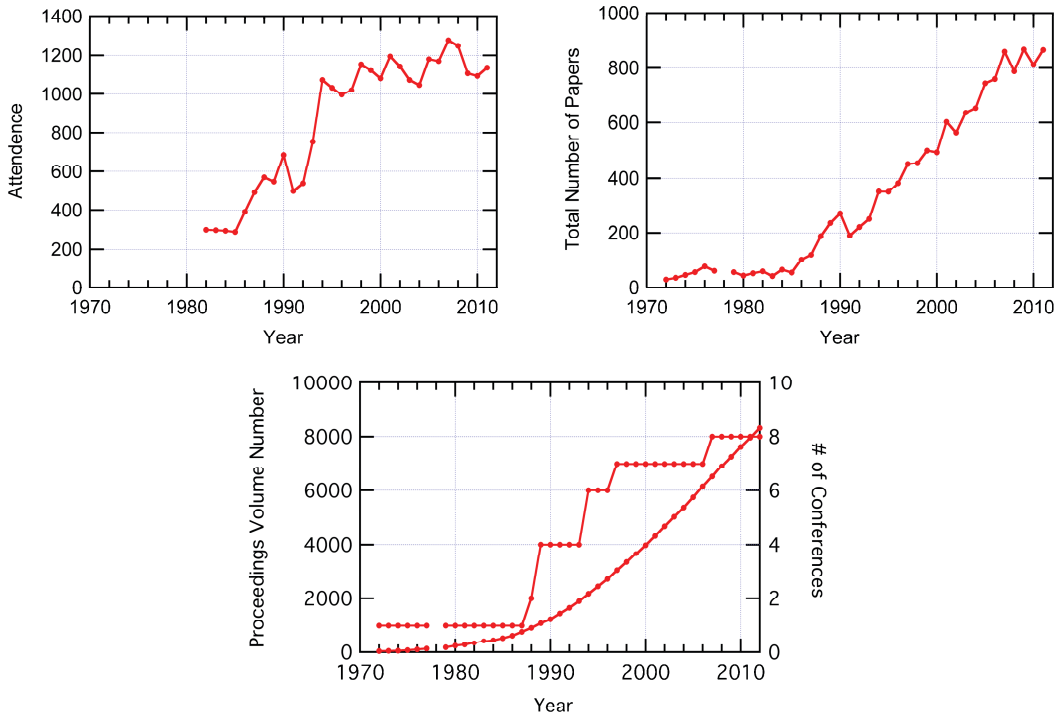

Figure 1. These plots capture some of the statistics from the meeting over time.

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.

Years Served as a Conference Chair	
Samuel J. Dwyer III	13
Roger H. Schneider	12
R. Gilbert Jost	11
Yongmin Kim	10
William R. Hendee	8
Anne V. Clough	7
Murray H. Loew	7
Joel E. Gray	6
Kenneth M. Hanson	6
Steven C. Horii	6
Arthur G. Haus	5
Elizabeth A. Krupinski	5
Eric A. Hoffman	5
Harold L. Kundel	5
K. Kirk Shung	5
Seong K. Mun	5
William F. Walker	5

Years Served on Physics Committee	
Robert F. Wagner	19
Hans Roehrig	13
Martin J. Yaffe	12
Robert J. Jennings	12
Harrison H. Barrett	11
Arthur E. Burgess	10
James T. Dobbins III	10
John M. Boone	10
Richard L. Van Metter	10
Rodney Shaw	10
Roger H. Schneider	10
John Yorkston	9
Kunio Doi	9
Larry E. Antonuk	9
Stephen W. Smith	9
Bruce R. Whiting	8
Jacob Beutel	8
Arthur G. Haus	7
Ian A. Cunningham	7
John A. Rowlands	7
Judith M. S. Prewitt	7
Kenneth M. Hanson	7
Michael J. Flynn	7
Murray H. Loew	7
Robert A. Kruger	7
Robert M. Nishikawa	7
Samuel J. Dwyer III	7
Stephen R. Thomas	7
Steven C. Horii	7
Thomas G. Flohr	7

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; SNM; 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 - Jack S. Krohmer

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; SNM; 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 Performance 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, ARRS; 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 Ovadia
Ray Tube Focal Spot Size and Intensity Distributions: Important Practical Considerations - Bengt E. Bjarngard
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, ARRS, 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 -
Quality Assurance for Diagnostic Radiologic Instrumentation - James J. Vucich
Exposure Initiation/Termination Mechanisms and Automatic Exposure Timers In Diagnostic Radiology - Robert G. Waggener
Rare·Earth Intensifying Screens - E. Dale Trout
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 Rohrer
Performance Evaluation of Mammographic Imaging Systems - Gregory L. Dubuque

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
Robert K. Cacak, Paul L. Carson, Gregory Dubuque, Joel E. Gray, Arthur G. Haus, William R. Hendee, Raymond P. Rossi

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. Baily
Radiographic Images and Dose - Arthur G. Haus
Computed Tomography II - Rodney A. Brooks
Computed Tomography III - Kenneth Weaver
Diagnostic Ultrasound I - Paul L. Carson
Quality Assurance in Diagnostic Radiology III - Robert K. Cacak
Current Topics in Mammography - Gregory Dubuque

