
THE QUANTUM TIMES

~APS TOPICAL GROUP ON QUANTUM INFORMATION~

WINTER 2007/8

VOLUME 2, NUMBER 4

Quantalk.org: a new resource for quantum information

The World Wide Web was originally conceived as a tool for sharing scientific research, and it has caused a revolution in this area as in so many others. Journals now receive manuscripts via web upload, distribute material to reviewers by the same mechanism, and ultimately present accepted papers to their readership via their web sites. The online version of a paper is often the definitive one, with journals like the *Physical Review* family offering free color figures in digital media while the print version, with its greyscale images, is relegated to second rate status. Meanwhile, powerful new tools have emerged for navigating the knowledge network represented by each paper and its citations, as well as displaying performance metrics for individual researchers.

The QIP community has been in the vanguard of this revolution. It is now standard practice for researchers to upload their research to the arXiv.org preprint server as soon as a preprint is written, and indeed the date of such a submission is regarded by many as the definitive evidence of when, and by whom, an idea was first presented.

However, although arXiv.org is the central location for hosting research preprints, there has been no equivalent site for scholarly *discussion* of research. Of course the rise of personal web logs, or blogs, has provided a number of popular sites for researchers to chat about the latest developments. The informal nature of blogs supports 'water cooler' style chat, and this is certainly not a bad thing since it is often the first way we learn of new ideas. But many people believe that there is also a role for more formal review and debate about the latest research, while maintaining the openness and freedom of access that is common to all the best web initiatives.

Quantalk.org (from quantum talk) seeks to offer such a facility to the QIP community. Its software has been custom written from scratch to provide the tools, the accountability and the permanence needed to foster scholarly debate. The heart of the site is the 'Articles' section (see <http://quantalk.org/articles>), where someone who is interested in a paper can start up a discussion by providing the title and abstract of the paper along with a link to its online location. This could be the published paper on a journal's website, a pre-print on arXiv.org, or something similar. They are also invited to write an initial comment about the article – either a full review-style tour or a shorter comment, perhaps focusing on a particular element of the paper or asking a question of the authors or the community at large. The author of a comment may opt for anonymity (as in the conventional peer-review process) so that they may speak freely without professional risk. The hope is that the comment will be noticed by the authors of the article, or others, who may reply in the same thread and thus generate an active dialog of the kind that cannot be had during the conventional peer-review process.

(continued on next page)

Inside...

What is open peer review (OPR) and will it change the way research is done? This question is just one of many intriguing questions that arise from our cover story in this issue. A sister project to Quantiki.org, a site called Quantalk.org, funded by an ERA-Pilot QIST grant has been launched. Among other things, it promises to provide a forum by which pre-prints may be discussed in detail, thus providing authors with feedback on their pre-prints prior to journal submission.

Additionally, this issue includes a full run-down of the upcoming March Meeting in New Orleans. We provide an overview of all GQI sessions, including times, locations, chairs, and invited speakers.

As usual, we also have our dose of news, a quantum joke or two, and, since it is that time of year again, a report from this year's chair Lorenza Viola. In addition we have a report on our recent elections from Barry Sanders.

We look forward to a fantastic 2008 for GQI!

-Ian T. Durham, Editor
Department of Physics
Saint Anselm College



(continued from previous page)

Ultimately, Quantalk.org will offer the ability to request an open peer-review (OPR) of a given article. Either the authors of a paper or an interested third-party will request a review of a paper (which may be in pre-print or print) and Quantalk.org will seek out reviewers from whom a detailed analysis of the manuscript may be obtained. Others may still comment during the process, and the reviewers will post their reviews into the discussion thread, anonymously if they so choose. Their reviews will then themselves be open to discussion and analysis with anyone else also free to air their own opinion.

