ISCB NEWSLETTER

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ISMB 2008

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iSCB INTERNATIONAL SOCIETY FOR COMPUTATIONAL BIOLOGY

INTERNATIONAL SOCIETY FOR COMPUTATIONAL BIOLOGY

WELCOME TO ISMB 2008!
A NOTE FROM ISCB PRESIDENT

Burkhard Rost

In the year that has passed since my last welcome message on behalf of the International Society for Computational Biology (ISCB), a team of us has worked hard in preparation of this year's conference in Toronto, the *16th International Conference on Intelligent Systems for Molecular Biology* (ISMB).

This will be our second year of managing this conference almost completely from ISCB resources and it will be the second massively parallel conference. If the result is anything like last year in Vienna, we are certainly creating something extraordinary within the growing selection of computational biology conferences. ISMB 2008's offering of parallel tracks includes original and previously published research papers (*Highlights tracks*), Special Sessions expanding the width by presenting evolving areas, *Special Interest Group* meetings (SIGs for the first time partially rolled into the main meeting), technology demonstrations and workshops, a focus on *Science in industry*, an extensive vendor exhibition, a perspective on science beyond science, as well as the ever-important poster sessions.

Even the pre-conference days are completely parallel now, with *Special Interest Groups and a Satellite Meeting (SIGs)* overlapping the *Student Council Symposium* (SCS4) on day one, overlapping with the *Tutorials* on day two, and even extending into the main ISMB meeting in an effort to shorten the span of the entire event. During *Keynote* talks and social breaks all 1500 attendees of the main meeting will gather. We have shortened ISMB to expand on these precious opportunities for communication. At all other times the participants will be choosing from among ~200 talks in the evermore specialized topic areas of our science today.

Let me use this opportunity to explain a few realities that surround ISMB. Firstly, finding a venue is very difficult: With our current model, we need a venue with at least 7 rooms each of which can seat 700 participants, and one of which can seat at least 1800. There are surprisingly few such places and many of the existing ones are very expensive and/or by far too large to suit our purpose. Finding ideal places is a challenge and generates substantial overhead; the Metro Toronto Convention Center suits our needs in many ways uniquely well.

Secondly, ISCB needs ISMB to be an immense success in many ways in order to flourish. One primary goal in the way we organize ISMB is to integrate the needs of anyone researching in the field of computational biology. This goal is at the heart of the width and massively parallel organization introduced at ISMB/ECCB 2007 in Vienna and expanded even further in Toronto. Note that over 44% of all the talks at any ISMB since 1998 have been presented in Vienna or will be presented in Toronto! This amazing dynamic creates many challenges. The simplest is overload of you. We addressed that by NOT expanding the duration, instead, we have now shortened the sessions to create more time for communication and we shortened the entire event (pre- and main ISMB) by a day.

Thirdly, ISCB is your society and ISMB is your meeting. We need you, need your participation and input. Not everyone can act as an editor or chair, but you all can help during the

meeting and in preparation of future ISMBs. For instance by spreading the news, by bringing others with you, by helping us to improve the meeting and the society, and by enjoying yourselves!

The personal reward in organizing a conference of this scale is realized through the relationships that grow and partnerships that solidify in the course of working together. I extend the gratitude of ISCB to honorary co-chair Thomas Hudson, a significant international figure, who is building an exceptional center of research excellence here in Toronto. I thank and hug my co-chairs Jill Mesirov and Michal Linial for their unwavering commitment to the task of creating something substantial for the benefit of the scientific community. Many thanks to the Steering Committee members Janet Kelso, Thomas Lengauer, David Rocke, Reinhard Schneider, Alfonso Valencia, Shoshana Wodak, and to the members of the Scientific Organizing Committee, Milana

Frenkel-Morgenstern, Dietlind Gerloff, Rodrigo Lopez, Marco Punta and Hershel Safer. A big thanks also to Sean O'Donoghue and Lars Jensen for organizing the ISMB Matrix Party.

The review and selection of scientific presentations for all tracks, as well as selection of the special interest groups, satellite meeting, tutorials and determination of recipients of the limited travel fellowship funds are thanks to the volunteerism of hundreds of reviewers led by editors (Area Chairs) and session chairs. Unfortunately, this space does not afford me the option to name them all, but I hope all of you know how grateful I am for the high quality of the final selections that make up the scientific program.

All logistics have been orchestrated by the ISCB Conferences Director Steven Leard and his Canadian-based team, and supported by the California-based ISCB administrative office led by Executive Officer BJ

Morrison McKay. On-site assistance has been provided by dozens of local volunteers who will help you around, and the city of Toronto has been enormously accommodating to all our activities and I know is putting in considerable resources for welcoming all our ISMB attendees arriving from near and far.

As of this writing ISMB 2008 Toronto has yet to begin its first session, but I would be remiss not to look ahead and mention to mark your calendar now for ISMB/ECCB 2009 taking place in Stockholm, Sweden, June 27-July 2.

Until then, enjoy the conference!

Burkhard Rost
President, ISCB

4th ISCB Student Council Symposium

Now in its 4th year the ISCB Student Council Symposium (SCS4) has again made an impact in the Computational Biology community: Around 100 student delegates registered for the July 18th event in Toronto where ISCB President Burkhard Rost, Mark Gerstein and Timothy Hughes delivered the keynote addresses. The students also listened to presentations by nine of their peers, who had been selected based on the outstanding quality of their submitted abstracts. The program was complemented by a panel discussion on "Career paths in Computational Biology and Bioinformatics" followed by a poster session and reception.