1977

Application of Optical Instrumentation in Medicine VI

Boston, MA Sept. 25-27
Vol. 127 60 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, Joie Pierce Jones, Raymond Rossi

Sessions
The Laboratory/Clinical Interface in Image Evaluation - Robert Wagner
Sensitometry Up-Date - Joel Gray
Screen Film Systems and Photosensitive 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. Cacak
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; SPSE; ARRS; BRH; SRE

Chairs
Joel E. Gray

Program Committee
Arthur G. Haus, William R. Hendee, Raymond P. Rossi, William Properzio

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. Mellins

1980

Application of Optical Instrumentation in Medicine VIII

Las Vegas, NV Apr 20-22
Vol. 233 43 papers Attendance: n/a

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

Chairs
Joel Gray, Arthur G. Haus, William R. Hendee, William S. Properzio

Program Committee
Same as Editors

Sessions
Screen-Film Evaluation - Arthur G. Haus
Unconventional Imaging Techniques - Joel Gray
Special Topics - Gerald Cohen
New Concepts in Conventional Imaging Techniques - James A. Mulvaney
How Might Exposure Values Be Determined for Radiological Exams? - William S. Properzio
Joint Session with the ARRS - Joel Gray; Joseph Calhoun

1981

Application of Optical Instrumentation in Medicine IX

San Francisco, CA Mar 22-24
Vol. 273 51 papers Attendance: n/a

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

Chairs
Joel E. Gray, Arthur G. Haus, William S. Properzio, James A. Mulvaney

Program Committee
Same as Editors

Sessions
Special Session: Nuclear Magnetic Resonance Imaging: Current Status - Leon Partain; A. Everette James. Jr.
Conventional Imaging Systems Evaluation - Arthur G. Haus
Digital Radiography - William S. Properzio
Quality Control - James A. Mulvaney
Nuclear Medicine - Joel E. Gray
Break-Out Session A: Nuclear Magnetic Resonance - C. Leon Partain
Break-Out Session B: Computerized Tomography - Gary D. Fullerton
Break-Out Session C: Digital Imaging - William S. Properzio
Break-Out Session D: Conventional Imaging Systems Evaluation - Joel E. Gray
Joint Session with the ARRS - Arthur G. Haus; James F. Martin
Computerized Tomography - Gary D. Fullerton
Recording, Storage, and Processing of Images - Joel E. Gray

1982

Application of Optical Instrumentation in Medicine X

New Orleans May 9-12
Vol. 347 58 papers Attendance: 300

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

Chairs
Gary D. Fullerton, Arthur G. Haus, William S. Properzio, James A. Mulvaney

Program Committee
Same as Editors

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Conventional Imaging Systems Evaluation - Arthur G. Haus
Digital Radiography - William S. Properzio
Computed Tomography - James A. Mulvaney
Conventional Imaging Systems Evaluation - Charles A. Kelsey
Break-Out Session A-Digital Radiography - William S. Properzio
Break-Out Session B-Conventional Imaging - James A. Mulvaney
Break-Out Session C-Nuclear Magnetic Resonance (NMR) Imaging - Gary D. Fullerton
Joint Session with The ARRS - John Tampas; Gary D. Fullerton
Digital Radiology (Cosponsored by The ARRS and SPIE) - M. Paul Capp; William R. Hendee
Integrated Systems for Analysis and Display of Radiological Images - Michael J. Flynn
Nuclear Magnetic Resonance (NMR) - Raymond L. Nunnally
Nuclear Magnetic Resonance (NMR) (Cosponsored by ARRS and SPIE) - A. Everette James; Raymond L. Nunnally

1983

Application of Optical Instrumentation in Medicine XI

Atlanta Apr 17-20
Vol. 419 41 papers Attendance: 298

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

Chairs
Gary D. Fullerton

Program Committee
Arthur G. Haus, James A. Mulvaney, William Properzio

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Conventional Imaging Systems Evaluation - Arthur G. Haus
Digital Radiography I - James A. Mulvaney
Image Performance Evaluation and Quality Assurance - William S. Properzio
Digital Radiography II - Stewart C. Bushong
Breakout Session A-Nuclear Magnetic Resonance Imaging - Gary D. Fullerton
Breakout Session B-Digital Radiography - William S. Properzio
Breakout Session C-Conventional Imaging - James A. Mulvaney
Joint Session with SPIE and The ARRS - Melvin M. Figley; Gary D. Fullerton
Nuclear Magnetic Resonance Imaging - Gary D. Fullerton
New Modalities and Computers in Medical Imaging - Michael J. Flynn

1984

Application of Optical Instrumentation in Medicine XII

San Diego, CA Feb 26-29
Vol. 454 64 papers Attendance: 295

Sponsors, Co-Sponsors & Supporting Organizations
SPIE; EFOMP; JPL; CDRH; SRE

Chairs
Samuel J. Dwyer III, Roger H. Schneider

Program Committee
David G Brown; Arthur Burgess; Kunio Doi; Andre J Duerinckx; Melvin Figley; Kenneth M. Hanson; Steven C Horii; Robert J. Jennings; Leon Kaufman; James L Lehr; Murray Loew; G Poretti; Judith M S Prewitt; Stephen W Smith; Vincent J Sodd; Michel M Ter-Pogossian; Robert F Wagner

