

MR PULSE

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Letter from the President

Expectations for the Seattle annual meeting are running high. Both ISMRM and SMRT are enjoying record memberships. Many of you have been working very hard on getting your ISMRM abstracts ready. As a result of the very large number of submitted abstracts and the increased acceptance rate (about 80%), the Seattle meeting will set a new record in the number of presented abstracts. Apart from sharing with you this news illustrating the excellent scientific health of our Society, the goal of this letter is to inform you of the many organizational aspects of the ISMRM in this period of the year, and to ask for your input in trying to strengthen our organization and improve its services to you and to the Society at large.

Our guide in all organizational activities of our Society is the Strategic Plan, available on the ISMRM Web site (<http://www.ismr.org/about.htm>). It is a short and clear document summarizing what the ISMRM is about, its mission, values, and goals. Its importance is evident in the meetings of the Board of Trustees, our Society's highest authority. The Board meets three times per year, twice at the annual meeting, and the third time in November, in the weekend preceding the RSNA meeting. The agenda of each Board meeting is organized along the seven major goals of the Strategic Plan. The Strategic Plan should evolve and be renewed every three to five years. Please contact us if you have suggestions or comments.

The latest strategic plan was adopted by the Board in 2004. Following this decision, all committees were asked to address the goals of the ISMRM relevant to their committee by developing new objectives and prioritizing them. Also, the Central Office is organized along the needs resulting from the goals in the strategic plan. The Board oversees and guides the activities of the committees and Central Office. Many initial changes resulted from the new Strategic Plan, some of which are evident for you at our annual meeting, such as the new initiative in offering walks-through-the-week for the different organ subspecialties: neurological, body, vascular, and musculoskeletal. The Outreach Program and the tremendous support for student stipends are other examples.

During the first year of the strategic plan, it became evident that our organization and committee structure are no longer optimal to properly address all goals. As part of this optimization process, we examined whether the size of our Board was appropriate for an organization the size of the ISMRM, and whether any of our committees could be retired or consolidated with other committees. When organizational changes require a change in the Bylaws of the ISMRM (see our Web site), the membership is asked to vote on the proposed changes, and a majority approval is needed to adopt them. Recently, you were asked to vote on the proposed reduction of Board members, and you approved it overwhelmingly. As a result, the number of Board members will be reduced by six over a period of three years. Soon you will be asked to vote again on important

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modifications this time relating to our committee structure. This proposed restructuring was prepared by the Governance Committee chaired by Walter Kucharczyk. The Board spent a long time during its last meeting debating the proposed changes and adopted them with some small modifications. This is probably one of the most significant committee restructuring initiatives, and, therefore, I would like to briefly discuss them here. As you will notice, the proposed modifications are interconnected to various degrees.

1) Annual Meeting Program Committee

In previous years, the responsibility over the scientific aspects of the annual meeting was with the Scientific Program Committee (SPC). The Education Committee organized the weekend courses and part of the weekday courses, whereas the SPC also had the responsibility over some other weekday courses. Feedback from our membership, the increasing complexity of our annual meeting with respect to science and education, and the positive effect of the Miami walk-through-the-week educational program have highlighted the need for further linking of all educational activities and scientific parts of the program in the different fields of interest. The proposal therefore is to create an Annual Meeting Program Committee (AMPC) with full responsibility of Scientific and Educational Activities. It was realized early on that such a change would have many implications. For example, the size of the AMPC would further increase with its inherent risk of organizational problems. In order to prepare for this major change and to gain valuable experience, David Norris and Leif Ostergard, chairs of the SPC and Education Committee respectively, met with their combined committees in Miami, and started the combined approach towards the Seattle meeting. Apart from the major task of organizing the Seattle meeting itself, they, together with their successors Georg Bongartz

and Kim Butts, also worked out several practical ways to improve efficacy of the large combined committee by designating committee members with either overall educational or scientific coordination responsibility in particular areas. Overall, I am very impressed with the way the preparations of the Seattle meeting have been going.

2) Education Committee

Since all educational activities at the annual meeting will be with the new AMPC, if accepted by the membership, the activities of the Education Committee must be revised. It is proposed that the Education Committee shall be responsible for all of the Society's educational operations, except those at the Annual Meeting, which shall be the responsibility of the Annual Meeting Program Committee. The Education Committee's responsibilities will include new education initiatives and evaluation of proposals for new educational initiatives such as educational workshops under the Outreach Program. Since the distinction between the new Education Committee and the existing Global Development Committee (GDC) would become vague, the new Education committee would assume all responsibilities of the current Global Development Committee and the latter would cease to exist. The other functions of the GDC would be re-assigned to other Committees. Most notably, the Zavoisky Fund, and the awards from this Fund to its recipients, would become the responsibility of the Finance Committee. Along similar lines of reasoning in redirecting financial responsibilities to the Finance Committee, one of the current responsibilities of the Education Committee is the Student Stipends. The Board feels that this function should also be re-assigned to the Finance Committee.

3) Workshop and Study Group Committee

Historically, the workshop committee

has reviewed all scientific workshop proposals. However, the majority of such workshops are organized by the Study Groups. In addition, the Study Group Review Committee currently has limited responsibilities. Therefore, it was felt that the proposed combination of the Workshop and Study Group Review Committees into a single Workshop and Study Group Committee would streamline the process of guiding workshop proposals and would have the potential of better addressing the needs of Study Groups.

4) Publications and Communication Committee

Our scientific journals, MRM and JMRI, are very important for the ISMRM, scientifically as well as financially. Until now, the ISMRM has had a separate Publications Committee. In addition, the Strategic Plan has clearly identified the need to improve communication with our members and the public. The ISMRM has previously had an Ad Hoc Committee on Electronic Communications. However, with the increased importance on communication in the Strategic Plan, the Board proposed to combine the tasks of the current Publication Committee and those related to communication aspects of the Strategic Plan and thus create a single Publications and Communication Committee.

5) Student Stipend Committee

Very significant financial support for student stipends is considered by the Board and our corporate sponsors an excellent investment in the future. The Subcommittee on Student Stipends fulfills the role of selecting candidates very well. The Board felt that this responsibility, as well as the selection of Zavoisky fund recipients (dedicated to members from countries with limited financial means) is best placed under the auspices of the Finance Committee. Therefore, the proposal is that the Subcommittee on Student Stipends will become a subcommittee of the Finance Committee rather than the Education

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Committee, and the Zavoisky Stipends will be administered by the Finance Committee.

Other ongoing activities are the scientific and educational workshops. A very successful Safety Workshop was held in November, organized by Frank Shellock and J. Daniel Schaefer, attracting 160 attendees from US, Europe, and Asia (see report on page 7 of this issue). In addition to addressing ongoing developments and research in safety aspects, several areas were identified with a need for further peer-reviewed research, such as epidemiological research and effects of very high field. The Safety Committee is analyzing the discussions at the workshop in view of helping to develop a research program in MR safety together with science policy organizations (as part of Goal 5 of the Strategic Plan). Further exciting workshops will be held on Real-Time MRI in February 2006, MR Flow and Motion in July 2006, and MR of Cancer in October of 2006, as well as endorsed workshops (<http://www.ismrm.org/workshops>).

Excellent educational workshops, as part of the International Outreach Program identified in Goal 3 of the Strategic Plan, were held in Beijing (principal organizer Debiao Li), Seoul (principal organizer Tae-Sub Chung), and Mexico City (principal organizer Patricia Silva). The latter workshop was held with simultaneous translation from English to Spanish and attended by close to 400, a record for the Outreach Program. Further workshops are planned in Bangkok, China (city to be determined), Cape Town, Sao Paulo, Rio de Janeiro, and Buenos Aires. The tremendous success of the Outreach Program is in large part due to the efforts of our local champions, as well as the excellent guidance by Walter Kucharczyk, who has developed Standard Operating Procedures for members interested in organizing such meetings.

The SMRT has seen record attendance to its meeting. The SMRT will hold its annual meeting again in conjunction with the ISMRM in Seattle. The SMRT is very active in organizing educational programs through regional events and local chapters. Of particular importance was the recent approval to become a Recognized Continuing Education Evaluation Mechanism (RCEEM) for ARRT, allowing the SMRT to evaluate applications for continuing education. This RCEEM status provides important organizational breadth and flexibility aligning with the SMRT's strategic plan, and is expected to provide further impetus for growth, especially in the USA, and hopefully also in other countries.