SCS4 conference chairs Lucia Peixoto and Amr Abuzeid and their team had raised almost $17,500 from sponsors, which allowed the Student Council to support seven top students with travel fellowships worth $1,000 each. More than 40 applications for these travel fellowships had been submitted.

The SCS4 program committee led by Sarath Chandra Janga reviewed a total of 75 submissions for the symposium. The organizers were very pleased with the quality of the submitted abstracts, which has been increasing consistently over the last few years. A selection of outstanding abstracts will be published as a supplement to *BMC Bioinformatics* along with a meeting report. More information about the event can be found on http://symposium.iscbsc.org.

ISCB HONORS DAVID HAUSSLER & AVIV REGEV

By Clare Sansom, Bioinformatics Consultant and Science Writer

ISCB gives two annual awards to innovators in bioinformatics. The awards committee, chaired by S¿ren Brunak of the Center for Biological Sequence Analysis at the Technical University of Denmark, announced that the 2008 Accomplishment by a Senior Scientist Award will be given to David Haussler of the University of California Santa Cruz, and the 2008 Overton Prize for achievement in early to mid-career will be awarded to Aviv Regev of the Broad Institute of MIT and Harvard. "These awards are a sign of recognition of achievement not just from ISCB, but from the whole bioinformatics community," Brunak said. "It is a significant honor to receive one."

ISCB 2008 Accomplishment by a Senior Scientist Award: David Haussler

Photo by Ron Jones

"[David] Haussler's group was one of the pioneers of machine learning in bioinformatics, introducing Hidden Markov Models for the statistical analysis of patterns in biological data," says Brunak. However, Haussler's recent achievements have been more in the application of bioinformatics

methods than in their development. Since 1999, he has been one of the principal figures in sequencing, and later analysing, the human genome and those of other mammals, and in mining this genomic information for insight into vertebrate evolutionary history.

Haussler originally trained as a mathematician. His first encounter with computational biology came in graduate school, at the University of Boulder in Colorado, where he had the good fortune to study for his Ph.D. under Andrzej Ehrenfeucht. "He taught me that I should never be constrained by disciplinary boundaries, and never be frightened to tackle big problems. The word 'bioinformatics' didn't exist when I was a graduate student, but we were doing it."

Haussler's first years as an independent investigator were devoted to studies in pattern recognition and machine learning, focusing on modelling the way the brain learns. He shifted from computational neuroscience back to bioinformatics when Anders Krogh joined him at Santa Cruz as a post-doc. "He [Anders] came to my lab to work on machine learning, but soon discovered that these methods could be applied to biological sequence analysis, to classifying proteins into families and recognising genes in fragments of DNA."

Late in 1999, Haussler was called by Eric Lander, one of the leaders of the public human genome sequencing project, and asked to apply his HMM methodology to identifying the genes in the then newly sequenced human

DNA," he explains. At that time, the public project was in a "full-on race" with Celera to publish an initial working draft of the sequence.

Barely six months after Haussler joined the project, both teams were ready to release their first genome drafts. Haussler well recalls July 7, 2000, when the complete draft genome sequence was posted on the University of Santa Cruz' Web server. "Seeing the waterfall of As, Gs, Cs, and Ts pouring off our server was an emotional moment," he says. "We were witnessing the product of more than three billion years of evolution, sequences passed down from the beginning of life to present-day humans." This excitement was shared by the worldwide scientific community; Internet traffic on the Santa Cruz server reached 0.5 terabytes per day then: a record that still stands.

Haussler has dedicated the first years of the new millennium to mapping and analysing that sequence. Other questions that have attracted Haussler's attention include the analysis of hyper-conserved DNA sequences that remain virtually unchanged in divergent species, and the genetic changes that distinguish humans from apes. While most researchers in this field have concentrated on gene gain during evolution, Haussler and his team recently identified twenty-six genes that are well-established in the vertebrate lineage but that were lost in the latter stages of human evolution.

ISCB 2008 Overton Prize: Aviv Regev

Photo courtesy of The Broad Institute

Brunak describes 2008 Overton Prize winner Aviv Regev as "a role model for how theoretical computer science can be applied to understanding biological organisms as systems." Trained initially at Tel Aviv University, she knew that her interests lay in bioinformatics "from day one." She made her first contribution to the field developing mathematical models for the evolution of DNA methylation. It was at that early stage that she realized the value of synergy between computational and "wet lab" biology. "There was no data for one critical phylogenetic group that I was studying, so I went to work in the lab at The Hebrew University to fill in the gaps," she said. "This experience gave me a good idea of how important it is to anchor theoretical biology in the real world."

The idea that led directly to her graduate studies, however, came from a branch of computational science that at first glance has little, if any, connection with biology: pi calculus, typically applied to problems in electronic engineering. "I was listening to a conference talk by Robin Milner, on the application of pi calculus to dynamic communication networks, when it occurred to me that molecular networks can have similar properties," she explains. Following this up, she developed a method for describing and understanding the dynamic relationships between entities in a biological system (such as proteins in an interaction network) using this type of "process algebra."

After graduation, Regev took her first independent position at the Bauer Center for Genomics Research at Harvard University. There, her research interests switched to the use of probabilistic graphical models to reconstruct networks based on genomic and transcription data, using yeast as a model system.