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The Physics and Statistics of Imaging I - Kenneth M. Hanson
The Physics and Statistics of Imaging II - Arthur Burgess
Non-ionizing imaging modalities - Robert J. Jennings
Management of Image Data - Judith M. S. Prewitt
Performance Analysis of X-Ray Screen-Film Systems - Robert F. Wagner
Data Processing for Image Formation, Enhancement, & Mensuration I - James L. Lehr
Image Display Systems I - Steven C. Horii
Data Processing for Image Formation, Enhancement, & Mensuration II - Kunio Doi
Data Processing for Image Formation, Enhancement, & Mensuration II - Murray Loew
Image Display Systems II - Samuel J. Dwyer III
Photoeletronic imaging devices - Hans Roehrig
Data Processing for Image Formation, Enhancement, and Mensuration III - Melvin M. Figley
Computerized Tomography and Nuclear Medicine - Roger H. Schneider

1985

Application of Optical Instrumentation in Medicine XIII

Newport Beach, CA Feb 3-6
Vol. 535 54 papers Attendance: 289

Sponsors, Co-Sponsors & Supporting Organizations
SPIE; CDRH; SRE; IEEE-CS

Chairs
Samuel J. Dwyer III, Roger H. Schneider

Program Committee
Roger Bauman; Stuart I Brown; Arthur Burgess; Kunio Doi; Andre J Duerinckx; Melvin M. Figley; Kenneth M. Hanson; Steven C. Horii; H. K. Huang; Robert J. Jennings; James L. Lehr; Murrey Loew; Albert Macovski; Judith M. S. Prewitt; Rodney Shaw; Stephen W Smith; Michel M Ter-Pogossian; Robert F Wagner

Sessions
Image Statistics & Perception: I - Kunio Doi
Image Statistics & Perception: II - Robert F. Wagner
Image Statistics & Perception: III - Arthur Burgess
Computing Images From Data - Kenneth M. Hanson
Detector Physics I: Scatter - H. K. Huang
Detector Physics II: Film Screen Systems - Rodney Shaw; Robert J. Jennings
Detector Physics III: Digital - Albert Macovski
Detector Physics IV: Semiconductors & Photoconductors - Roger Schneider
Detector Physics V: Ultrasound & NMR - Stephen W. Smith
Photography. Stuart I. Brown - University Hospital
Image Processing I: General - James L. Lehr
Image Processing II A: Task Oriented Cranial - Murray Loew
Image Processing II B: Task Oriented-Chest - Gordon Johnson
Image Processing II C: Task Oriented-Gastro Intestinal - Steven C. Horii

1986

Application of Optical Instrumentation in Medicine XIV and Picture Archiving and Communication Systems

Newport Beach, CA Feb 2-7
Vol. 626 101 papers Attendance: 391

Sponsors, Co-Sponsors & Supporting Organizations
SPIE; AAPM; CDRH

Chairs
Samuel J. Dwyer III, Roger H. Schneider

Program Committee
Laurens V Ackerman; Ronald I Arenson; Harrison H Barrett; Roger A Bauman; David G. Brown; Stuart I. Brown; Arthur E Burgess; Arthur Carson; Kunio Doi; James F. Dunn; Kenneth M. Hanson; Shankar S. Hegde; David G. Hill; Steven C. Horii; H. K. Huang; Robert J. Jennings; Bruce Laskin; Robert A. Kruger; James L Lehr; Thomas K. Lewellen; Murray H. Loew; Albert Macovski; William C. Mortimore; Judith M. S. Prewitt; Roland W.Redington; Stephen Riederer; Rodney Shaw; Stephen W. Smith; Edward Staab; Stephen R. Thomas; Henry N.Wagner Jr.; Robert F. Wagner; Jason S. Zielonka

Sessions
New Signals in Medical Imaging I & II - Roger H. Schneider & Stephen J. Riederer
mage Formation I - IV - Kunio Doi; Robert J. Jennings; H. K. Huang; Stephen R. Thomas
Image Perceptions - Robert F. Wagner
Image Processing I - III - Murray H. Loew; Robert A. Kruger; Arthur E. Burgess
Digital Image Capture and Formatting I & II - David R. Pickens & Thomas K. Lewellen
Digital Image Display I- III - James L. Lehr; Steven C. Horii; Stephen M. Pizer
PACS System Design and Evaluation I - V - Ronald L. Arenson; Edgar Alzner; R. Gilbert Jost; Roger A. Bauman; B. G. Thompson
Archives for PACS - Judith M. S. Prewitt
Operations Analysis and Modeling of Radiology Departments I & II - Shakar S. Hegde & Samuel J. Dwyer III