Communication is an essential element of ISMRM activities as part of Goal 4 (and in part of Goal 5) of the Strategic Plan. The ISMRM will actively pursue to improve communication by multiple approaches. The Central Office, with help of Patrick Stroman, our Web site editor, is designing a new Web site with improved functionalities for members, sponsoring companies, and the public at large. Suitable MRM and JMRI papers will be selected by our journal editors, Mike Smith and Leon Partain, and made available to the general public. An attendee survey is being planned following the Seattle meeting. With all ongoing changes, your input will be much appreciated.

With the increasing activities and visibility of the ISMRM, the ISMRM has widened the possibilities for corporate sponsorship as part of Goal 6 of the Strategic Plan. In particular, an entry level sponsorship was created provisionally called "Corporate Associate Member" intended for start-up and small companies with an interest in MR. Also, possibilities now exist to sponsor individual elements of the educational activities. Please, see the Web site for more details.

The ISMRM is in good financial health with reserves of about 4 M\$. The Board felt that it is important to have sufficient reserves to deal with cancellation of at least one annual meeting, and investments in programs related to our Strategic Plan. Please, note that the cost of the Seattle meeting is estimated at 2.3 M\$. Costs for congress venues for annual meetings outside North America are significantly higher. Our Finance Committee is reviewing the various reports and budget planning. It has been chaired by Roxanne Deslauriers, as the ISMRM Treasurer, for more than five years. She recently indicated that she is planning to step down at the end of fiscal year 2006. Let me thank her on behalf of our members for her clarity in communicating financial matters to the Board and guiding the Society towards good financial health. Please let us know if you are interested in this position.

For those of you who had difficulties in submitting abstracts because of server problems at the company that we contracted for abstract handling, we apologize for the inconvenience. ISMRM abstracts are notoriously difficult to handle because of their complexity. Nevertheless, it is important that sufficient bandwidth is guaranteed by our subcontractors. We are actively working on ways to avoid a repeat of such problems.

In closing let me thank the numerous volunteers in the ISMRM and SMRT, our abstract reviewers, our officers and committees, and our dedicated Central Office. I look forward to hearing your feedback, to knowing your decisions in the upcoming ballots on committee structuring and elections, and of course to seeing you all in Seattle.

—Chrit Moonen, Ph.D.
ISMRM President

Message from the Executive Director

Dear ISMRM Members,

I am pleased to inform you that planning for the ISMRM 14th Scientific Meeting & Exhibition, to be held in Seattle, Washington, USA, 6-12 May 2006, is well underway. With the abstract deadline behind us, as well as the review, we are currently preparing for the Annual Meeting Program Committee meeting, to be held in January, and are planning to have notifications out to the authors no later than the first week of February. Decisions regarding the student stipend applications will follow these notifications by a couple of weeks, as the work of the Subcommittee on Student Stipends commences once the abstract decisions have been made.

I want to take this opportunity to thank all of you who were struggling in the final hours of the deadline for your patience as we struggled with bandwidth. We want to assure you that all measures will be taken to insure that this is not an issue in the future. In addition, I would like to thank our 300-plus reviewers who sacrificed many hours over the holidays and during RSNA reviewing the 4,573 abstracts that were submitted for peer review this year. It is a monumental task, and, as always, our membership has proven to be our greatest asset. You make the work of the Central Office so much easier by your responsiveness and willingness to serve. Thank you.

In the midst of planning for the annual meeting, we continue to work with you to organize workshops of topical interest. I encourage you all to monitor our Web site as we have a number of ISMRM workshops scheduled, in addition to endorsed workshops and programs organized under the auspices of the International Outreach Program. In addition, the SMRT continues to plan and execute very successful Educational Regionals throughout North America, having just concluded nine Regionals this past fall.

Work continues in the redesign of our Web site, with the aim of providing not only a new "look" but a significant increase in functionality as well. We plan to launch the

new site in February. In the meantime, we encourage you to monitor our Web site for new program information, workshop announcements, member announcements, as well as archived workshop presentations, syllabi, Annual Meeting Proceedings, MR Pulse, to name just a few of the benefits available to you as a member of this organization.

Since I last corresponded with you, we have made a few adjustments in staff here at the Central Office. I am pleased to welcome Kailin Mardones, our new Administrative Assistant, as well as Sara Vasquez, our new Publications Coordinator. In addition, Amanda Knapp is now assisting Robert Goldstein and Jennifer Olson as our Education Coordinator, and Katie Simmons has taken over as the Director of Meetings. Please take a moment and see "who's who at the Central Office" on our Web site (<http://www.isrmr.org/centoff.htm>).

We hope you will all join us in Seattle this year for the annual meeting. I encourage you to make your hotel reservations now as well as register. Remember, The ISMRM has made contract commitments in order to assure a wide range of hotels and prices from which to choose over the dates of our meeting, and to assure that these hotels are clean, safe, and in good proximity to the Washington State Convention & Trade Center. The ISMRM does not make money from the hotels. Instead, the hotel contracts stipulate that the ISMRM must fill a certain percentage of the rooms it has contracted to avoid attrition liability. So please book your room through the official housing company, Convention Housing Management. You will find all the necessary information on our Web site (<http://www.isrmr.org/06>). If you have any questions or need assistance, please do not hesitate to contact us here at the Central Office.

On behalf of the ISMRM Central Office staff, we wish each of you a very happy and prosperous New Year.

**—Roberta A. Kravitz
Executive Director**

Annual Meeting Program Committee Update

Since the last issue of Pulse, abstract submission and review have been completed and the AMPC is now looking forward to the construction meeting in Boston in January. Towards the end of the abstract submission period, the system became overloaded and incredibly slow. As a result, the deadline had to be extended by a day. This problem was unanticipated as the load on the system was essentially the same as in 2004. We are truly sorry for the inconvenience caused, and ISMRM is now working to ensure that this does not happen again. On a brighter note, the number of abstract submissions was 4,573, which is roughly the same number as Miami, however the greater size of the venue means that we should have an approximately 80% acceptance rate, which will make Seattle the largest ISMRM meeting ever.

Please also note that the 'Sounds and Visions' of MR has now returned to the program, so if you wish to contribute to this, the deadline is the 15th January.

The AMPC and the office are all working very hard to make the meeting in Seattle a great success. More details of the program will emerge after the construction meeting, so keep an eye on the ISMRM web page for these.

—David Norris, Ph.D.