In 2006, Regev took a position as an assistant professor at MIT and a Core Member of the Broad Institute. She has extended her network models to a range of applications including the characterisation of genes that are co-expressed in a range of cancer types but not in normal cells, and studying gene duplication. Once again, a chance meeting sparked a productive idea. "I was returning from a conference with Jill Mesirov, who had been trying to study variation in the gene expression of the malaria parasite in different patients' blood cells," she explains. "Mesirov's data came from Johanna Daily and Dyann Wirth, infectious disease specialists from Harvard, who suspected that variation in gene expression might explain some of the observed variation in the clinical course of the disease. I wondered whether there might be equivalence to my own classification of yeast gene expression patterns, and so it proved: the malaria samples could be classified into three groups, similar to states characteristic of active growth, a starvation response, and a stress response in yeast." This work was published in *Nature* in December 2007, and featured in the *Making the Paper* section.

This is not the first time that Regev's work has been recognised by the ISCB. During the last decade, her name has appeared on four ISMB prize-winning posters or papers.

This article is excerpted from the July 2008 issue of *PLoS Computational Biology*. To link to the full journal article please visit www.ploscompbiol.org/doi/pcbi.10000101.

The annual ISCB award winners are presenting their awards and delivering keynote lectures at the annual ISMB conference. This year's talks are scheduled as follows:

Aviv Regev, ISCB 2008 Overton Prize
Presentation Title: Modular Biology: the Function and Evolution of Molecular Networks
Date: Monday, July 21
Time: 4:45 p.m.

David Haussler, ISCB 2008 Accomplishment by a Senior Scientist
Presentation Title: 100 Million Years of Evolutionary History of the Human Genome
Date: Wednesday, July 23
Time: 2:00 p.m.

Both talks will be held in Hall G of the Metro Toronto Convention Centre, South

By Burkhard Rost,
ISCB President

The main meeting of the International Society of Computational Biology (ISCB), the International Conference on Intelligent Systems for Molecular Biology (ISMB) has evolved into becoming THE major event in computational biology. In 2008, it is still true that a considerable fraction of all the major scholars in computational biology frequently participate in ISMB. In other words, ISMB is undoubtedly the meeting that attracts the highest fraction of participation from the discipline of computational biology.

ISMB has become a forum for reviewing the state-of-the-art in many fields of this growing discipline, for introducing new directions, and for welcoming technological breakthroughs. Through its federated activities, ISMB has evolved into a means of education: It provides different opportunities at different levels in the careers of scholars, these opportunities include many of the essential stepping stones at all levels of the development of scientists.

ISMB has been evolving from a local to a global meeting; it has evolved from a forum for primarily some subgroup in computational biology to the integration of an unprecedented variety of fields within the discipline. It has also evolved from a meeting organized by a local group into one organized by an international society (ISCB). In the past, the meeting has even been co-organized by two international societies (ISCB and ECCB). ISMB/ECCB has also begun to evolve into more of a "confederate" event the scientific organization of which is no longer confined to a few people who come together for one particular meeting. This concept instead is becoming replaced by the growing independence of the different tracks that constitute the meeting. ISMB has been impacting computational biology in many ways, in terms of channeling its science, of bringing together its representatives, of contributing to education and of creating a commonality of a newly evolving field. ISMB also was at the heart of making the step from an important international meeting to creating ISCB, a stable international society that will contribute to the advancement of the field and represent the field.

The main goals of ISMB are the following: To further the advancement of science, in particular of computational biology; to contribute toward making the pursuit of knowledge and the advancement of science an endeavor that furthers the happiness of the scientists; and to help build bridges between all individuals involved that foster peace by joining likeminded, dedicated, and passionate groups of scholars from an unusual variety of backgrounds, both in terms of nations and scientific mindsets in the common ambitious goal.

ISMB Overview & Background
From local to global event. In the beginning a particular person/group from around the conference location had organized the entire ISMB. We have finally transited into the mode in which the meeting is run by the Society, i.e., ISCB alone or – every other year – jointly by ISCB and ECCB. This transition has many simple results:

(1) The main organizing team need not be local; we can connect the optimal place with the optimal group of scientific organizers regardless of the location of each.

(2) The financial control is fully in the hands of ISCB to be responsible if anything goes wrong.

(3) The Steering Committee and a rotating team of organizers provide stability and history.

(4) ISCB can build and evolve its conference staff/facilities into powerful resources that will consolidate our growth and finances.

From single-track to massively parallel.
At ISMB/ECCB 2004 in Glasgow we introduced papers presented in two parallel tracks after many years of debate. By ISMB/ECCB 2007 in Vienna we further transited to a meeting with many tracks. The number of all talks in Vienna was over twice that of any other ISMB meeting; in fact, almost 20% of the talks presented at ANY ISMB to-date were presented in Vienna. The meeting moved into a new dimension. The major driving force was the hope to accelerate the transition from "computer science only" to the whole variety of computational biology including the biology, designing tracks to include different groups of scientists. At ISMB 2008 in Toronto, we have added even more events, yet condensed the entire meeting by a day by rolling two SIGs into the main meeting, and by running other SIGs in parallel to the Student Council Symposium and tutorials on pre-conference days. Overall, we increased the width yet shortened the meeting and hope that trend may continue in the future.