1987

Medical Imaging

Newport Beach, CA Feb 1-6
Vol. 767 (two volumes) 119 papers Attendance: 494

Sponsors, Co-Sponsors & Supporting Organizations
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Sessions
Future Potential of Several Candidate Signals for Medical Imaging I & II - Roger H. Schneider / Stephen R. Thomas
Tomographic Reconstruction - Harrison H. Barrett
Radiography I & II - Robert J. Jennings / Hans Roehrig
Fluoro/Angio - Ronald R. Price
Imaging Performance Measures - Kunio Doi
Image Formatting and Compression - H. K. Huang
Perception - Arthur E. Burgess
Image Processing I- VI - Stephen J. Riederer / Rodney Shaw / David G. Hill / Robert A. Kruger / Yongmin Kim / Edward Staab
Printers, Displays, and Digitizers - Roger A. Bauman
PACS at the UCLA / PACS at Univ of Arizona - H. K. Huang / William J. Dallas
3-D Display - James L. Lehr
Workstations and the Display - Observer Interface I & II- Stephen Pizer / Steven C. Horii
Networking Issues - Chris Stockbridge
PACS I - III - Laura Lee Murphy / Samuel J. Dwyer III / Steven C. Horii

1988

Medical Imaging II: Part A--Image Formation, Detection, Processing, and Interpretation

Newport Beach, CA Jan 31-Feb 5
Vol. 914A 188 papers (102 in Physics) Attendance: 570

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Sessions
Future Potential of the Several Candidate Signals for Medical Imaging - Roger H. Schneider
Image Formation I - VII - Robert F. Wagner / Harrison H. Barrett / Kunio Doi / Robert A. Kruger / Aaron Fenster / Hans Roehrig / Gary T. Barnes
Image Processing I - Arthur Burgess
Image Processing II: Chest and Cardiological - Jerry Cohen
Image Processing III: Cardiological - Kenneth M. Hanson
Image Processing IV: Tomography and 3D Mapping and Interpretation - Orhan Nalcioglu
Image Processing: Microscopy - Judith M. S. Prewitt
Digital Medical Photography - Roger A. Bauman

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
914B	Part B--Image Data Management & Display	Samuel J. Dwyer III, Roger H. Schneider	86

1989

Medical Imaging III: Image Formation

Newport Beach, CA Jan 29-31
Vol. 1090 235 papers (51 in Physics) Attendance: 547

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Sessions
Future Potential of the Several Candidate Signals for Medical Imaging - Roger H. Schneider
Image Formation I - Stephen J. Riederer
Image Formation II - Robert J. Jennings
Image Formation III - Arthur E. Burgess
Image Formation IV - Robert A. Kruger
Image Formation V - Kunio Doi
Image Formation VI - Ronald R. Price

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
1091	Image Capture and Display	Samuel J. Dwyer III, R. Gilbert Jost, Roger H. Schneider	44
1092	Image Processing	Samuel J. Dwyer III, R. Gilbert Jost, Roger H. Schneider	71
1093	PACS System Design and Evaluation	Samuel J. Dwyer III, R. Gilbert Jost, Roger H. Schneider	69

1990

Medical Imaging IV: Image Formation

Newport Beach, CA Feb 4-6
Vol. 1231 270 papers (60 in Physics) Attendance: 686

Sponsors, Co-Sponsors & Supporting Organizations
SPIE; AAPM; ACR;CDRH; NEMA

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Sessions
Future Potential of Bioeletromagnetic and Ultrasound Imaging - Roger H. Schneider
Future Potential of Ultrasound, CT, and Optical Imaging - Stephen W. Smith
Future Potential of Optical Imaging - William J. Dallas
MRI - Stephen R. Thomas
Calculated Images - Rodney Shaw
CT - Orhan Nalcioglu
Film Screen Systems - Kunio Doi
Digital Quantum Imagers I - Hans Roehrig
Digital Quantum Imagers II - Aaron Fenster
Clinical Systems and Issues - Robert J. Jennings

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
1232	Image Capture and Display	Yongmin Kim	43
1233	Image Processing	Murray H. Loew	54
1234	PACS Systems Design and Evaluation	Samuel J. Dwyer III, R. Gilbert Jost	113

1991

Medical Imaging V: Image Physics

San Jose, CA Feb 25-26
Vol. 1443 190 papers (26 in Physics) Attendance: 500

Sponsors, Co-Sponsors & Supporting Organizations
SPIE; AAPM; ACR;CDRH; IS&TNEMA

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Sessions
Magnetic Imaging - Roger H. Schneider
Acoustic Imaging - David G. Brown
Radiographic and Fluoroscopic Detectors and Systems - Hans Roehrig
Decision Makers and Displays - Arthur E. Burgess
Computing Images: CR, CT, and PET - Kenneth M. Hanson
Cone Beam CT - Aaron Fenster
Optical Imaging - Aaron Fenster

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
1444	Image Capture, Formatting, and Display	Yongmin Kim	48
1445	Image Processing	Murray H. Loew	59
1446	PACS Design and Evaluation	R. Gilbert Jost	57

1992

Medical Imaging VI: Instrumentation

Newport Beach, CA 23-24 February
Vol. 1651 221 papers (27 in Physics) Attendance: 539

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

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

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
1652	Image Processing	Murray H. Loew	74
1653	Image Capture, Formatting, and Display	Yongmin Kim	51
1654	PACS Design and Evaluation	R. Gilbert Jost	69

1993

Medical Imaging 1993: Physics of Medical Imaging

Newport Beach, CA 14-15 February
Vol. 1896 250 papers (45 in Physics) Attendance: 754

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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
Physics of Medical Imaging VII - Richard L. Van Metter

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
1897	Image Capture, Formatting, and Display	Yongmin Kim	51
1898	Image Processing	Murray H. Loew	86
1899	PACS Design and Evaluation	R. Gilbert Jost	68