BOARD MOTIONS, JULY & NOVEMBER 2005

- It was moved, seconded, and carried to approve the addition of China to the current defined list of countries whose nationals may qualify for ISMRM Associate Membership.
- It was moved, seconded, and carried to approve the addition of Macedonia to the current defined list of countries whose nationals may qualify for ISMRM Associate Membership.
- It was moved, seconded, and carried to approve a new level of corporate sponsorship, Associate Corporate Member, at the level of US\$7,500.
- It was moved, seconded, and carried to approve the sponsorship of Annual Meeting courses at the US\$5,000 level, to be offered on an exclusive basis to Gold, Silver, and Bronze Corporate Members first, Associate Corporate Members second, Exhibitors third, and then to open sponsorship up to companies outside the corporate membership program and the technical exhibition.
- It was moved, seconded, and carried that the Board increase the amount of funds designated for operating emergencies, from \$1.85m to \$2.3m, to reflect more accurately the current cost of one Annual Scientific meeting.
- It was moved, seconded, and carried to slightly increase the balance of investments – as advised by Sanford Bernstein to ISMRM – in emerging stock markets and developed international stock markets in order to reflect the nature and vision of ISMRM.
- It was moved, seconded, and carried to approve the nominations put forward by the Nominating Committee.
- It was moved, seconded, and carried to approve the nominations put forward by the Awards Committee.
- It was moved, seconded, and carried to ask the Governance Committee to review mechanisms to enhance the effectiveness of Board members.
- It was moved, seconded, and carried to propose to the membership by ballot a single Publications and Communication Committee to deal with all aspects of publication and communication.
- It was moved, seconded, and carried to propose to the membership by ballot a single Annual Meeting Planning Committee fulfilling the roles of the previous Scientific Program and Education Committees.
- It was moved, seconded, and carried to propose to the membership by ballot a single Workshop and Study Group Committee and a single Education and Global Development Committee to be responsible for all education functions of ISMRM outside of the Annual Meeting. The single Education and Global Development Committee would have responsibility for the Global Outreach Program, but would not have responsibility for student stipends or the Zavoisky Fund.
- It was moved, seconded, and carried that the Student Stipend Subcommittee will handle student stipends and the Zavoisky fund and will become a subcommittee of the Finance Committee; that the chair of the Student Stipend Subcommittee will be a member of Finance Committee.
- It was moved, seconded, and carried that the nominations process should avoid the possibility of having three consecutive presidents from the same geographical region.
- It was moved, seconded, and carried to approve sponsorship of the ISMRM Cancer MR Study Workshop on Frontiers in Metabolic, Molecular and Clinical Imaging.
- It was moved, seconded, and carried to approve sponsorship of the ISMRM Flow & Motion Study Group Workshop on Imaging Assessment of Cardiovascular and Tissue Mechanics.
- It was moved, seconded, and carried to approve ISMRM endorsement of the 6th Interventional MRI Symposium.
- It was moved, seconded, and carried to support the Global Outreach Program for three years with up to \$75K per year to be spent if this amount is not obtained from commercial sponsors.
- It was moved, seconded, and carried to increase the budget for student stipends by \$75K.
- It was moved, seconded, and carried to approach the NIH for a R13 grant to support student stipends for attendance at the Annual Meeting.
- It was moved, seconded, and carried to approve the budget FY2006 as recommended by the Finance Committee, with an additional \$17K expense for journal postage charges, up to \$75K underwriting for global outreach, \$75K for Student Stipends, and support of an additional workshop in July 2006 that is projected to be revenue neutral.



REMINDER: Do Not Forget to Vote!

Board of Trustee & Study Group ballots will be mailed 13 January 2006. Remember, in order for your vote to be counted, your 2006 membership dues must be paid, and the completed ballots must be postmarked on or before 28 February 2006 and received on or before 7 March 2006 by the ISMRM Central Office.

ISMRM 2005 Annual Meeting Outstanding Teacher Awards

To recognize outstanding educational contributions to the ISMRM meeting, the Education Committee acknowledges the highest rated speaker in each of the weekend educational courses. Recipients of these awards have been determined by the evaluation scores which attendees gave to the speakers.

We thank all our attendees who let us know about these outstanding teachers.

MR Physics for Physicists – Douglas C. Noll

Clinical MRI: From Physical Principles to Practical Protocols – Vivian S. Lee

Breast Imaging – Kathy Brandt

Quantitative Image and Data Analysis – Derek K. Jones

MR and Molecular Imaging – Robert N. Muller

Methods and Applications of Clinical Spectroscopy – Daniel M. Spielman

Artifacts and Pitfalls – Mark Schweitzer

Current Debates and Recent Advances in Functional MRI – Luc Pellerin

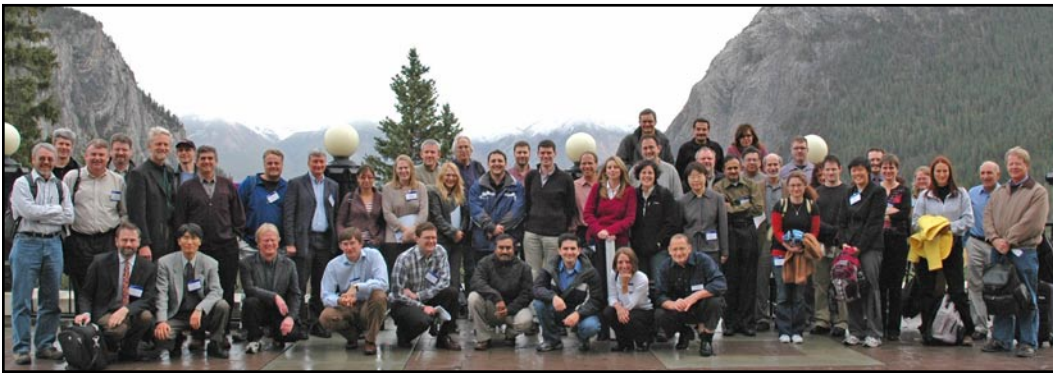
Experimental Methods in MR of Cancer – Hadassa Degani

Musculoskeletal MRI – Christine Chung

Advanced Neuro MR – Howard A. Rowley

Cardiac MR – Robert M. Judd

Advanced Body MR – Hedvig Hricak



Upon departure, participants gathered at the Garden Terrace overlooking a beautiful valley.

The Dynamic Spectroscopy and Psychiatric MR Spectroscopy & Imaging Study Groups organized a joint workshop on MRS Applications to Neuropsychiatric Disorders, which took place 15 - 17 October in Banff, Alberta, Canada. The purpose of the workshop was education in MRS techniques and the etiologies of diseases. For this purpose, the approximately 100 attendees included not only experts in MRS acquisition and analysis, but respected specialists in several neuropsychiatric disorders.

The opening session, with presentations by Kelvin Lim, M.D., and Gerard Sanacora, M.D., Ph.D., sparked a lively 45-minute discussion about the role of MRS, what kind of research questions it should address, and, most fundamentally, what research is needed to advance our understanding of neuropsychiatric disorders. The workshop covered issues associated with spectral fitting and quantification, spectroscopic imaging, nuclei other than protons, detection of GABA and glutamate, and spectroscopic quality control in a patient environment. These areas were presented with the perspective of methodological education and with applications to several diseases. Applications were also highlighted in the poster sessions, with focus on half the posters each day.

Although the workshop ran into the evenings, there was still time for contemplation and conversation immersed in the glorious Canadian Rocky Mountains. After the late sessions, many found time for conversation and locally brewed beer, and one afternoon was scheduled for relaxation, which included a scenic bus tour planned by Peter Allen and ISMRM Director of Meetings Katie Simmons. There have been several reports of attendees returning home enthused to apply MRS to advance their research. There have already been several requests for a repetition, improved by experience, and perhaps it is time to begin to plan to meet those requests.



The organizing committee: (l to r): Roland Kreis, Ph.D., Kelvin O. Lim, M.D., Peter S. Allen, Ph.D., Katie Simmons, Graeme F. Mason, Ph.D., Douglas L. Rothman, Ph.D., and Dieter J. Meyerhoff, Ph.D.



Attendees enjoyed the tour of Bow Lake despite the wet weather.



The workshop presentations served many interests and attracted MR professionals from across the globe.



The rain didn't stop these attendees from admiring Lake Louise.

—Graeme Mason, Ph.D.
Workshop Organizer

The 2005 ISMRM safety workshop, "Workshop on MRI Safety: Update, Practical Information, and Future Implications," was held on 5 and 6 November 2005 in McLean, Virginia. The previous ISMRM Safety Workshop was held in February 2003 in Munich, Germany. Several safety workshops have been held since the earliest MR safety workshop held in San Francisco in 1984. The 2005 meeting was broken into four broad Special Focus Sessions dealing with timely issues including: (1) "Practical Information for Clinical and Experimental MRI" (chaired by Dr. Alayar Kangarlu), (2) "Interventional MR Procedures: Applications and Safety Aspects" (chaired by Dr. Joel Felmlee), (3) "MRI Safety for Implants and Devices" (chaired by Dr. Frank Shellock),



Speaker and moderator Patrick M. Colletti, M.D. and workshop organizing co-chairperson, Frank G. Shellock, Ph.D. stop for coffee and a pose.

and (4) "MRI Safety Standards, Guidelines and Recommendations" (chaired by Dr. Hans Engels and Dr. Loren Zaremba). Each of the Special Focus Session chairs also conducted roundtable discussions to permit the speakers and audience to explore issues in more depth.

