

Join ISMRM in

Santa Cruz
CA, USA

23-26 October 2009

*The International Society for Magnetic Resonance in Medicine
presents the Third International Workshop on:*

Parallel MRI

Chaminade Conference Center, Santa Cruz, CA, USA



The ISMRM designates this educational activity for a maximum of
17 AMA PRA Category 1 Credits™.

For More Information: <http://www.ismrm.org/workshops/>

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Phone: +1 510 841 1899 • Fax: +1 510 841 2340 • E-mail: info@ismrm.org
<http://www.ismrm.org/workshops/>

ISMIRM Workshop on: Parallel MRI

OVERVIEW

The field of parallel MRI has evolved rapidly over the past decade, with methodological and technological developments feeding new applications across a broad spectrum of clinical and research areas. This workshop will review developments to date and examine current promising directions and continuing unsolved problems in parallel MRI.

It is the aim of the workshop to bring clinicians and basic scientists together for purposes of education and scientific exchange. In addition to lectures outlining the fundamentals of parallel imaging, invited presentations will address topics such as highly parallel MRI, high field parallel MRI, and parallel transmission techniques. Analogies with other imaging modalities and inverse problems will be explored, as will emerging applications of and vendor perspectives on parallel MRI. The meeting will include focused discussions of outstanding issues such as measurement and reporting of signal-to-noise ratio for parallel reception, or challenges needing to be addressed for practical parallel transmission. These discussions are intended to culminate in concrete consensus recommendations for dissemination and possible publication. We will also set aside time at the end of the meeting to catalogue key unsolved problems and unmet needs in parallel imaging, both as a resource for new entrants into our field and as a means of fostering innovative solutions.

AUDIENCE DESCRIPTION

This workshop is designed for clinicians and basic scientists who are new to the field of parallel MRI as well as established investigators in parallel MRI. Students are encouraged to participate.

EDUCATIONAL OBJECTIVES

Upon completing this workshop, participants should be able to:

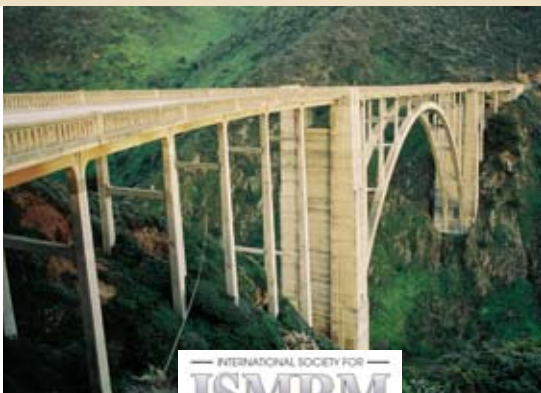
- Describe the basic operation of and recent developments in parallel reception techniques;
- Describe the basic operation of and recent developments in parallel transmission techniques;
- Identify current and emerging applications of parallel reception and transmission;
- Explain the current limits of performance of parallel MRI techniques; and
- Identify important future developments which might allow these limits to be exceeded.



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PRELIMINARY LIST OF SESSIONS

- Parallel MRI: From Beginnings to Today
- Parallel Reception:
Fundamentals and State of the Art
- Parallel Transmission:
Fundamentals and State of the Art
 - Current Applications
 - Limits and Opportunities for Parallel Reception: Highly Parallel MRI and High-Field Parallel MRI
- Emerging Technologies, Methods, and Applications
- Consensus Panels:
 - SNR Measurement and Reporting in Parallel MRI
 - Limits and Opportunities for Parallel Transmission: Calibration, Validation, and Implementation
 - Unsolved Problems in Parallel Transmission
 - Unsolved Problems & Unmet Needs in Parallel MRI



The International Society for Magnetic Resonance in Medicine is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

The International Society for Magnetic Resonance in Medicine designates this educational activity for a maximum of 17 *AMA PRA Category 1 Credits™*. Physicians should claim credit commensurate with the extent of their participation in the activity.



ISMRM Workshop on Parallel MRI Organizing Committee

Chair: Daniel A. Sodickson, M.D. Ph.D.

New York University Langone Medical Center, New York, NY, USA

Mark A. Griswold, Ph.D.

Case Western Reserve University, Cleveland, OH, USA

Peter Kellman, Ph.D.

National Institutes of Health NHLBI, Bethesda, MD, USA

David J. Larkman, PhD

Imperial College London, London, UK

Klaas Pruessmann, Ph.D.