Challenges of numbers. The Vienna model remains a financial gamble: at basically the same per person costs and fees, we could have welcomed over 1,500 additional participants to Vienna. This would have likely increased the profit substantially, thereby solidifying ISCB and ECCB for years to come. We could afford the gamble in Vienna because the venue was very affordable: the Toronto venue expenses are slightly higher than those for Vienna, and Stockholm will be more expensive than Toronto; yet all of these locations are more affordable than many possible alternatives that we investigated (note that given our current model there are surprisingly few possible sites that can host ISMB). If the number of participants does not increase over the next two meetings (Stockholm and Boston), we will have to find ways to revert to fewer parallel tracks and/or to a venue with smaller rooms dedicated to each track (at the risk that any room might become overloaded).

Organization. We have made considerable advances in running ISMB from the organizational perspective thanks to the unmatched experience of Steven Leard, for whom we created the essential position of ISCB Conferences Director, which will be a pillar for future ISMB meetings.

Roughly there are three major components of the overall organization: (1) Scientific components: Responsible for the scientific content of the meeting are the meeting Chairs (currently one chair with two co-chairs and a local honorary chair) and the Scientific Organizing Committee (SOC). The SOC has basically evolved into the collection of those who organized the tracks of the conference or otherwise contributed an essential aspect to the meeting. The SOC never meets explicitly; instead those from the SOC who are not on the Steering Committee (SC) join the SC meetings whenever needed.

(2) Logistical site components: The Professional Conference Organization (PCO) is hired by ISCB to coordinate all local connections, communications, housing and registration. In Toronto, we introduce another step of independence: Marketwhys is a company that has already had close and long-term associations with ISCB through Steven Leard, the Conferences Director.

(3) Administrative components: Issues that are neither handled by the SC with the Chairs, nor by the PCO are handled by the ISCB staff, including the Conferences Director. Tasks include the site visit, negotiations with local vendors, industry partners, exhibitors, as well as a major fraction of the communication with the scientists who will present at the meeting. Tasks also include the financial management, marketing, maintenance of documents, the archiving of the institutional memory, and the oversight over committees, conference bodies, conference events, and the avoidance of mistakes that happen when joining all the pieces.

The successful interplay between constituents of each component is guaranteed by the ISCB staff together with the SC, which meets by telephone every other week beginning at about a year before the event. The members of the SC are some subset of all of those who take over an explicit important role in the organization. Ideally, most of the members remain constant from one year to the next, with the group rejuvenating gradually.

Evolution into federation of professionally organized events. In the first years ISMB re-invented itself every year with little memory transference from one year to the next. The strength of such a process is its freshness. However, this approach is no longer feasible given the dimensions to which the event has grown. Given the many pressures and constraints, we need to move ISMB and ISMB/ECCB into an event that ascertains stability and security.

It appears that the most flexible and potent model is one in which the meeting is run by a federation of tracks that are coordinated by the Conference Chairs, the Steering Committee, and the decision-making bodies from ISCB and ECCB (for joint meetings). This model combines gradual rotation with stability. It facilitates long-term planning and reduces *ad hoc* decisions. Overall, this will considerably strengthen the transition from a meeting *run by a few* to a meeting *run by societies* even more than has been the case in the past. It will also significantly reduce the burden on the Conference Chairs, and it will help create a variety of separate characters and flavors that will be home to different groups of participants.

The more people contribute, the more people come. We are glad you are one of them this year and hope to welcome you again next year in Stockholm, and the following year in Boston!

PLoS COMPUTATIONAL BIOLOGY
OVERVIEW

By Philip E. Bourne, Editor-in-Chief of PLoS Computational Biology, and Catherine Nancarrow, Managing Editor, PLoS Computational Biology

PLoS Computational Biology is now moving into its third year of publishing in association with the ISCB and we are pleased to see the positive reception of the community for this young but successful journal that is proving to positively impact the field of computational biology. We recently received our second impact factor of 6.236 from Thomson Reuters, placing us at the top of the Mathematical and Computational Biology category for the second year in a row (see http://www.plos.org/cms/node/366 for PLoS' view on impact factors). This statistic simply reflects the over 200 high-quality research articles published this year, showing the diversity and depth of the journal and, based on user statistics, a wide-ranging readership.

Three of the top ten downloaded articles are in the area of neurobiology. *Adaptive, Fast Walking in a Biped Robot under Neuronal Control and Learning* by Manoonpong, Geng, Kulvicius, Porr and Worgotter, illustrates attempts to mimic human neurobiology. A hybrid and adaptive mechano–neuronal design strategy was used to build and control a small, fast, biped walking robot and to make it learn to adapt to changes in the terrain. *Filling-In and Suppression of Visual Perception from Context: A Bayesian Account of Perceptual Biases by Contextual Influences* by Zhaoping and Jingling suggests that cortical areas beyond the primary visual cortex are responsible for visual inferences. Similarly, *What Are Lightness Illusions and Why Do We See Them* by Corney and Lotto provides causal evidence that illusions (and by extension all percepts) represent the probable source of images in past visual experience, which has fundamental consequences for explaining how and why we see what we do.

The fourth most downloaded article is that by Scheef and Bourne, who explore the *Structural Evolution of the Protein Kinase–Like Superfamily.* Published three years ago, this work benefits from the visibility and accessibility offered by its dissemination beyond journal publication by www.scivee.tv. At the time of writing, the authors' pubcast – a video about the research integrated with the online content of the open access article -- has been viewed over 120,000 times and has led people to download the article PDF.