1994

Medical Imaging 1994: Physics of Medical Imaging

Newport Beach, CA 13-14 February
Vol. 2163 349 papers (45 in Physics) Attendance: 1073

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

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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 Metter

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
2164	Image Capture, Formatting, and Display	Yongmin Kim	55
2165	PACS: Design and Evaluation	R. Gilbert Jost	97
2166	Image Perception	Harold L. Kundel	24
2167	Image Processing	Murray H. Loew	88
2168	Physiology and Function from Multidimensional Images	Eric A. Hoffman, Raj S. Acharya	40

1995

Medical Imaging 1995: Physics of Medical Imaging

San Diego, CA 26-27 February
Vol. 2432 348 papers (60 in Physics) Attendance: 1034

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Sessions
Image Quality and X-Ray Physics I - John M. Boone
Image Quality and X-Ray Physics II - Robert J. Jennings
Image Quality and X-Ray Physics III - Hans Roehrig
Physics of Ultrasound Imaging - Randall P. Brown
Novel Detectors for Digital Radiography I - Martin J. Yaffe
Novel Detectors for Digital Radiography II - Frank A. DiBianca
Novel Detectors for Digital Radiography III - Ian A. Cunningham
Digital Radiography System Performance - Larry E. Antonuk

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
2431	Image Display	Yongmin Kim	61
2433	Physiology and Function from Multidimensional Images	Eric A. Hoffman	47
2434	Image Processing	Murray H. Loew	94
2435	PACS Design and Evaluation: Engineering and Clinical Issues	R. Gilbert Jost, Samuel J. Dwyer III	67
2436	Image Perception	Harold L. Kundel	19

1996

Medical Imaging 1996: Physics of Medical Imaging

Newport Beach, CA 11-13 February
Vol. 2708 382 papers (79 in Physics) Attendance: 996

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Sessions
Plenary Session - Robert Wagner
New Concepts in Information Theory - Hans Roehrig
Image Quality and X-Ray Physics I - John M. Boone
Image Quality and X-Ray Physics II - John M. Boone
Image Quality and X-Ray Physics III - Robert J. Endorf
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

Other Conferences

Vol #	Title	Editor/Conference Chair	papers
2707	Image Display	Yongmin Kim	65
2709	Physiology and Function from Multidimensional Images	Eric A. Hoffman	49
2710	Image Processing	Murray Loew, Kenneth Hanson	102
2711	PACS Design and Evaluation: Engineering and Clinical Issues	R. Gilbert Jost, Samuel J. Dwyer III	66
2712	Image Perception	Harold L. Kundel	21

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
Imaging Physics I - Robert F. Wagner
Imaging Physics II - Hans Roehrig
Volume Imaging I - Herbert D. Zeman
Volume Imaging II - Robert J. Endorf
Mammographic Imaging - Martin J. Yaffe
Film/Screen and CR Imaging - Ian A. Cunningham

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
3031	Image Display	Yongmin Kim	87
3033	Physiology and Function from Multidimensional Images	Eric A. Hoffman	46
3034	Image Processing	Kenneth M. Hanson	123
3035	PACS Design and Evaluation: Engineering and Clinical Issues	Steven C. Horii, G. James Blaine	78
3036	Image Perception	Harold L. Kundel	35
3037	Ultrasonic Transducer Engineering	K. Kirk Shung	25

1998

Medical Imaging 1998: Physics of Medical Imaging

San Diego, CA Feb 22-24
Vol. 3336 454 papers (86 in Physics) Attendance: 1153

Sponsors, Co-Sponsors & Supporting Organizations
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Sessions
X-Ray Detectors I - Richard L. Van Metter
X-Ray Physics - Gary S. Keyes
Non-Ionizing Imaging - Robert J. Endorf
X-Ray Detectors II - Martin J. Yaffe
Mammographic Imaging - John M. Boone
Imaging Theory - Robert F. Wagner
Volume Imaging - Ian A. Cunningham
Imaging Physics - Hans Roehrig
Real-Time X-Ray Detectors - Frank A. DiBianca
X-Ray Detectors III - James T. Dobbins III

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
3335	Image Display	Yongmin Kim, Seong K. Mun	70
3337	Physiology and Function from Multidimensional Images	Eric A. Hoffman	39
3338	Image Processing	Kenneth M. Hanson	155
3339	PACS Design and Evaluation: Engineering and Clinical Issues	Steven C. Horii, G. James Blaine	65
3340	Image Perception	Harold L. Kundel	14
3341	Ultrasonic Transducer Engineering	K. Kirk Shung	25

1999

Medical Imaging 1999: Physics of Medical Imaging

San Diego, CA Feb 21-23
Vol. 3659 (in 2 vol) 499 papers (99 in Physics) Attendance: 1123

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

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Sessions
Direct X-Ray Detectors - Richard L. Van Metter
Imaging Theory - Robert F. Wagner
Mammography I - Martin J. Yaffe
Computer Tomography - Gary S. Keyes
Ultrasound - Ian A. Cunningham
Imaging Physics - Frank A. DiBianca
Indirect X-Ray Detectors I - Larry E. Antonuk
New Frontiers - Hans Roehrig
Mammography II - Jacob Beutel
Thoracic Imaging - John M. Boone
Indirect X-Ray Detectors II - James T. Dobbins III