The reviewers are not charged with reaching a 'publish/don't publish' recommendation, but rather to initiate a discussion by providing solid, thorough starting material. Moreover, each discussion thread is a permanent online artifact, with its own unique and compact web address (for example, quantalk.org/51). Therefore it can be cited from other media, and the researchers who contribute to the thread can feel justified in investing the time necessary to compose substantial remarks. Indeed the authors themselves may use the system to offer, for example, a less formal explanation of key points within their paper. Then the discussion thread may be regarded as a continuously evolving

extension of the paper itself. In this way, Quantalk.org can be seen as being complementary to the existing peer-review architectures, as well as services such as arXiv.org, rather than as a competitor to them. By opening up and broadening out the discussion the aim is to increase the value of a journal or conference publication or an arXiv preprint to both authors and readers.

To make it as easy as possible for people to join the discussions, Quantalk.org uses custom-built software to facilitate the common tools of scientific discourse. For example, it is possible to write equations directly into posts using the full features of LaTeX and images can be incorporated via a process similar to copy-and-paste. Replies to a particular post may also be filtered out of the general thread to allow a single conversation within the thread to be studied as required. The important feature of anonymity is handled cleanly: one person returning to a thread anonymously retains the same anonymity throughout that thread (and *only* that thread) facilitating clear conversation and preventing abuse. Furthermore, each registered user is also provided with a personal 'watchlist' where they may keep track of recent activity on threads of interest to them. There are also sections of the site that highlight interesting books and the

(continued on next page)

(continued from previous page)

occasional news story or featured opinion piece for example. To increase the scope of the site, an upcoming development will be the ability to host generalized digital media on the site such as, for example, a video of an author's presentation of a conference paper or something similar.

One key weakness of online systems such as forums and blogs is that 'just anybody' can turn up and dilute the discussions. On Quantalk.org, this has to be weighed against the desire to open up the review and discussion process to as many qualified opinions as possible. To strike this balance, anyone may register with the site, following which they may join in discussion on news stories and books for example. However, to initiate or participate in discussions about research articles, a user must specifically request an upgrade to 'Scholar' status that will only be granted following a human check that the individual is an active researcher. Once upgraded, Scholars may invite (a limited number of) other qualified people to join Quantalk.org, without those people needing to go through the approval process.

The project is funded by the European ERA-Pilot QIST grant, alongside our sister project Quantiki.org which disseminates many other kinds of information to the community. We hope that QIP researchers will find Quantalk.org to be a useful system; we invite readers to take a look at what's being discussed now at <http://quantalk.org>. During this start-up phase, we're offering up to €100 if you identify a relevant article and write a good review of it – see <http://quantalk.org/pay> for full details, and <http://quantalk.org/articles> for the types of things already happening on the site. And if you have any feedback for us, please let us know at feedback@quantalk.org.

*-Simon Benjamin
Quantalk.org*

THE LIGHTER SIDE

QUANTIZED AMUSEMENT

"To understand something means to derive it from quantum mechanics, which nobody understands."

- Physics proverb, author ("utterer") unknown

Mrs. Schrödinger to Mr. Schrödinger:
"What the hell did you do to the cat? It looks half dead!"

- The Sophontologist

Bits, Bytes, & Qubits

QUANTUM NEWS AND NOTES

|0⟩ **Marching to the beat of a quantum drum.**

Forty years ago mathematician Mark Kac asked "Can one hear the shape of a drum?" In the 1990s mathematicians finally proved that it is possible for two drums of different shapes to produce the same sound and so the answer, at least classically, to Kac's question is 'no.' This process was experimentally verified using soap bubbles, but raised questions about spectroscopy. Stanford physicist Hari Manoharan decided that in order to resolve the questions surrounding spectroscopy that arose from the soap bubble experiments, it might be useful to scale things down as far as possible. Manoharan and his students were able to create tiny enclosures made of carbon monoxide (CO) on a copper surface. The enclosures were a bit like a fort whose walls were made of CO. However, in this case, the walls were only one molecule high! It was this "quantum fort" that roughly thirty electrons were placed. The setup was such that the wavelike properties of the electrons caused the shapes to resonate and thus Manoharan calls them quantum drums. It turns out that just as in the classical world, two quantum drums of different shape can exhibit the same resonance, a phenomenon known as isospectrality. In any case, to "hear" the quantum drums, visit the group's website at <http://mota.stanford.edu/>. The question is, did they create any nano-bongos in honor of Feynman?