The eighteen invited speakers covered a variety of topics including

high field safety, time-varying gradient field safety, RF power deposition, contrast agent safety, MRI and pregnant patients, patient screening, interventional focused ultrasound, worker and patient safety in interventional MR, implanted device (such as pacemakers, neurostimulators, and sedation equipment) safety in MRI, and safety standards for patients, for workers, and for device compatibility. Sixteen proffered papers were presented orally and nine were presented as posters. The three oral sessions for the proffered papers were capably chaired by Dr. Patrick Colletti, Dr. Stephen Hushek, and Dr. John Nyenhuis.

One issue that generated concern among the attendees involved the MR estimated SAR level and how this impacted heating for implants placed in phantoms. There was confusion over the meaning of displayed SAR estimates. It turns out these estimates are not typically valid for phantoms. Direct SAR measurements are likely to be required, but how this will ultimately be utilized by MR users remains to be determined.

It was clear that closer cooperation is needed from MR system manufacturers, implant companies, and regulatory scientists to devise test procedures to ensure safety of patients with implants and other devices. Much of this work is being done by an ASTM, International committee chaired by Dr. Terry Woods from the FDA.

There is also growing concern over whether the upcoming European Directive will establish such conservative safety limits (especially for static magnetic field exposures) that the development of and possibly even the practice of MR may be severely hampered. Dr. Hans Engels presented an invited talk on this subject and on progress by the International Electrotechnical Commission (IEC) Maintenance Team (MT) 40, which he chairs, to develop occupational and patient safety limits. An informal general discussion begun by Dr. Martin Prince and Dr. Hans Engels led to the development of a new ISMRM MR Safety Study Group. Dr. Alayar Kangarlu agreed to serve as Chairman, Dr. Joe Schaefer, agreed to serve as secretary, and Dr. Frank Shellock agreed to serve as Program Director.

A great many other important issues also were presented and discussed. The syllabus is available from ISMRM (<http://www.ismr.org>). Workshop organizers included Dr. Frank Shellock and Dr. Joe Schaefer. Abstracts were reviewed by both the organizers and by Dr. Joel Felmlee. They were supported by the outstanding efforts of the ISMRM staff. Bob Goldstein, Roberta Kravitz, and Katie Simmons deserve special mention because of their considerable efforts to make this well-attended (about 160 participants) workshop such a wonderful success.



(left to right): SMRT members: Julie Strandt-Peay, Maureen Ainslie, Maureen Hood, and Vera Miller.

— Dr. Joe Schaefer
Workshop Organizer

The Global Outreach Program is an initiative of the ISMRM that began in Shanghai with a short two-day educational workshop in May 2004, immediately after our Kyoto Annual Meeting. Due to the tremendous popularity of the Shanghai meeting, ISMRM undertook to expand the program, with an aim of holding three to five meetings each year, in parts of the world where we felt there was a need for education in MRI and MRS, yet where ISMRM had little presence at the current time. 2005 was the first complete year for ISMRM's Global Outreach Program. Four meetings were held in 2005, varying in length, number of speakers, content, and location. All of the meetings were organized and held jointly with national organizations, either radiological or MRI societies, or universities, and each was held in a part of the world where ISMRM had previously had little or no presence. The duration of each meeting was between one and three and a half days. All of the lectures at all of the meetings were in English, except for three lectures in Spanish at the Mexico City meeting. The number of invited speakers was as few as five, and as many as fifteen. Two of the meetings were integrated with our other national meetings; two were stand-alone meetings. The information about each of the 2005 meetings is summarized in the table shown.

At the beginning of 2005, ISMRM had no commitment of funding from any of its sponsors for any of the 2005 program. Despite this financial uncertainty, ISMRM allocated \$25,000 of its budget to support accommodation costs for invited speakers, and decided to proceed with the first meeting, the Singapore meeting, regardless of speaker travel support. Fortunately, we were able to find several outstanding speakers for Singapore willing to travel at their own expense. Shortly afterwards all three of our Gold Sponsors – Siemens, Philips, and GE – agreed to each

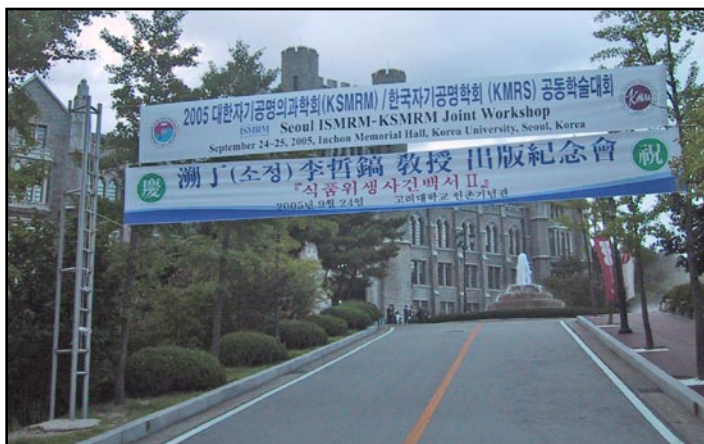
contribute \$25,000 USD for the 2005 program to support speaker expenses. This eased the financial pressure for the remaining three meetings of 2005, and allowed for a wider selection of speakers. In return for their sponsorships, our Gold Sponsors were prominently acknowledged at each meeting, and were given the option of holding their own sponsored events (lunch symposia, evening receptions) at each of the last three meetings. These sponsored events presented their own challenges, such as how to treat all three sponsors equitably for sponsored events when the meeting in some cases was only one day in duration! Nevertheless, despite some organizational hiccups, in every case the meetings had outstanding content and a high level of satisfaction amongst attendees. As is evident in the table on the next page, by far our best attendance was at the Mexico City meeting. This was likely due to several factors but probably the most important was the outstanding organizational work by Dr. Patricia Silva and her colleagues in the Mexican Society of Radiology and Imaging.

It is my opinion that local attendees have found these programs extremely educational. I also believe that some ISMRM members would find it very attractive to attend some of these global programs, not only because of their outstanding content, but also because of their interesting locations and opportunity to meet their colleagues from all over the world. The ISMRM is facilitating its members attendance at these meetings by ensuring that ISMRM members are granted free registration for these meetings, or at markedly reduced rates, typically less than \$100.

For your information, I have included an outline of the programs that are planned for 2006, as well as a detailed program for the first meeting of the year, which will be in Bangkok, 22-23 March 2006. Please consider coming to our first meeting in Thailand!



Attendees enjoy a meal at the National University of Singapore - ISMRM Joint Course in Advanced Imaging of Cancer faculty dinner.



Korea University's Incheon Memorial Hall was the meeting place for the Seoul Joint ISMRM - KSMRM Joint Workshop.

See *Global Outreach* page 9



Faculty entering the lecture hall at the National University of Singapore - ISMRM Joint Course in Advanced Imaging of Cancer.



Professor Mark Henkelman and Professor Ming Wang, the organizer, during the National University of Singapore - ISMRM Joint Course in Advanced Imaging of Cancer.

2005 GLOBAL OUTREACH PROGRAM MEETINGS

Location	Month	Duration (days)	Attendance (estimated)	Organized Jointly with	Theme	Stand-Alone or Integrated	Principal
Singapore	March	2	80	National University of Singapore	Advanced MRI Methods in Cancer	Stand-Alone	Ming Wang
Beijing	Sept.	1	150	Chinese Society of Radiology	State-of-the-Art MRI at 1.5 and 3T	Integrated	Debaio Li
Seoul	Sept.	1	125	Korean Society of Magnetic Resonance in Medicine	MRA	Integrated	Tae-Sub Chung
Mexico City	Oct.	3.5	380	Mexican Society of Radiology	State-of-the-Art MRI	Stand-Alone	Patricia Silva



The speakers join for a photo at the Seoul Joint ISMRM - KSMRM Joint Workshop.