Other Conferences

Vol #	Title	Editor/Conference Chair	papers
3658	Image Display	Seong K. Mun, Yongmin Kim	60
3660	Physiology and Function from Multidimensional Images	Chin-Tu Chen, Anne V. Clough	51
3661	Image Processing	Kenneth M. Hanson	170
3662	PACS Design and Evaluation: Engineering and Clinical Issues	G. James Blaine, Steven C. Horii	52
3663	Image Perception and Performance	Elizabeth A. Krupinski	39
3664	Ultrasonic Transducer Engineering	K. Kirk Shung	28

2000

Medical Imaging 2000: Physics of Medical Imaging

San Diego, CA Feb 13-15
Vol. 3977 493 papers (71 in Physics) Attendance: 1082

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

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Sessions
X-ray Detectors I - John M. Boone
Imaging Physics - Gary S. Keyes
Fluoroscopic Imaging - Robert A. Street
Mammography I - Martin J. Yaffe
Microscopy - James T. Dobbins III
Mammography II - Andrew D. A. Maidment
Computed Tomography and MRI - Frank A. DiBianca
New Frontiers - Jacob Beutel
Volume Imaging - Ian A. Cunningham
X-ray Detectors II - Larry E. Antonuk
Optimization of Image Quality - Robert F. Wagner

Other Conferences

Vol #	Title	Editor/Conference Chair	papers
3976	Image Display and Visualization	Seong K. Mun	62
3978	Physiology and Function from Multidimensional Images	Chin-Tu Chen, Anne V. Clough	57
3979	Image Processing	Kenneth M. Hanson	166
3980	PACS Design and Evaluation: Engineering and Clinical Issues	G. James Blaine, Eliot L. Siegel	55
3981	Image Perception and Performance	Elizabeth A. Krupinski	36
3982	Ultrasonic Imaging & Signal Process.	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

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Sessions
X-ray Detectors I - Larry E. Antonuk
Imaging Physics I - Ian A. Cunningham
Fluoroscopic Imaging - Katherine P. Andriole
Mammography I - Andrew D. Maidment
X-ray Detectors II - Robert A. Street
CT/MRI - Michael J. Flynn
Novel Imaging Methods I - James T. Dobbins III
Imaging Physics II/Keynote - Martin J. Yaffe
Volume Imaging - Tom J. Bruijns
Novel Imaging Methods II - John Yorkston
X-ray Detectors III - Robert F. Wagner

Other Conferences

Vol #	Title	Editor/Conference Chair	papers
4319	Visualization, Display, and Image-Guided Procedures	Seong K. Mun	83
4321	Physiology and Function from Multidimensional Images	Chin-Tu Chen, Anne V. Clough	62
4322	Image Processing	Milan Sonka, Kenneth M. Hanson	209
4323	PACS and Integrated Medical Information Sys: Design & Evaluation	Eliot L. Siegel, H. K. Huang	56
4324	Image Perception and Performance	E.A. Krupinski, Dev P Chakraborty	31
4325	Ultrasonic Imaging & Signal Process.	Michael F. Insana, K. Kirk Shung	58

2002

Medical Imaging 2002: Physics of Medical Imaging

San Diego, CA 23 - 28 February
Vol. 4682 564 papers (90 in Physics) Attendance: 1142

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

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Katherine P. Andriole; John M. Boone; Tom J. Bruijns; Michael J. Flynn; Paul R. Granfors; Andrew D. Maidment; Robert A. Street; John Yorkston; Wei Zhao

Sessions
X-Ray Detectors I - Imaging Physics
Volume Imaging I - Breast Imaging
Volume Imaging II - Novel Imaging Methods I
Fluoroscopy/Real Time - Volume Imaging III
X-Ray Detectors II - X-Ray Detectors III/Imaging Physics II
Novel Imaging Methods II - Poster Session

Other Conferences

Vol #	Title	Editor/Conference Chair	# of papers
4681	Visualization, Image-Guided Procedures, and Display	Seong K. Mun	82
4683	Physiology and Function from Multidimensional Images	Anne V. Clough, Chin-Tu Chen	53
4684	Image Processing	Milan Sonka, J. Michael Fitzpatrick	198
4685	PACS and Integrated Medical Information Sys: Design & Evaluation	Eliot L. Siegel, H. K. Huang	54
4686	Image Perception, Observer Performance, and Technology Assessment	Dev P. Chakraborty, Elizabeth A. Krupinski	40
4687	Ultrasonic Imaging and Signal Processing	Michael F. Insana, William F. Walker	47

2003

Medical Imaging 2003: Physics of Medical Imaging

San Diego, CA Feb 15-20
Vol. 5030 636 papers (108 in Physics) Attendance: 1073

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Chairs
Martin J. Yaffe, Larry E. Antonuk

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Sessions
Imaging Physics I - John M. Boone
X-Ray Detectors I - Larry E. Antonuk
CT - Paul R. Granfors
Breast Imaging I - Martin J. Yaffe
X-Ray Detectors II - Wei Zhao
Novel Imaging Methods - Harrison H. Barrett
Breast Imaging II - John Yorkston
Volume Imaging - US/Tomosynthesis - Michael J. Flynn
Imaging Physics II - James T. Dobbins III
X-Ray Detectors III - Tom J. C. Bruijns
Breast Imaging III - Larry E. Antonuk