As a complement to the published research, *PLoS Computational Biology* has expanded the Education section of the journal guided by Education Editor and ISCB Education Committee Co-Chair Fran Lewitter. Key to this growth has been the publication of many of the Tutorials presented at ISMB meetings in 2006 and 2007. Designed to be practical, quick reference guides, these Tutorials are proving helpful for younger scientists and for anyone learning new methods or exploring the use of new tools. Published subjects range from Python to Bayesian networks to computational proteomics to the regulation of gene expression; all are available, along with previously published review articles, in the *PLoS Computational Biology* Education Collection at http://collections.plos.org/ploscompbiol/education.php.

In October of 2007, the journal and ISCB launched the "Getting Started in…" series under the editorial leadership of Olga Troyanskaya. These are short, practical articles written by experts for students and active researchers who want to learn more about new areas of computational biology but are unsure where or how to start. The first expert to inform, motivate, and inspire readers to consider a new direction was Dr. Xiaole Shirley Liu, who outlined the essentials of tiling microarray analysis. Then followed excellent introductions to text mining by Kevin Cohen and Larry Hunter, probabilistic graphical models in biology by Edo Airoldi, and analysis and modeling of biological pathways by Ganesh Viswanathan, Stuart Sealfon, and colleagues. The series now includes these four excellent articles, with more yet to come, including plans to cover topics ranging from biomedical databases to modeling in immunology. To read each of the current articles and keep up on others as they are published go to www.ploscompbiol.org and type "Getting Started in" in the search box. Our hope is that we have, and will continue, to inspire readers to consider new and exciting research directions.
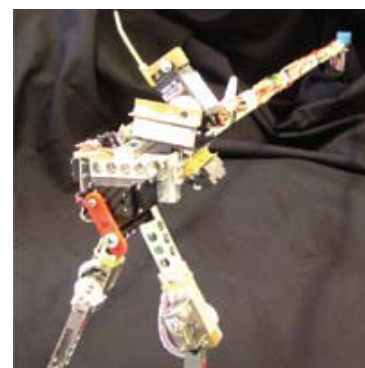
"RunBot", a neural controlled robot, demonstrates dynamic, biped walking, http://www.ploscompbiol.org/article/info:doi/10.1371/journal.pcbi.0030134. Dynamic, biped walking is a difficult motor coordination problem for robots. "RunBot," is equipped with actuators that are dynamically controlled by a neural network that can adapt via simulated synaptic plasticity to a change in terrain.

SPOTLIGHT ON ISCB AFFILIATED REGIONAL GROUP:
Report on 11th Israeli Bioinformatics Symposium

Submitted by Hershel Safer, Weizmann Institute of Science

The 11th Israeli Bioinformatics Symposium, the annual meeting of the Israeli Society for Bioinformatics and Computational Biology (ISBCB), was held on April 27th, 2008, at Tel Aviv University (TAU). Approximately 400 people attended the meeting, which was chaired by Roded Sharan of TAU. Nir Friedman of the Hebrew University of Jerusalem (HUJI) was Program Chair.

Chris Sander of Memorial Sloan-Kettering Cancer Center gave the opening keynote presentation: "Cancer genomics and modeling combinatorial perturbation of cells." Ehud Gazit of TAU gave a keynote talk entitled "Nanobiotechnology: From biochemical self-assembly to novel bionanomaterials." Ed Trifonov of the University of Haifa received a Distinguished Membership Award in tribute to his seminal contributions to bioinformatics research. The conference continued its tradition of introducing new faculty to the local community. This year's roster included Michal Ziv-Ukelson of Ben Gurion University (BGU), Uri Gophna of TAU, Masha Niv of

HUJI, and Amos Tanay and Koby Levy of the Weizmann Institute of Science.

Prizes were awarded for the five best student posters of the 86 that were exhibited. Abstracts of all posters, including the award winners, are available on the conference website.

For additional information on the Israeli Society for Bioinformatics and Computational Biology please visit the Society's website: www.weizmann.ac.il/ISBCB/

For further details on the 11th Israeli Bioinformatics Symposium, including links to past meetings, please visit the conference website: www.cs.tau.ac.il/~ibs08/

By BJ Morrison McKay,
ISCB Executive Officer

The ISCB board of directors recently released a new statement about software sharing as the Society's formal position on this topic of tremendous importance to our scientific community. The ISCB Software Sharing Statement (see next page) replaces the previously released ISCB Statement on Bioinformatics Software Availability from 2002 (www.iscb.org/policy _statements2002May21.htm).

Evaluation of the previous statement got underway over 18 months ago among subsets of the ISCB public affairs & policies committee, ISCB executive committee, Public Library of Science board of directors and thought leaders from the open source community. A meeting at ISMB/ECCB 2007 in Vienna presented several viewpoints through a panel discussion that included audience comments and questions answered by the panelists.

That meeting was preceded and followed up by ISCB blogs that encouraged a worldwide audience to express their opinions. All of these activities were organized by then ISCB board member and public affairs & policies committee chair, Barbara Bryant, who also collected the input and feedback and wrote the first draft of a revised statement, which went through committee review and redraft before presentation to the ISCB board. A statement agreed upon by the board was then offered for a public comment period through the ISCB blog, (see http://iscbdiscussion .blogspot.com/2008/03/iscb -member-feedback-sought-on -revised.html) and those comments were considered in a final revision that became the board approved statement for public release.