⟨1|0⟩ **Quantum memory and teleportation.**

Researchers from the University of Heidelberg in Germany, the University of Science and Technology of China, and the Atomic Institute of the Austrian Universities in Austria have successfully teleported a qubit a distance of seven meters and then briefly stored it in memory. The phenomena of quantum memory and teleportation have never before been realized in the same experiment. The research team in this instance teleported a photonic qubit to a cluster of rubidium atoms that was able to store the state for up to eight microseconds before it was lost.

⟨1|0⟩ **Light-based circuit performs basic math.**

Researchers at the University of Queensland in Australia have created a light-based circuit capable of performing basic calculations. This is seen as a crucial step in the quest to build a quantum computer. The Queensland group's circuit consisted of four photonic qubits that successfully found the two prime roots of fifteen (three and five). The Queensland research is part of an Australia-wide collaboration called the Centre for Quantum Computer Technology (CQCT), a consortium of some of Australia's largest universities. The group was lead by Andrew White and included collaborators from the University of Toronto (that's in Canada, in case you didn't know). While factoring fifteen into its two prime factors may not seem like something to write home about unless you're a four-year-old math prodigy, it represents a basic example of the types of calculations quantum computers should be able to accomplish more efficiently than classical computers. The factoring of large numbers into primes forms the core of several existing cryptographic techniques that nearly all of us rely on every day such as the Diffie-Hellman and RSA public key exchanges. Your data may be safe, for now, but just wait...

⟨1|0⟩ **New methods for renormalizing groups.**

Yet another University of Queensland researcher (anyone notice a pattern here?) is in the news. Guifre Vidal has developed a new method for performing renormalization group operations on entangled systems. Traditionally such operations were performed by replacing a group of particles with a single quasi-particle, something somewhat analogous to replacing a rigid system of particles by a single point particle in certain Newtonian systems. The trouble was that this method essentially eliminated entanglement since the multi-partite system was no longer treated as such. This process is sometimes called coarse-graining. Vidal's method, however, breaks things down a little more piecemeal in a way. The system is first divided into local blocks in which the entanglement is preserved. The system can then be coarse-grained in order to simplify it for manageable calculations.

⟨1|0⟩ **Bond gets quantized for the 22nd time.**

Perhaps surprisingly the venerable James Bond film franchise still has some original Ian

Fleming material on which to draw. The latest (and 22nd in the series), set to be released next November, takes its title from one of Fleming's short stories, *A Quantum of Solace*. While some critics have argued the title sounds too much like a physics lesson, we have no doubt there will be plenty of action. But our question is whether there will be anything remotely quantum in this latest installment. Could the villain perhaps have developed some nefarious quantum device? Come to think of it, there already was that nasty laser in *Goldfinger*. But if they're getting their ideas from Fleming, who died in 1964, we doubt there's any reference to anything related to quantum information. We can confirm, however, that the sweet Aston Martin DBS from *Casino Royale* makes a reappearance.

⟨1|

Position Announcement

COMPUTER SCIENCE

Saint Anselm College invites applications for an assistant professorship in computer science. This is a one-year position (renewable up to 3 years) to start in August 2008. Ph.D. required (will consider ABD). Duties include teaching a variety of undergraduate computer science courses and advising students. A commitment to excellence in teaching is paramount. Candidates must be supportive of the mission of this Catholic College. Saint Anselm College is committed by its mission to actively building a diverse academic community that fosters an inclusive environment. It therefore encourages a broad spectrum of candidates to apply. Applications will be accepted until the position is filled. Along with the Departments of Physics and Chemistry, which have active quantum information research programs, the department administers a new Certificate in Computational Physical Sciences.