Other Conferences

Vol #	Title	Editor/Conference Chair	papers
5029	Visualization, Image-Guided Procedures, and Display	Robert L. Galloway, Jr.	88
5031	Physiology and Function: Methods, Systems, and Applications	Anne V. Clough, Amir A. Amini	63
5032	Image Processing	Milan Sonka, J. Michael Fitzpatrick	205
5033	PACS and Integrated Medical Information Sys: Design & Evaluation	H. K. Huang, Osman M. Ratib	57
5034	Image Perception, Observer Performance, and Tech Assessment	Dev P. Chakraborty, Elizabeth A. Krupinski	59
5035	Ultrasonic Imaging & Signal Processing	William F. Walker, Michael F. Insana	56

2004

Medical Imaging 2004: Physics of Medical Imaging

San Diego, CA 14 - 19 February
Vol. 5368 653 papers (102 in Physics) Attendance: 1048

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

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Sessions
Imaging Performance - Harrison H. Barrett
Computer Tomography I - Tom J. C. Bruijns
Imaging Systems Analysis I - James T. Dobbins III
Digital Radiography I - John Yorkston
Digital Radiography II - Paul R. Granfors
Optical/US/Neutron Imaging - Harrison H. Barrett
Micro Tomography - Michael J. Flynn
Computed Tomography II - Jiang Hsieh
Digital Radiography III - Wei Zhao
Imaging Systems Analysis II - Michael J. Flynn
Mammography - Martin J. Yaffe

Other Conferences

Vol #	Title	Editor/Conference Chair	# of paper
5367	Visualization, Image-Guided Procedures, and Display	Robert L. Galloway, Jr.	92
5369	Physiology, Function, and Structure from Medical Images	Amir A. Amini, Armando Manduca	80
5370	Image Processing	J. Michael Fitzpatrick, Milan Sonka	232
5371	PACS and Imaging Informatics	Osman M. Ratib, H. K. Huang	48
5372	Image Perception, Observer Performance, and Tech Assessment	Dev P. Chakraborty, Miguel P. Eckstein	60
5373	Ultrasonic Imaging and Signal Proc	William Walker, Stanislav Emelianov	39

2005

Medical Imaging 2005: Physics of Medical Imaging

San Diego, CA 12–17 February
Vol. 5745 745 papers (144 in Physics) Attendance: 1180

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Keynote Session - Michael J. Flynn
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Performance Measurement - Aldo Badano
Digital Radiography - John Yorkston
Tomosynthesis and Dual Energy Imaging - James T. Dobbins III

Other Conferences

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5747	Image Processing	Michael Fitzpatrick, Joe Reinhardt	231
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5749	Image Perception, Observer Performance & Tech Assessment	Miguel P. Eckstein, Yulei Jiang	64
5750	Ultrasonic Imaging & Signal Process.	William Walker, Stanislav Emelianov	56

2006

Medical Imaging 2006: Physics of Medical Imaging

San Diego, CA 11–16 February
Vol. 6142 760 papers (184 in Physics) Attendance: 1169

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Keynote Session - Michael J. Flynn
Mammography - Robert M. Nishikawa
Tomosynthesis - Richard L. Van Metter
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X-ray Imaging Detectors I & II- John A. Rowlands / Wei Zhao
X-ray CT: Systems - Bruce R. Whiting
Innovative Imaging - Jiang Hsieh
X-ray Imaging - Michael Overdick
Dual Energy X-ray Imaging - Michael J. Flynn
Computational Simulation - Aldo Badano
CT and DR Performance Assessment - Ehsan Samei
Cone Beam Reconstruction - Jeffrey A. Fessler
CT Image Reconstruction - Thomas Flohr

Other Conferences

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6143	Physiology, Function & Struct. from Med Im	Armando Manduca, Amir A. Amini	117
6144	Image Processing	Joseph Reinhardt, Josien Pluim	243
6145	PACS and Imaging Informatics	Steven C. Horii, Osman M. Ratib	43
6146	Image Percept., Obs Perform. & Tech Assess	Yulei Jiang, Miguel P. Eckstein	44
6147	Ultrasonic Imaging and Signal Processing	Stanislav Emelianov, William Walker	35

2007

Medical Imaging 2007: Physics of Medical Imaging

San Diego, CA 17-22 February
Vol. 6510 858 papers (201 in Physics) Attendance: 1278

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Sessions
Dual Energy - Richard L. Van Metter
Performance Assessment - John A. Rowlands
Innovative Imaging I & II- Aldo Badano / Michael J. Flynn
Detector Technology - Michael Overdick
System Modeling - Christoph Hoeschen
Cardiac Imaging - Jiang Hsieh
X-ray Imaging - Ehsan Samei
Breast Imaging - Ehsan Samei
Tomosynthesis - Robert M. Nishikawa
CT Systems - Bruce R. Whiting
Signal Corrections - Thomas Flohr
Cone Beam Reconstruction - Jeffrey A. Fessler
Advanced Reconstruction - Katsuyuki Taguchi