ISCB's reevaluation of this topic prompted the Society's official journal, *PLoS Computational Biology*, to do the same. The initial

result is an editorial published in this month's issue (www.ploscompbiol.org/doi /pcbi.1000136) on the post-publication difficulties and frustrations experienced due to non availability of software and web servers essential to reproducing results of research articles. Plans for a full length follow up article are also in the works.

At ISMB 2008 in Toronto David States, ISCB Public Affairs & Policies Committee Chair, will moderate a session entitled "Effective Implementation of Software Sharing" to include talks and a panel of experts to take audience questions and engage in discussion on implementing ISCB's new statement. All conference attendees are invited to attend, and more news will follow on the ISCB website for those wishing to get involved in the months ahead.

ISCB Tackles US Entry Visa Issues

By BJ Morrison McKay

In January 2008, Barbara Bryant, as chair of the ISCB Public Affairs & Policies committee (a term that has since expired), worked quickly and effectively with Carrie Wolinetz of the Federation of American Societies for Experimental Biology (FASEB) Office of Public Affairs (OPA) to produce data for a US House of Representatives Committee on Science & Technology, Subcommittee on Research and Science Education, hearing on "Visas for Foreign Scholars and Students" to

look at the bearing federal government's policies have on scientific exhange and "science diplomacy". Bryant conducted the following survey of ISCB members on problems encountered to obtaining US entry visas:

Questions asked:

1) Are you experiencing delays getting visas or outright rejections of your applications?

2) Are you seeing this problem from particular countries of citizenship?

3) Specifically, what problems are you experiencing (i.e., difficulty

getting consular appointments; delays in application processing; denial of visas; problems with US-VISIT system)?

4) For each problem, is it due to not following or understanding the existing visa application guidelines and restrictions (such as not applying far enough ahead of time, failing to schedule a consular interview, providing incomplete applications, country-specific single entry or is the problem a failure of the U.S. immigration system to follow its own policies?

5) What change, if any, do you feel we ought to advocate?

ISCB Software Sharing Statement

I. Introduction

Bioinformatics software availability is extremely important to the field of bioinformatics. The International Society for Computational Biology (ISCB) is committed to the advancement of the understanding of living systems through computation. In support of that mission, we believe that research results should be shared with the scientific community so that they can be reproduced and built upon. Scientific research may include the development of software and algorithms. Therefore, ISCB is disseminating this statement to make recommendations on software availability policies for funders of bioinformatics research, for scientific journals that publish bioinformatics research, for bioinformatics researchers, and for their employers.

This statement has been revised from the original 2002 statement, incorporating feedback from the ISCB membership.

II. Recommendations

1. Publishers, granting organizations, employers and researchers have a responsibility to uphold the core principle of sharing methods and results. If a researcher's software is necessary to understand, reproduce and build on scientific results, then the software should be made available. This principle is imperative for peer-reviewed scientific publications, recommended policy for granting agencies, and encouraged practice wherever individuals and organizations are committed to advancing science. ISCB supports the recommendations of the National Academies of Sciences report, "Sharing Publication-Related Data and Materials: Responsibilities of Authorship in the Life Sciences."

2. Grantors and publishers should require statements of software availability in grant proposals and research reports. These statements should clearly describe how to obtain the software, and terms of use. The statements should be specific about cost, source code availability, redistribution rights (including for derived works), user support, and any discrimination among user types. The nature of software distribution is an appropriate criterion for consideration in the review of manuscripts and grant proposals, to assess the significance and impact the work is likely to have. Authors of statements of availability should be held accountable by journals, granting agencies and employers for delivering on their software's promised availability. The rights granted to the software user should be irrevocable.

3. No single licensing or distribution model is appropriate for all research projects, and therefore no single model should be mandated by either publishers or grantors.

4. Individuals, institutions, and businesses engaged in research in computational biology should recognize the primacy of dissemination and further research and choose licenses accordingly.

III. Implementation when software sharing is warranted

1. In most cases, it is preferable to make source code available. We recommend that executable versions of the software should be made available for research use.

2. Open source licenses are one effective way to share software. For more information, see the definition of open source, and example licenses, at www.opensource.org.

Rapid response:
The answers fired in rapidly, one after the other. Within about one ten days we had some 50 detailed stories of frustration, disappointment and in some cases disrespectful handling of applicants by consular officials. Responses came in from at least 20 countries -- from Austria to China, from Denmark to Singapore, from Canada to Cameroon. Although the survey questions were written to elicit the responses of foreign researchers entering the US, several responses came in from US citizens recounting government delay or denial of entry by researchers in their labs or speakers at their conferences.

The compilation of responses point to some sad truths: Foreign researchers in the US cannot take a chance on leaving the country to attend meetings or visit family for fear of being denied or delayed reentry. Other countless researchers simply avoid coming to the US as much as possible due to the inordinate hassle of securing a visa. Some respondents even requested anonymity, expressing fear of repercussions for speaking out.

Almost all of the survey participants thanked ISCB for tackling this issue, stating that much has been written about the problem but until now no specific organization seemed to be stepping forward to collect the growing body of data on just how much of a problem this is, and providing it to legislators who can do something about it.