See *Global Outreach* page 10

2006 GLOBAL OUTREACH PROGRAM SCHEDULED MEETINGS

Location	Month	Organized Jointly with	Theme	Stand-Alone or Integrated	Principal
Bangkok	22-23 Mar	Thai Society of Radiology	State-of-the-Art MRI	Integrated	Ming Wang
China (TBA)	Summer	Chinese Society of Radiology	Not known	Not known	Debaio Li
Romania	24-28 June		MRI & MRS Summer School	Stand-Alone	Gheorghe Mateescu
Cape Town	12-16 Sept	ICR and South African Rad Society	State-of-the-Art MRI	Integrated	Jan Labuscagne
Buenos Aires, Rio and Sao Paulo	4-12 Nov	Brazilian and Argentine Neurorad Societies	State-of-the-Art in MRI: Neuro, MSK, CVS & Body	Stand-Alone	Patricia Silva

Invited Speakers

BANGKOK

22-23 March 2006

Prof. Paul FINN, Department of Radiology, UCLA, USA; Pres-Elect of ISMRM
 Prof. Winfried WILLINEK, Department of Radiology, U of Bonn, Germany
 Prof. Brian RUTT, Imaging Research, Robarts Research Institute, London, Canada
 Prof. Ming WANG, Dept of Radiology, National University of Singapore
 Prof. Lynne STEINBACH, Dept of Radiology, UCSF, USA
 Prof. Howard ROWLEY, Dept of Radiology, U of Wisconsin, USA

22 March 2006

9:00 Welcome from the ISMRM (5 minutes)(FINN)
 CONTRAST ENHANCEMENT in MRI and MRA
 9:05 Contrast Agents in MRI and MRA: Basic Principles and New Developments (WANG)
 VASCULAR and CARDIAC MRI and MRA
 9:45 MRI for Carotid Artery Disease (FINN)
 10:25 Coffee and Tea Break (20 minutes)
 10:45 Vascular MRI of the Lower Extremities (35 minutes) (FINN)
 11:20 Cardiac MRI in Acquired Heart disease (FINN)
 12:00 MRI in Congenital Heart disease: Adult and Pediatric (FINN)
 LUNCH (12:40 - 14:00)
 Lunch Symposium by one of our Gold Sponsors
 VASCULAR MRI and MRA (continued)
 14:00 Direct Imaging of Atherosclerotic Plaque - The Future of Stroke Risk Assessment (RUTT)
 ABDOMINAL and PELVIC MRI
 14:40 Pelvic MRI: Most Important Current Indications (WILLINEK)
 15:20 MRI for evaluation and differential diagnosis of diffuse and focal liver disease (WILLINEK)
 16:00 Coffee and Tea Break (20 minutes)
 16:20 Parallel imaging and other new developments for body MRI (30 minutes) (WILLINEK)
 16:50 Ultra-fast body MR imaging (30 minutes) (WILLINEK)
 POSSIBLE RECEPTION (17:20 - 19:00)
 Symposium by one of our Gold Sponsors

23 March 2006

ABDOMINAL and PELVIC MRI (continued)
 8:30 Whole body MRI at 3.0T (30 minutes) (WILLINEK)
 MUSCULOSKELETAL MRI
 9:00 MRI of the knee (80 minutes) (STEINBACH)
 10:20 Coffee and Tea Break (20 minutes)
 10:40 MRI of the elbow (STEINBACH)
 11:20 MRI of the wrist (STEINBACH)
 12:00 MRI of musculoskeletal soft tissue neoplasms (WANG)
 LUNCH (12:40 - 14:00)
 Lunch Symposium by one of our Gold Sponsors
 BREAST MRI
 14:00 Breast MRI (WANG)
 BRAIN MRI
 14:40 Stroke: Diffusion and Perfusion (ROWLEY)
 15:20 Coffee and Tea Break (20 Minutes)
 16:00 CNS Vascular Malformations (ROWLEY)
 16:40 CNS Infections (ROWLEY)
 17:20 Epilepsy Imaging: State of the Art (ROWLEY)
 24-25 March 2006 - Thai Radiology Society Annual Meeting

— Walter Kucharczyk, MD, FRCP(C)
 Past-President, ISMRM

Message from the SMRT President

It is hard to believe how fast the year is going. The ISMRM abstract deadline has passed, and the SMRT abstract deadline of 18 January 2006 is quickly approaching. Before we know it, the 2006 SMRT Annual Meeting program, themed "Soaring to New Heights in MR Education," will be upon us.

The number of abstract submissions has been increasing every year, and we expect no less for Seattle. Following the lead of the ISMRM, the SMRT has moved to electronic process, both for abstract submissions as well as peer review and scoring. In addition, the SMRT is capturing and archiving the posters electronically. Our ISMRM colleagues can contribute to technologist education and their technologists' professional welfare by encouraging and, if necessary, assisting them with the submission process. Are the technologists in your area submitting abstracts?

Ballot results for the SMRT Executive Committee and Policy Board were announced in early December. I have the honor of introducing to the ISMRM Carolyn Bonaceto as the SMRT President Elect for 2006-2007. Carolyn will assume the Presidency of the SMRT in May 2007. Joining the Policy Board and serving a three-year commitment are Randy Earnest of Provo, Utah, USA; Anna Kirilova of Mississauga, Ontario, Canada; Caron Murray of Toronto, Ontario, Canada; David Stanley of Proctor, Minnesota, USA; and Nancy Talbot of Burlington, Ontario, Canada. The winner of the 2006 Crues-Kressel Award for excellence is Maureen Hood of Bethesda, Maryland. The new Policy Board members will take office during the SMRT Business Meeting, Saturday, 6 May 2006. The presentation of the Crues-Kressel Award will take place during Saturday's meeting as well.

The SMRT Annual Meeting program is set and ready for all those who are ready to learn. The program will commence on Friday, 5 May 2006, in Seattle, with the Poster Exhibit and Walking Tour Presentation. This event allows technologists to engage with colleagues and to review posters informally. Poster authors will be available to the attendees during the tour for questions regarding their work.

The full program is available to read on the Web site, but, surely, one of the highlights will be the ever-popular Dr. Michael Moseley, speaking on "Trends in Diffusion Imaging." The 3T Update Forum on Saturday afternoon will present information on body, cardiac, neuro, and pediatric imaging at 3 Tesla. During Saturday's SMRT Business Meeting, the gavel will pass to Cindy Comeau as she commences her year as SMRT President. Ending Saturday's program will be Dr. Diego Martin, presenting "The Current and Developing Approach to Body MRI: How and Why We Do It."

Sunday's busy day will begin with the Breast MR Forum featuring Dr. Constance Lehman and Mr. Michael Coles. Following and ending the morning's presentations will be Dr. Frank Shellock and Mr. Tobias Gilk. The Safety Forum will provide technologists with safety information and updates in and around the MR suite. The busy day will end with the MR Education and Certification Forum, representative of MR technologists and radiographers from around the world. There will be updates on international standards as well as US standards.

A big part of the SMRT program, as always, is the presentation of technologist proffered papers. Spacing the papers through out the program on Saturday and Sunday allows

technologists a chance to present their research and work in a formal yet relaxed atmosphere. Abstracts submitted to the SMRT per the published guidelines, are judged by members of the Education Committee and chosen for oral presentation based on the author's request for oral presentation, merit score, and program balance. Awards for winning abstracts will be presented during Saturday's business meeting.

Preceding the 2006 Annual Meeting will be the President's Regional, 18 March 2006. The Virginia, USA Chapter of the SMRT will host the meeting at the University of Virginia, Charlottesville, Virginia, USA. Program speakers include Dr. Peter Bandettini presenting on functional MRI, Dr. Christopher Kramer speaking on Cardiac MR, Dr. Frank Shellock presenting on MR Safety and veteran SMRT speaker, Candace Roth. Charlottesville is located in a beautiful area of the country, only 1 1/2 to 2 hours from Washington, D.C. A big thank you goest o Charles Stanley, John Christopher, and their committee members for hosting this event.

As the New Year begins and activities start again in earnest, I ask members to remember the following dates:

18 January 2006 – SMRT abstract submission deadline

13 March 2006 – SMRT electronic poster submission deadline

18 March 2006 – The SMRT President's Regional in Charlottesville, Virginia, USA

5 - 7 May 2006 – The 15th SMRT Annual Meeting in Seattle, Washington, USA

Please assist those technologists you are associated with to join us now and in the future, "Soaring to New Heights in MR Education."