Applicants should send a letter of application, a curriculum vita, and contact information for three references to: Professor Carol Traynor, Chair, Department of Computer Science, Saint Anselm College, Box 1658, 100 Saint Anselm Drive, Manchester, NH 03102-1310
[Phone: (603) 656-6021]
[E-mail: ctraynor@anselm.edu]

Report from the Chair

MOVING AHEAD IN 2008

I would like to take a moment to introduce myself and say that it will be my privilege and pleasure to serve as the Chair of the APS Topical Group on Quantum Information (GQI for short, as we all know by now...) throughout 2008. Let me welcome you to a GQI year which I hope will be rich in quantum information physics, activities, and outreach.

While a lot of work remains to be done, GQI has been so far very successful in consolidating its status within the greater APS community, and serving as the focal point for an increasingly diverse pool of quantum researchers. Last year, I have striven to raise the profile and visibility of our field, in particular by ensuring a solid presence of GQI at the upcoming March Meeting in New Orleans. This has resulted in nineteen sessions, co-sponsored with DAMOP or DCMP (as opposed to thirteen last year) which I believe should convincingly showcase the quality and breadth of research that GQI embraces today.

In my work as Chair, I will continue as well as diversify my efforts, one of my priorities being to further enlarge GQI membership – by reaching out to researchers who are now outside traditional physics disciplines and by promoting a stronger representation from the international community. Growing above about 1400 members will enable GQI to claim the status of APS Division. If growth continues at the current rate (from over 600 members to roughly 900 members over the last year), I am confident that reaching this target near the end of 2008 is not unreasonable. Clearly, additional growth will not come without a price. As the field is entering a higher level of maturity and developing into a larger number of specializations, it will be important (in fact imperative) that we devise effective strategies for minimizing the impact of excessive fragmentation and for remaining united by a common language and mission: to explore and exploit the significance of the ultimate physical nature of information.

Lastly, both in my role of GQI Chair and as a scientist, I cannot refrain from expressing a deep concern in regard to the current status of federal science funding, which I am sure you all share. No scientific endeavor, no matter how successful in the short term, can flourish and deliver its full potential in the absence of sustained support and

trust. Quantum information physics is no exception in that respect. I believe that further growing our field as united in its diversity will certainly help to make a strong case for a continued and broadly distributed level of funding. However, it is also my hope that GQI members will actively help to rectify the damage caused so far by taking direct responsibility as appropriate. Our voice may well make the difference at this time.

–Lorenza Viola
Dartmouth College

QCMC 2008

CALL FOR ABSTRACTS

This is a call for abstract submission to the Ninth International Conference on Quantum Communication, Measurement and Computing (QCMC), which will be held at the University of Calgary, Canada, on August 19 to 24, 2008.

A one-page abstract of your presentation should be submitted via the web interface at <http://www.qcmc2008.org/> before April 15, 2008. The same site contains abstract templates and preparation instructions.

We are also accepting nominations for the 2008 International Quantum Communication Award for outstanding achievements in quantum communication research, which will be presented at the meeting. In order to make a nomination, please email Dr. Osamu Hirota [hirota@lab.tamagawa.ac.jp] before April 1.

We offer conference fee, travel, and/or accommodation grants for outstanding undergraduates who are interested in pursuing quantum information research. Additionally, a limited number of subsidies are available to participants who are presenting papers and are in need of financial support. Applications for both kinds of support are accepted at the meeting web site before April 15.

The scope of the conference will be similar to that of previous meetings in the series with full details available on the conference website, <http://www.qcmc2008.org/>.

We look forward to welcoming you in Calgary in August.

–Alex Lvovsky, Principal Organizer
Institute for Quantum Information Science
& Department of Physics and Astronomy
University of Calgary

Quantum Information Science 2008 GORDON RESEARCH CONFERENCE

This is an announcement for the 2008 Gordon Research Conference on Quantum Information Science (QIS2008) that will be held at Big Sky Resort, Big Sky, Montana, US from August 31 - September 5, 2008.