What next?
We can't say ISCB's members' stories have made a specific change in policy yet, but if more societies take this on as ISCB has and start reporting it directly to the lawmakers who can make changes, there just might be improvements on the horizon. Meanwhile, ISCB is doing a better job of assisting our own conference attendees in securing visas when they encounter problems by contacting their local consulates, and has been answering questions from our members and colleagues as they conduct their
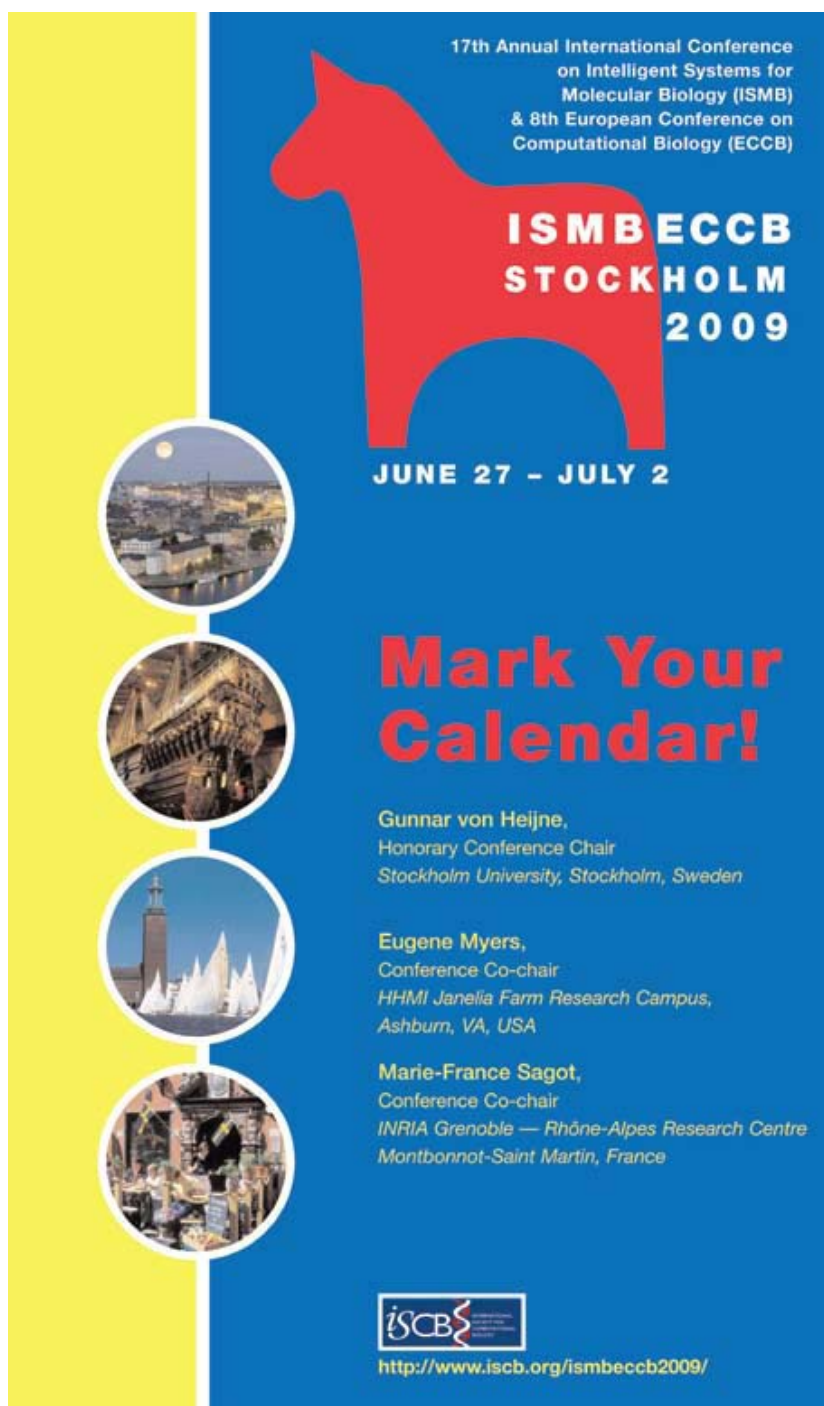
own conferences and have to weave their way through the process of educating their speakers and attendees on the visa application process.

Personal stories of difficulties encountered are still welcome at policy@iscb.org, as well as any success stories that might indicate the tide is turning in favor, once again, of global scientific exchange. We urge you to directly report any visa issues by completing the questionnaire of the National Academies International Visitors Office at www7.nationalacademies.org/visas/Visa_Questionnaire

To read the full summary of survey comments and recommendations please visit http://www.iscb.org/US_visa_survey.html. A timely editorial has also been published in *PLoS Computational Biology*, ISCB's official journal at www.ploscompbiol.org/doi/pcbi.1000097

Full information on the February 7, 2008 Visas for Foreign Scholars and Students hearing of the US House of Representatives can be found at http://science.house.gov/publications/hearings_markups_details.aspx?NewsID=2064. This includes reports, opening and witness statements, and a press release by Washington Congressman Brian Baird, who chaired the hearing.

17th Annual International Conference on Intelligent Systems for Molecular Biology (ISMB) & 8th European Conference on Computational Biology (ECCB)

ISMBECCB STOCKHOLM 2009

JUNE 27 – JULY 2

Mark Your Calendar!