— **Karen Bove Bettis**
SMRT President

Join us! The 15th Annual Meeting of the SMRT is being held 5-7 May 2006 in the beautiful Pacific Northwest city of Seattle, Washington, USA, at the Washington State Convention and Trade Center. The Program Committee has the wheels in motion to bring the international MR technologist community a wide breadth of educational experiences addressing the cutting edge advances taking place in the MR field worldwide. We have a fantastic lineup of speakers and topics to provide you with MRI information you can use in your daily practice.

The Annual Meeting traditionally begins with our Friday evening poster reception. This year the event is scheduled for 5 May and it is always a terrific way to start the weekend by getting reacquainted with your friends in the MR technologist community while enjoying light refreshments. In the past, the success of this event has been due to the truly phenomenal abstract submissions from technologists worldwide. These efforts illustrate countless hours of work and dedication to the field. The posters display new techniques, interesting ideas, and future developments in MRI. There will be posters with both a research focus and a clinical focus, so there will be something of interest for everyone. We are anticipating many more impressive submissions this year. In addition to the educational aspect of the poster exhibit, this opportunity is a great time to simply visit and meet with fellow MRI Technologists/Radiographers from around the world.

Saturday morning, our SMRT President, Karen Bove Bettis, and the 2006 Program Chair, Todd Frederick, will greet the meeting attendees with opening remarks. The didactic program will begin with an update on Diffusion Imaging. We will hear from one of the leading innovators

in Diffusion Imaging on the newest techniques and clinical applications of diffusion, diffusion tensor, and white matter tractography. We will also learn from a Technologist who is involved in these imaging techniques.

Since MRI is not just about physics, we have the pleasure of a presentation by Gina Greenwood on "Colorful Communication." We interact and communicate with many different people throughout our workdays. Gina will present an interesting and fun approach to how we communicate. Norman Farrar will present the latest in MR imaging of the prostate, and Dr. Gareth Barker will explain how pulse sequences are developed, tested, and brought to clinical use.

Lunch will be provided on Saturday to all as we conduct the Annual Business meeting and awards presentation. This is the one time each year that the SMRT membership meets together, discusses, and votes on important matters regarding our profession. This is an opportunity to see your elected representatives at work. We are committed to being your voice. SMRT is its membership. During this time you might consider stepping up to the plate and volunteering for one of our many committees. It's a great chance to get your feet wet and see if you might be interested in taking on more within the organization. All members in good standing are encouraged to participate this way. At the SMRT business meeting, awards will be presented to the most outstanding papers and posters submitted in both the clinical and research arenas. Also presented are the special awards to SMRT members who have made significant contributions to the organization and the field of MR. We will also witness the passing of the gavel as those newly elected begin their terms. Please plan on participating in this important session of the Annual Meeting.

See SMRT Update page 13

SMRT 15TH ANNUAL MEETING PROGRAM SEATTLE, WASHINGTON, USA

Friday, 5 May 2006, 18:30-20:30

SMRT Poster Presentation and Walking Tour Reception

Saturday, 6 May 2006, 07:45-17:00

07:45-08:00 Welcome

Karen Bove Bettis, R.T. (R)(MR), '05-'06 President
Announcements

Todd Frederick, R.T. (R)(MR), 2006 Program Chair

Moderator Charles Stanley, R.T. (R)(CT)(MR)

08:00-09:20 Trends in Diffusion Imaging
Michael Moseley, Ph.D.

Speaker - To Be Announced

09:20-09:50 Proffered Papers

09:50-10:05 Break

10:05-10:55 Colorful Communication

Gina Greenwood, B.S., R.T. (R)(MR)

10:55-11:25 MRI Prostate Technique

Norman Farrar, R.T. (R)(MR)

11:25-11:55 Pulse Sequence Design and Testing
Gareth Barker, Ph.D.

11:55-13:15 SMRT Business Meeting & Awards Luncheon
Moderator Pamela Vincent, MPA, R.T. (R)(M)(CT)(MR)

13:15-15:15 3T Update Forum

13:15-13:45 Pediatric Imaging - 3T, Michael Ditchfield, M.D.

13:45-14:15 Cardiac Imaging - 3T, Paul Finn, M.D.

14:15-14:45 Neuro Imaging - 3T, David Stanley, B.S., R.T.(R)(MR)

14:45-15:15 Body Imaging - 3T, Neil Rofsky, M.D.

15:15-15:30 Break

15:30-16:00 Proffered Papers

16:00-17:00 The Current and Developing Approach to Body MRI:
How and Why We Do It
Diego Martin, M.D., Ph.D.

After lunch and the business meeting, this year's program will offer several lectures focusing on 3T Imaging and Body MRI. Speakers will present 3T updates in pediatric, cardiac, body, and neuro imaging. Award-winning proffered papers will be presented throughout the meeting program. Dr. Diego Martin is an advocate of body MRI, and he will complete the Saturday schedule by presenting the importance of MRI of the body and showing different clinical applications.

Sunday morning, the incoming SMRT president, Cindy Comeau, will welcome meeting attendees. The morning will begin with speakers who will bring attendees the latest information on MRI of the breast. Talks will be presented by a Radiologist and Technologist on the latest clinical techniques and applications of breast MRI. As safety is always first on MR technologists' minds, we are pleased to continue the tradition of holding our Safety Forum, led by Dr. Frank Sherlock. He will include an important safety update for all in attendance. Following is an occasion to look into how MRI suites are designed for optimal safety. The popular speaker Tobias Gilk of Junk Architects will present this topic.

Following the break for Sunday lunch the didactic sessions continue. The program topics will include Economics and Marketing of your MRI Center, Planning for Gamma Knife Radiotherapy, Imaging for Clinical Trials and Recent Advances in fMRI. The Annual meeting will conclude with an international forum presented by MR Technologists/Radiographers from around the world. They will explain the educational and certification requirements of their regions. This will be an informative and enlightening forum that will focus on understanding the current state of education and certification for MR technologists internationally. As

you can see, the Education and Program Committees have tried to present a broad range of topics for the SMRT annual meeting. We have invited speakers who will provide many different perspectives on these important topics. The SMRT 15th Annual Meeting program will be accredited for 15 Category A Continuing Education Credits (pending approval by SMRT).

The ISMRM and SMRT Joint Forum Presentation will be held at 14:00, Monday, 8 May 2006. Your registration for the SMRT Annual Meeting allows you to attend this SMRT/ISMRM presentation. This year, the forum topic is titled "Imaging of the Mother, Fetus and Newborn Child," organized by Dr. Jeffrey L. Duerk and Bobbi Lewis. The two-hour forum will consist of an overview of the technical and clinical aspects of performing MRI on the expectant mother, fetus and the newborn child. The presentations will focus on the "how to" of optimizing the technical aspects of the exam as well as reviewing the most pertinent clinical applications.

Make sure you leave some of that time to explore the surroundings. Seattle, which sits on Puget Sound, is amazingly beautiful. Pike Place Market, the Space Needle and the Experience Music Project Museum are not to be missed. And, if the tentative schedule remains true, you might consider catching a Seattle Mariner's baseball game against Tampa Bay on Monday or Tuesday.

We hope to see you, your friends and co-workers in Seattle. Our goal is to bring you the most up-to-date, pertinent information so that you can be your best. Make your plans now to attend and we hope to see you in May!