Quantum Information Science is a yearly conference focusing on the rapidly growing field of Quantum Information Processing. The primary focus of the conference will be on physical and theoretical aspects of quantum information processing and communication, as well as on their physical implementation.

The conference will bring together researchers from the diverse fields of physics, computer science, and mathematics with the common interest of increasing our understanding of how to formulate, manipulate, and process information using physical systems that operate on quantum mechanical principles.

The conference will take place at the Big Sky Resort (<http://www.bigskyresort.com>) in Montana (US). The Big Sky resort community occupies a part of southwestern Montana, with Yellowstone and Grand Teton National Parks immediately to the south, untamed rivers in every adjacent valley. Accommodations are in the generously appointed Huntley Lodge of Big Sky Resort.

We welcome all interested graduate students, postdocs, university faculty, and researchers from industry and government laboratories. As we like to stimulate the interaction between young scientists and more senior people in the field, we specially encourage young participants to join this meeting.

As the number of participants will be limited, we encourage you to apply as soon as possible (at the latest until August 10, 2008) through the following webpage, where you can also find more information about the meeting: <http://www.grc.org/programs.aspx?year=2008&program=quantinf>

We may be able to provide some financial support for junior researchers through our Chair's Fund. Please indicate your need for support when you apply.

—Immanuel Bloch
Department of Physics, Mathematics, &
Computer Science
Universität Mainz

—David DiVincenzo
IBM Watson Research Center

March Meeting Planner

NEW ORLEANS, MARCH 10-14, 2008

The following is a comprehensive list of all APS GQI sponsored sessions at the upcoming March Meeting including titles, chairs, and room assignments. Please be sure to check at the conference for any last minute changes.

Monday, March 10, 2008

Session A14 Focus Session: Quantum Simulation of Condensed Matter Systems With Ultracold Atoms

Sponsors: GQI, DAMOP

Chair: Ivan Deutsch, University of New Mexico

Invited speaker: Ehud Altman

Room: Morial Convention Center 205

Time: 8:00 AM

Session B6 Quantum Simulation and Quantum Information Theory in Cold Atoms

Sponsors: GQI, DAMOP

Chair: Lincoln Carr, Colorado School of Mines

Invited speakers: Ulrich Schollwoeck, Anatoli Polkovnikov, Ivan Deutsch, David Weiss, Murray Holland

Room: Morial Convention Center RO4

Time: 11:15 AM

Session B15 Quantum Entanglement I

Sponsor: GQI

Chair: Dagmar Bruss, Heinrich-Heine-Universität Duesseldorf

Room: Morial Convention Center 207

Time: 11:15 AM

Session D5 Circuit QED: Superconducting Qubits Coupled to Cavities

Sponsor: DCMP, GQI

Chair: Raymond Simmonds, National Institute of Standards and Technology, Boulder

Invited speakers: A. Blais, Mika Sillanpaa, Johannes Majer, Yasunobu Nakamura, M. Neeley

Room: Morial Convention Center RO1

Time: 2:30 PM

Session D14 Quantum Information Science in AMO
Sponsor: DAMOP, GQI
Chair: J. Y. Vaishnav, National Institute of Standards and Technology
Room: Morial Convention Center 205
Time: 2:30 PM

Session D15 Focus Session: Foundations of Quantum Theory I
Sponsor: GQI
Chair: Howard Barnum, Los Alamos National Laboratory and GSCCM Chair
Invited speakers: Bryce Gadway, Andrew Jordan
Room: Morial Convention Center 207
Time: 2:30 PM

Tuesday, March 11, 2008

Session H15 Focus Session: Superconducting Qubits I
Sponsor: GQI
Chair: Britton Plourde, Syracuse University
Invited speaker: Franco Nori
Room: Morial Convention Center 207
Time: 8:00 AM

Session J15 Quantum Computation
Sponsor: GQI
Chair: Gerardo Ortiz, Indiana University
Room: Morial Convention Center 207
Time: 11:15 AM