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6512	Image Processing	Josien P. W. Pluim, Joseph Reinhardt	166
6513	Ultrasonic Imaging and Signal Processing	Stan. Emelianov, Stephen McAleavey	50
6514	Computer-Aided Diagnosis	Maryellen L. Giger, Nico Karssemeijer	131
6515	Image Perception, Obs Perform & Tech Assess	Yulei Jiang, Berkman Sahiner	59
6516	PACS and Imaging Informatics	Steven C. Horii, Katherine P. Andriole	49

2008

Medical Imaging 2008: Physics of Medical Imaging

San Diego, CA 16-21 February
Vol. 6913 788 papers (181 in Physics) Attendance: 1250

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Sessions

Keynote and Small Animal Imaging - Jiang Hsieh; Ehsan Samei
Innovative Imaging - Aldo Badano
Optical and MR Imaging - Mats E. Danielsson
X-ray Detectors I & II - Michael Overdick / Bruce R. Whiting
Performance Assessment and Phantoms - Ehsan Samei
Dual Energy - Jiang Hsieh
Breast Tissue Modeling and Estimation - Ehsan Samei
Breast Imaging - John A. Rowlands
Cardiac Imaging - Christoph Hoeschen
CT Applications - Robert M. Nishikawa
CT System Models - Norbert J. Pelc
Systems and Corrections - Thomas G. Flohr
Tomographic Reconstruction - Jeffrey A. Fessler
Algorithms and Reconstructions - Katsuyuki Taguchi

Other Conferences

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6915	Computer-Aided Diagnosis	Maryellen L. Giger, Nico Karssemeijer	126
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6918	Visualization, Image-Guided Procedures & Modeling	Michael I. Miga, Kevin R. Cleary	106
6919	PACS and Imaging Informatics	Katherine P. Andriole, Khan M. Siddiqui	42
6920	Ultrasonic Imaging and Signal Processing	Stephen A. McAleavey, Jan D'hooge	39

2009

Medical Imaging 2009: Physics of Medical Imaging

Lake Buena Vista, FL 9–12 February
Vol. 7258 866 papers (201 in Physics) Attendance: 1107

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Sessions

Keynote and CT Dose: Tribute to Bruce Hasegawa - Ehsan Samei; Jiang Hsieh
CT Performance - Ehsan Samei; Jiang Hsieh
CT Applications - Norbert J. Pelc
Breast CT - John A. Rowlands
Breast Tomosynthesis - Stephen J. Glick
Nuclear Medicine - Katsuyuki Taguchi
Non-X-Ray Imaging - Hee-Joung Kim; Jinyi Qi
X-Ray Detectors - John Yorkston
Radiography and Mammography Performance - Christoph Hoeschen; John Rowlands
Photon-Counting and Direct-Conversion Systems - Mats E. Danielsson
Tomosynthesis - Christoph Hoeschen
CT Algorithms - Thomas G. Flohr
CT Corrections - Jeffrey H. Siewerdsen
CT Hot Topics - Guang-Hong Chen
CT Reconstruction - Bruce R. Whiting

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7262	Biomedical Appl. in Molecular, Structural, and Functional Imaging	Xiaoping P. Hu, Anne V. Clough	97
7263	Image Perception, Observer Performance, & Tech Assessment	Berkman Sahiner, David J. Manning	64
7264	Advanced PACS-based Imaging Informatics and Therapeutic Appl	Khan M. Siddiqui, Brent J. Liu	35
7265	Ultrasonic Imaging and Signal Processing	Stephen A. McAleavey, Jan D'hooge	51

2010

Medical Imaging 2010: Physics of Medical Imaging

San Diego, CA 13-18 February
Vol. 7622 811 papers (190 in Physics) Attendance: 1094

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Sessions

Keynote and Radiation Therapy Imaging - Ehsan Samei; Norbert J. Pelc
Breast Imaging - Robert M. Nishikawa; Christoph Hoeschen
Breast Tomosynthesis - Stephen J. Glick; Jeffrey H. Siewerdsen
Performance Evaluation - John M. Sabol; Aldo Badano
X-ray Phase-Contrast Imaging - Hee-Joung Kim; Norbert J. Pelc
Novel Imaging Topics - Christoph Hoeschen; Bruce R. Whiting
Breast Imaging - Measurement Techniques - John Yorkston; Ehsan Samei
Selenium-based Detectors - John A. Rowlands; John Yorkston
Photon Counting Detectors - Mats E. Danielsson; John M. Sabol
CT Dose, Quality, and Techniques - Thomas G. Flohr; Michael Grass
Detectors - Katsuyuki Taguchi; Stephen J. Glick
CT Algorithms - Jinyi Qi; Guang-Hong Chen
CT: Dual Energy and Photon-counting - Dianna D. Cody, Mats E. Danielsson
CT Algorithms and Compressed Sensing - Guang-Hong Chen, Bruce R. Whiting
Cone Beam CT - Jeffrey H. Siewerdsen; Michael Grass

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7627	Image Perception, Observer Performance, & Tech Assessment	David J. Manning, Craig K. Abbey	48
7628	Advanced PACS-based Imaging Informatics and Therapeutic Appl.	Brent J. Liu, William W. Boonn	36
7629	Ultrasonic Imaging, Tomography, and Therapy	Jan D'hooge, Stephen A. McAleavey	45

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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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

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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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

Abbreviations

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