— Carolyn Bonaceto, R.T., (R)(MR), Education Committee Chair
Todd Frederick, R.T., (R)(MR), Program Committee Chair

Sunday, 7 May 2006, 07:45-17:00

07:45-08:00	Welcome	Moderator	Vera Miller, B.S., R.T. (R)(MR)
	Cindy Comeau, B.S., R.T. (R)(MR), '06-'07 President	13:00-13:30	Economics, Design & Marketing Considerations of Your MRI Center
	Announcements		James Stuppino, B.S., R.T. (R)(MR)
	Todd Frederick R.T. (R)(MR), 2006 Program Chair	13:30-14:00	MRI Planning for Gamma Knife Radiotherapy
Moderator	Steve Shannon, R.T., (R)(MR)		James Stuppino, B.S., R.T. (R)(MR)
08:00-09:30	Breast Forum	14:00-14:30	Imaging for Clinical Trials
08:00-08:45	MR Breast		Maureen Ainslie, M.S., R.T. (R)(MR)
	Constance Lehman, M.D.	14:30-14:45	Break
08:45-09:30	MR Breast Technique	14:45-15:15	Recent Advances in fMRI
	Michael Coles, R.T.		Rasmus Birn, Ph.D.
09:30-10:00	Proffered Papers	15:15-17:00	MRI Education and Certification Forum
10:00-10:15	Break		Technologists/Radiographers From Around the World
10:15-11:45	MR Safety Forum		U.S. – Carolyn Roth, R.T. (R)(MR) (CT)(M)(CV)
10:15-11:00	MR Safety Update – 2006		Canada – Caron Murray, M. R.T. (R) A.C. (MR)
	Frank Sherlock, Ph.D.		Australia – TBA
11:00-11:45	MRI Facility Safety: How The Design Of Your MRI Suite Impacts Patient Safety		Asia – TBA
	Tobias Gilk, Ph.D.		Europe – TBA
11:45-13:00	Lunch	17:00	Adjourn

New Entrant Stipend Award

To encourage new entrants to research in areas of interest to the ISMRM, the Society invites applications for a New Entrant Stipend Award. This program is aimed at students, trainees, or researchers who are new to the field and might not be funded under the main educational stipend program. Each awardee will receive US\$400 toward the costs of attending the Fourteenth Scientific Meeting in Seattle, Washington, USA. Upon request, an awardee may be paired with a senior member of the ISMRM who will be the awardee's mentor during the Scientific Meeting, providing the opportunity for reviews and discussions of important scientific and clinical developments presented at the meeting. Recipients of stipends who are not members of the ISMRM will be required to submit an application for membership before funds are disbursed.

ELIGIBILITY CRITERIA:

- Applicants must already be actively involved or about to be actively involved in some aspect of research related to the ISMRM;
- Applicants cannot be first or presenting authors on abstracts submitted to the ISMRM program and do not need to submit an abstract to the meeting;
- Applicants are required to attend at least 4 days of the ISMRM meeting, including at least one day of the weekend educational courses.

PROGRAM DESCRIPTION:

- Awardees will have the opportunity be paired with a mentor from the ISMRM community, with whom they will meet on a daily basis.
- Mentors will subsequently be available to the awardees for advice and discussion regarding scientific and career issues in the field of magnetic resonance.

APPLICATION PROCEDURE:

- Applicants should send a letter including a brief statement of their interest in attending the Scientific Meeting and explain how this will relate to their own work;
- A letter of support from the Department Chair is required stating that the student or trainee either will be given the time off to attend and be supported for the remaining cost of the meeting, or will use vacation time and personal funds as needed;
- A curriculum vitae must accompany the application;
- Completed check sheet.

WHERE TO APPLY:

SEND COMPLETED CHECK SHEET AND ALL MATERIALS TO:

Jeffrey J. Neil, M.D., Ph.D., Chair
International Society for Magnetic Resonance in Medicine
Subcommittee on Student Stipends
2118 Milvia Street, Suite 201
Berkeley, California 94704, USA
Fax: + 1 510 841 0106

SEND ELECTRONIC (PDF) SUBMISSIONS TO:

New_Entrant_06@ismrm.org

New Entrant Stipend Check Sheet

Applicant Name _____
Family Name First/Given Middle

Degree _____

Institution _____

Institution Address _____

City _____

State/Province _____

Country _____

Postal Code/Zip+4 _____

Work Phone Number _____

Home Phone Number _____

E-mail Address _____

Supervisor _____

☐ Yes. Please pair me with a mentor.

My areas of interest are:

Recipients of New Entrant stipends will be required to submit an application for membership in the ISMRM before the funds are disbursed.

ENCLOSED:

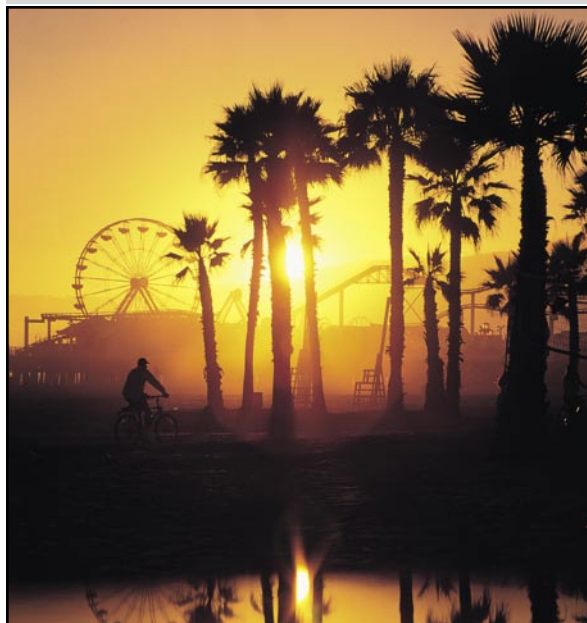
- ☐ New Entrant's Application Letter
- ☐ New Entrant's Curriculum Vitae
- ☐ Department Chair's Letter
- ☐ Eligibility Verification
- ☐ Membership Application (for nonmembers only)

FOR OFFICE USE ONLY

NO.

DATE RECEIVED

DEADLINE: Applications must be received no later than **31 January 2006.**



ISMRM WORKSHOP ON

Real Time MRI: Dynamic Interactive Imaging and Its Applications

22-24 February 2006

**Doubletree Guest Suites
Santa Monica, California, USA**

OVERVIEW

With the advent of high-speed gradients, coil arrays, novel pulse sequence designs and reconstruction techniques, modern MR systems are capable of interactively acquiring and reconstructing images in real-time, which has led to major advances in cardiac imaging, imaging during interventions, and imaging of dynamic processes such as joint motion and functional activation. Real-time imaging has unique needs in terms of system infrastructure, pulse sequence design, reconstruction, and careful examination of applications. The planned sessions will cover the latest clinical and research applications of real-time MRI, along with the latest technical developments, including new system infrastructures, contrast mechanisms, artifact avoidance and correction, and methods for extending the limits of spatial resolution, temporal resolution and SNR. This format naturally includes educational presentations and presentations describing the current state of the art. In addition, we will have a session showcasing hot topics and future trends. Invited presenters will include young scientists and scientists from inside and outside North America. This will be the first multi-vendor workshop on real-time MRI.

In this workshop, "real-time" MRI is defined as having an end-to-end system latency of less than 1 second (which includes acquisition, reconstruction, and display).

ORGANIZING COMMITTEE

- **Krishna Nayak, Ph.D.**, University of Southern California, Los Angeles, California, USA - Chair
- **Peter Börnert, Ph.D.**, Philips Research Labs, Hamburg, Germany
- **Oliver Heid, M.D.**, Siemens AG, Gunzenhausen, Germany
- **John Pauly, Ph.D.**, Stanford University, Stanford, California, USA
- **Graham A. Wright, Ph.D.**, University of Toronto, Toronto, Ontario, Canada

CME CREDIT AVAILABLE

The International Society for Magnetic Resonance in Medicine designates this continuing medical education activity for up to 10.25 category 1 credits towards the Physician's Recognition Award of the American Medical Association. Each physician should claim only those credits actually spent in the educational activity.

SPEAKERS

- Mark S. Cohen, Ph.D.**, University of California Los Angeles, Los Angeles, California, USA
Jeffrey L. Duerk, Ph.D., Case Western Reserve University, Cleveland, Ohio, USA
Orit Glenn, M.D., University of California, San Francisco, California, USA
Mark A. Griswold, Ph.D., Case Western Reserve University, Cleveland, Ohio, USA
Christopher J. Hardy, Ph.D., GE Global Research, Niskayuna, New York, USA
Bob S. Hu, M.D., Palo Alto Medical Foundation, Palo Alto, California, USA
Kullervo Hynnenen, Ph.D., Brigham and Women's Hospital, Boston, Massachusetts, USA
Peter Kellman, Ph.D., National Institutes of Health, Bethesda, Maryland, USA
Robert J. Lederman, M.D., National Institutes of Health, Bethesda, Maryland, USA
Elliot R. McVeigh, Ph.D., National Institutes of Health, Bethesda, Maryland, USA
Craig H. Meyer, Ph.D., University of Virginia, Charlottesville, Virginia, USA

EDUCATIONAL OBJECTIVES

Upon completion of this workshop, participants should be able to:

- articulate the general hardware and software infrastructure requirements for real-time interactive magnetic resonance imaging;
- describe various pulse sequences that are used for rapid dynamic imaging, and identify their weaknesses;
- explain methods for temporal acceleration, including those based on parallel acquisition, and the use of temporal patterns;
- describe the diagnostic utility of real-time imaging in cardiac, neurologic, and fetal applications
- describe the utility of real-time MRI in cardiovascular, abdominal, and neurologic interventions; and
- appraise and evaluate the capabilities of current "state-of-the-art" real-time MR imaging systems.