Session L14 Focus Session: Foundations of Quantum Theory II
Sponsor: GQI
Chair: Julio Gea-Banacloche, University of Arkansas
Invited speakers: Jonathan Barrett, Matthew Leifer
Room: Morial Convention Center 205
Time: 2:30 PM

Session L15 Focus Session: Progress toward Scalable Quantum Information Processing
Sponsor: GQI
Chair: Dana Berkeland, IARPA
Invited speaker: Paul Kwiat
Room: Morial Convention Center 207
Time: 2:30 PM

Session M15 GQI Business Meeting
Sponsor: GQI
Chair: Lorenza Viola, Dartmouth College
Room: Morial Convention Center 207
Time: 5:45 PM

Wednesday, March 12, 2008

Session P5 Quantum Information Meets Gravitation
Sponsor: GQI
Chair: Matthew Leifer, Institute for Quantum Computing
Invited speakers: Dave Bacon, John Preskill, Ivette Fuentes-Schuller, Paul M. Alsing, Fotini Markopoulou
Room: Morial Convention Center RO1
Time: 8:00 AM

Session P15 Focus Session: Superconducting Qubits II
Sponsor: GQI
Chair: Frank Wilhelm, University of Waterloo
Invited speaker: Adrian Lupascu
Room: Morial Convention Center 207
Time: 8:00 AM

Session S15 Focus Session: Superconducting Qubits III
Sponsor: GQI
Chair: Franco Nori, University of Michigan & RIKEN
Room: Morial Convention Center 207
Time: 2:30 PM

Thursday, March 13, 2008

Session U15 Open Quantum Systems and Decoherence
Sponsor: GQI
Chair: Sergio Boixo, University of New Mexico
Invited Speaker: Lieven Vandersypen
Room: Morial Convention Center 207
Time: 8:00 AM

Session V15 Quantum Error Correction and Control
Sponsor: GQI
Chair: Lorenza Viola, Dartmouth College
Room: Morial Convention Center 207
Time: 11:15 AM

Session W15 Quantum Entanglement II

Sponsor: GQI

Chair: James Franson, University of Maryland, Baltimore County

Room: Morial Convention Center 207

Time: 2:30 PM

Friday, March 14, 2008

Session X4 Approaching Quantum Limits in Optomechanical Systems

Sponsor: DCMP, GQI

Chair: Konrad Lehnert, JILA, NIST/University of Colorado

Invited speakers: Cindy Regal, Jack Harris, Florian Marquardt, Thomas Corbitt, Markus Aspelmeyer

Room: Morial Convention Center 206

Time: 8:00 AM

Session Y15 Focus Session: Quantum Metrology and Control: Fundamental Limits and Applications

Sponsor: GQI

Chair: Lorenza Viola, Dartmouth College

Invited Speakers: Seth Lloyd

Room: Morial Convention Center 207

Time: 11:15 AM

Election Results

EXECUTIVE COMMITTEE AND BY-LAWS

The GQI Election is complete.

There were 159 votes cast, which corresponds to a participation rate of 18.34% from the total membership of 867.

I would like to congratulate Dave Bacon on his election as Vice-Chair and Chris Monroe on his election as a Member-at-Large for a two-year term. Thanks go to Dana Berkeland, Immanuel Bloch, Michel Devoret, and Carl Williams for agreeing to run for these positions!

As for the question about approving the new bylaws, they are approved by a large majority, including approval of the Group's official name as "Topical Group on Quantum Information". In other words, the Question on the ballot was answered with a resounding Yes.

–Barry Sanders

*Institute for Quantum Information Science
& Department of Physics and Astronomy
University of Calgary*

New Editorial Board

The Quantum Times is pleased to announce the appointment of a new editorial board designed to assist the editor in developing content for each issue. Agreeing to serve on the board are Howard Barnum of Los Alamos National Laboratory, Matt Leifer of the Institute for Quantum Computing at the University of Waterloo, and Dietrich Leibfried of the National Institute of Standards and Technology in Boulder, Colorado.