University and ETH Zürich, Zürich, Switzerland

Yudong Zhu, Ph.D.

New York University Langone Medical Center, New York, NY, USA



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CALL FOR PAPERS: Submission deadline for digital abstracts: 21 August 2009

Prospective participants are invited to submit abstracts for oral or poster presentation. Abstracts are limited to one page in length or a maximum of 700 words, including all images, tables, graphs, and references. Submission will be via the ISMRM web site. For complete instructions, please go to <http://www.ismr.org/workshops/>.

BOOK YOUR ROOM EARLY AND SAVE!

The workshop will take place at Chaminade, a mission style hotel and executive conference center located on a 300-acre bluff overlooking the Monterey Bay in Santa Cruz, California, USA. Chaminade's location offers an ideal venue for conferences and is known for its high level of service, outstanding food, spectacular grounds, and guest leisure activities.

Because of the unique location of this workshop, the workshop fee includes workshop attendance and materials, three nights' accommodation (23rd, 24th, and 25th of October), dinner on the evening of the 23rd, all three meals on the 24th and 25th, and breakfast and lunch on the 25th of October.

For travel information, please go to <http://www.ismr.org/workshops/>.

ENJOY *Santa Cruz* CA, USA

*S*anta Cruz is the quintessential beach town. It was here that Hawaiian royalty first introduced surfing to the mainland—and locals and visitors alike have been riding the waves ever since.

Not far from the surf break, calliope music and laughter fills the air at the Santa Cruz Beach Boardwalk, the West Coast's last remaining seaside amusement park. A few blocks from the beach is Santa Cruz's newly renovated downtown. The pedestrian-friendly, tree-lined streets are filled with vibrant shops and galleries, outdoor bistros and sidewalk musicians - all in keeping with Surf City's offbeat personality.



ENROLLMENT APPLICATION: Parallel MRI

Register online: <http://www.ismrm.org/workshops/>

◆ STEP 1: REGISTRATION

Honorific and gender: Male Female
 M.D. M.D. Candidate Ph.D. Ph.D. Candidate Prof. RT Other: _____

Family Name _____ First/Given Name _____ Middle Name _____

Institution _____

City _____ State/Province _____ Country _____

◆ STEP 2: MAILING/CONTACT INFORMATION

This address is for: Work Home This is new contact information YES NO

Street Address _____ City _____

State/Province _____ Zip+4 Postal Code _____ Country _____

Phone _____ Fax _____ Email _____

◆ STEP 3: SPECIAL REQUESTS:

I have a disability and require assistance Please send me an invitation letter for the purpose of obtaining visa

◆ STEP 4: FEES

Workshop fees include:

- Workshop materials
- 3 nights' accommodation (23, 24, 25 October 2009)
 - Dinner on 23rd
- 3 meals on the 24th and 25th
- breakfast & lunch on the 26th
 - Coffee breaks

Please Check One:	↓ Early (By 18 September)	↓ Late (After 18 September)
Member	US \$1700.00	US \$1900.00
Nonmember	US \$1900.00	US \$2100.00
Student Member**	US \$1400.00	US\$1400.00
Student Nonmember**	US \$1500.00	US\$1500.00

** Students include postdocs, residents, fellows, and technologists.

REQUIRED OF ALL REGISTRANTS: Please provide your anticipated arrival/departure dates:

Arrival: _____ Departure: _____

◆ STEP 5: STUDENT VERIFICATION* (Required for all students registering as nonmembers)

Supervisor's Name: _____ Institution Name: _____

Supervisor's Phone: _____ Supervisor's E-mail: _____

◆ STEP 6: How did you learn about this workshop: brochure associate journal ad web email

◆ STEP 7: PAYMENT OPTIONS (FEES MUST BE PAID IN US DOLLARS)

- Check enclosed (personal, bank, institution) made payable to ISMRM in US dollars.
 Credit Card: Please charge registration fees to my: VISA AMEX MasterCard

Cardholder's Name (please print clearly) _____ Cardholder's Signature _____

Billing Street Address (required) _____ Postal Code _____

Card Number _____ Expiration Date _____ **US \$**
Payment Amount

Register by Mail: ISMRM, P.O. Box 45690, San Francisco, CA 94145-0690 USA

Register online: <http://www.ismrm.org/workshops/>

REFUNDS/CANCELLATIONS: To cancel registration, you must request a refund in writing by 2 October 2009. Your fee will be refunded, less a \$75 processing charge. No refunds can be granted for cancellation after this date.