AUDIENCE DESCRIPTION

This workshop is designed for physicians and physicists/engineers who are specializing in rapid dynamic MRI and its applications. They may be faculty, clinical or research fellows, residents, or other doctoral trainees, with an interest in real-time interactive MRI, and with the goal of furthering what is technically feasible and how it can be clinically applied. It will also be of significant value to researchers at companies developing high-performance MRI systems and accessories.

EARLY REGISTRATION DEADLINE:

20 January 2006

Register online at http://www.ismrm.org/workshops/RealTime_MRI or by contacting the ISMRM office.

Visit the ISMRM Web site at: <http://www.ismrm.org>

ISMRM, 2118 Milvia Street, Suite 201, Berkeley, California 94704 USA Tel: +1 510 841 1899 Fax: +1 510 841 2340 E-mail: info@ismrm.org

THE INTERNATIONAL SOCIETY FOR MAGNETIC RESONANCE IN MEDICINE
IS

13-16 July 2006
New York, New York, USA

ISMIRM WORKSHOP



Flow and Motion: Imaging Assessment of Cardiovascular and Tissue Mechanics

ORGANIZERS:

Leon Axel, Ph.D., M.D., New York University School of Medicine,
New York, New York, USA
Richard L. Ehman, M.D., Mayo Clinic,
Rochester, Minnesota, USA
Vinay Pai, Ph.D., New York University School of Medicine,
New York, New York, USA
Paul E. Summers, Ph.D., University of Oxford,
Oxford, England, UK
Han Wen, Ph.D., National Institutes of Health,
Bethesda, Maryland, USA

OVERVIEW:

Imaging methods provide potentially powerful means to assess cardiovascular and tissue mechanics, and have been the subject of much ongoing research. This workshop will focus on three areas of application: 1) the use of MRI for measurement of fluid flow, a relatively mature but still evolving area, 2) the use of MRI methods to evaluate cardiac function and its relationship to more conventional imaging approaches, and 3) the use of MRI "elastography" approaches to characterize tissue mechanical properties. The goals of the workshop include provision of: 1) overview talks to provide a survey of the current state of the art in these fields for trainees and researchers becoming involved in them, 2) a forum for the presentation and discussion of the results of ongoing research in these areas, and 3) an opportunity for leaders in these fields to meet to discuss issues related to standardization of approaches to image acquisition, analysis, and display of the results. An additional goal is to provide a forum for interaction between technically and clinically oriented investigators in this area.

CE CREDIT:

The International Society for Magnetic Resonance in Medicine designates this continuing medical education activity for up to 18 category 1 credits towards the Physician's Recognition Award of the American Medical Association.

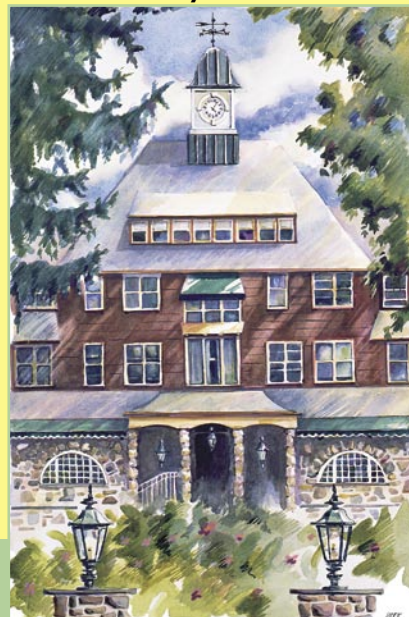
EDUCATIONAL OBJECTIVES:

Upon completion of this workshop participants should be able to:

- Describe methods used to acquire and analyze flow data with MRI;
- Compare methods used to acquire and analyze cardiac motion data with MRI;
- Describe methods used to acquire and analyze tissue elastic properties data with MRI;
- Discuss clinical applications of flow studies with MRI;
- Describe new findings from cardiac motion studies with MRI; and
- Compare the relative advantages and disadvantages of the use of different modalities to evaluate cardiac motion

13-16 October 2006
Pocono Manor, Pennsylvania, USA

ISMIRM WORKSHOP



MR of Cancer: Frontiers in Metabolic, Molecular and Clinical Imaging

ORGANIZERS:

Jeffrey R. Alger, Ph.D., David Geffen School of Medicine at UCLA,
Los Angeles, California, USA
Thomas L. Chenevert, Ph.D., University of Michigan Hospitals,
Ann Arbor, Michigan, USA
Hadassa Degani, Ph.D., Weizmann Institute of Science,
Rehovot, Israel
Edward J. Delikatny, Ph.D., University of Pennsylvania,
Philadelphia, Pennsylvania, USA
Joseph A. Frank, M.D., National Institutes of Health,
Bethesda, Maryland, USA
Martin O. Leach, Ph.D., Royal Marsden Hospital, Sutton,
Surrey, England, UK
Ross J. Maxwell, Ph.D., Gray Cancer Institute,
Northwood, England, UK
Harish Poptani, Ph.D., University of Pennsylvania,
Philadelphia, Pennsylvania, USA
Simon P. Robinson, Ph.D., University of London,
London, England, UK

OVERVIEW:

The workshop program will cover the latest advances in the application of MR to cancer research, and will feature invited presentations by scientists from the fields of clinical oncology and radiology, as well as from experimental radiology and cancer imaging. In addition to invited scientific presentations, the program will include an educational lecture, presentations of proffered papers, poster sessions, and the Negendank Memorial Lecture on a special topic of clinical relevance.

The goals of the workshop are to present results from cutting-edge experimental imaging and to explore and develop translational research for clinical applications. This is the first time the MR of Cancer Workshop will be held in the Eastern United States since the inception of this workshop in Baltimore in 1996.

For more information, and to
register, visit us online at

<http://www.ismrm.org>



Fourteenth Scientific Meeting and Exhibition

2006

6-12 MAY

Seattle, Washington, USA

ISMRM Future Meetings

2007 **Fifteenth Scientific Meeting and Exhibition**
12-18 MAY *Barcelona, Spain*

2008 **Sixteenth Scientific Meeting and Exhibition**
3-9 MAY *Toronto, Ontario, Canada*

2009 **Seventeenth Scientific Meeting and Exhibition**
18-24 APRIL *Honolulu, Hawai'i, USA*

2010 **Eighteenth Scientific Meeting and Exhibition**
1-7 MAY *Stockholm, Sweden*

2011 **Nineteenth Scientific Meeting and Exhibition**
7-13 MAY *Montreal, Quebec, Canada*

Bill Negendank Award Fund

In memory of William George Negendank, M.D., his colleagues in the ISMRM MR of Cancer Study Group have established the **Bill Negendank Award Fund** to recognize outstanding young investigators in the field of Cancer MR (see MR Pulse, Vol. 3, No. 3, page 6). To make a contribution, please send your check made payable to the ISMRM or submit your Visa, MasterCard, American Express, or Eurocard number, expiration date, and amount you wish to donate to the following address:

Bill Negendank Award Fund, International Society for Magnetic Resonance in Medicine, 2118 Milvia Street, Suite 201, Berkeley, CA 94704, USA

You may also make your donation online at <http://www.ismrm.org/mrc/>



International Society for
Magnetic Resonance in Medicine
2118 Milvia Street, Suite 201
Berkeley, CA 94704, USA
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Web: www.ismrm.org

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