The editor would additionally like to thank Barry Sanders and Lorenza Viola for their assistance in developing this new board.

Student Paper Awards

Once again, the GQI will award two "Best Student Paper" prizes at the APS March meeting – one for theoretical work, and one for experimental. The awards, each consisting of a \$500 cash prize, will be sponsored by the Perimeter Institute for Theoretical Physics in Waterloo, Canada, and the Institute for Quantum Computing at the University of Waterloo. All undergraduate and graduate students who are both first author and presenters of an oral or poster presentation are eligible. To be registered for the competition, a brief nomination letter from the student's supervisor stating that the results described in the presentation are substantially the student's own work and that the student is currently enrolled at a degree-granting institute, should be sent via email to Chris Fuchs at cfuchs@perimeterinstitute.ca. The two equally weighted criteria for the award are the quality of the scientific results and the quality of the presentation. Judging will be undertaken by an ad hoc committee consisting of five or more senior members of GQI.

–Christopher Fuchs
Perimeter Institute for Theoretical Physics

Correction: Dana Berkeland's name was inadvertently misspelled at one point in the last issue. We apologize for the error.

All material contained herein is Copyright 2008 by the authors. All rights reserved.

GQI Executive Committee 2008

Chair

Lorenza Viola, Dartmouth College

Chair-elect

David DiVincenzo, IBM Corporation

Vice-chair

Dave Bacon, University of Washington

Secretary-Treasurer

Barry Sanders, IQIS/University of Calgary

Past-chair

Carlton Caves, University of New Mexico

Members-at-large

Christopher Fuchs, Bell Labs

Christopher Monroe, University of Maryland,
College Park & JQI

GQI Website

<http://units.aps.org/units/gqi/>

Newsletter Information

Editor

Ian T. Durham

Department of Physics

Saint Anselm College

Manchester, NH, USA

+1 603 222-4073 (voice)

idurham@anselm.edu

4th Asia Pacific Conference in QIS

The deadline for Abstracts for the 4th Asia Pacific Conference in QIS (which is being held in the Palm Cove Resort in Cairns during the first week this July), is rapidly approaching (March 17th).

We have a good line up of Asia Pacific and broader speakers: Blatt, Bloch, Brennen, Dowling, Englert, Guo, Linares, Nemoto, Parkins, Peng, Pryde, Sasaki, Silberhorne, Wallraff, and Zhang. We are also intend to have a student only oral session and we would encourage students to submit abstracts.

The conference is attracting a good deal of international interest. I would personally encourage members of APS GQI to communicate this conference to your colleagues and students as a strong representation of QIS research from the US. We are expecting many delegates from a variety of Asian-Pacific nations and from further abroad (USA/Canada and Europe), and contributions from your groups or colleagues in particular would be greatly welcomed.

Abstract submissions can be made online at <http://www.4apcqis.org>.

*—Jonathan Dowling
Department of Physics and Astronomy
Louisiana State University*

APS Website seeking photographs

As you may have discovered visiting the American Physical Society web site, we routinely publish photographs of recent physics research in the center of the APS Home page. APS would particularly like to give our own members' work this tribute and focus. If you own striking, beautiful, and interesting photographs of current physics projects (January 2007 to present), we want to consider highlighting your work.

Although we do not pay for these images, we give full credit and an introduction to the research illustrated in a Home page picture. The APS web site is visited millions of times each year, thousands of times each day. The vast majority of our visitors enter through our Home page (<http://www.aps.org>) and view these photos. Each Home page picture has an "About this image" link. By clicking an image, our members and other visitors can learn more about the project or research featured in the photographs. The Home page images rotate each time the Home page is visited. Each picture remains in our website rotation 2-3 months.

There is no deadline for submissions and image selection is on-going. Images not used on our Home page may still be suitable for our brochures, calendars, or posters. Clear credit is always given for our photos, usually with a description. To submit photos, email your image to Margaret Black, black@aps.org. She will reply regarding information or abstracts associated with selected photographs. Please contact Margaret if you have any questions.