Gunnar von Heijne,
Honorary Conference Chair
Stockholm University, Stockholm, Sweden

Eugene Myers,
Conference Co-chair
HHMI Janelia Farm Research Campus, Ashburn, VA, USA

Marie-France Sagot,
Conference Co-chair
INRIA Grenoble — Rhône-Alpes Research Centre Montbonnot-Saint Martin, France

http://www.iscb.org/ismbeccb2009/

ISCB STUDENT COUNCIL

Submitted by Nils Gehlenborg,
Student Council Chair,
European Bioinformatics
Institute

The declared mission of the ISCB Student Council is to promote the development of the next generation of Computational Biologists through provision of scientific events, networking opportunities, soft-skills training, educational resources and career advice. In the past the majority of our energies were focused on the collective organization of our annual Student Council Symposium, where we try to provide a little bit of everything. But an increasing number of active student members and growing recognition by the leaders in the Computational Biology community have allowed us to expand our activities during the last 10 months.

Here are some highlights:

• DREAM Team: A team of five students from the United States, Australia, The Netherlands and Spain is collaborating on a submission for the DREAM3 Network Reverse Engineering Challenge. A previous winner of the DREAM competition is mentoring our team. More on www.iscbsc.org/dreamteam.

• Visual Reflections on Science Exhibition: Proposed by the ISMB 2008 Conference Chairs this art exhibition has been organized by Student Council leaders.

• New York City Computational Biology Student Event: In collaboration with the Institute for Computational Biomedicine at Weill-Cornell and the Computational Biology Center at MSKCC the Student Council has organized an educational event with a strong focus on networking for selected students who are attending ISMB 2008. More on www.iscbsc.org/meetings.

More recently the leadership team has initiated attempts to influence policy processes affecting science and education in our field, for instance through dedicated Student Council representatives on the ISCB Education and Public Affairs Committees.

Our continued efforts to establish local groups around the globe through our Regional Student Group initiative have also begun to pay off. The ISCB Student Council now has affiliated groups in the Africa, Denmark, India, Korea, Morocco, Singapore, The Netherlands and the United States. Further groups have shown interest in this opportunity to become affiliated with the Student Council.

Some of our Regional Student Groups consist of only a handful of students while others have close to 400 members. All of them are actively reaching out to their local communities through dedicated mailing lists and organization of educational workshops and meetings.

The Student Council itself has gained a lot of momentum from this growing network. It provides a larger audience for our activities and we are now able to connect students from all parts of the world to their benefit. At the same time local communities are strengthening their internal ties through activities organized by Regional Student Groups. More about this initiative on www.iscbsc.org/rsg.

POST YOUR EVENTS & NEWS DIRECTLY TO THE ISCB WEBSITE

If you have a bioinformatics conference or event to announce, or news to share with our community be sure to post it directly to the ISCB website for widespread dissemination of information. Over 35,000 visitors view the ISCB site monthly, so your exposure is maximized with this valuable free tool.

Upcoming conferences and events can be submitted at www.iscb.org/events/event_post.php, while news of a new product, publication, collaboration opportunity, funding opportunity, fellowship program or any other information such as might be distributed in the form of a press release can be submitted at www.iscb.org/news/news_post.php.

MENTORNET REPORT CARD: YEAR TWO

By Kevin Karplus, ISCB Education
Committee Liaison to MentorNet

ISCB student and post doc members have always looked for mentors specific to computational biology. As a Society that serves a global membership without focusing on services within any one institution, ISCB joined MentorNet™, the E-Mentoring Network, as an Affiliated Partner in April, 2006. We are pleased to report that ISCB has once again committed to continuing this partnership for the next year for the benefit of those members that take advantage of this unique opportunity to be mentored (or to mentor) without geographic restrictions or specific schedules to adhere to.

The 2nd year report card of member involvement in MentorNet is as follows:

- 54 ISCB student members have enrolled as protégés (31 during the 2nd year).

- 63 ISCB professional members have enrolled as mentors (32 during the 2nd year).

- 20 ISCB protégés have been matched to ISCB mentors over the two years.

- 4 ISCB protégés have had more than one mentoring relationship.

- 14 ISCB mentors have mentored more than one protégé.

The above numbers still indicate a relatively small ISCB member enrollment considering we have nearly 700 student members and over 1000 professional members, but for our members that are involved it is an important element of their ISCB membership experience. MentorNet continues to report that there is a shortage of mentors in the bio fields, and those in computational biology are almost non-existent, creating high demand for ISCB mentors. We continue to believe that with time the ISCB participation in this program will grow to become a valuable benefit for many more of our members, both students and professionals.

If you would like to sign up as a mentor or protégé please join at www.mentornet.net. Be sure to indicate your affiliation as an ISCB member and your preference (requirement, preferably) for an ISCB mentor or protégé match in your profile.

Calling all Leaders!

By Dietlind Gerloff, ISCB Nominations Committee Chair

Officer positions up for nomination are Vice President, Treasurer and Secretary. ISCB bylaws require that ISCB Officers have served on the ISCB Board of Directors for at least one year before taking office. Therefore, potential nominees are limited to current and past board members, and are listed in a drop down menu on the nomination form. The deadline for submitting an Officer nomination is August 6, 2008.

Student Council Leaders positions being nominated are Representative to the ISCB Board of Directors, Student Council Chair, Vice Chair and Secretary. The deadline for submitting a Student Council Leader nomination is August 15, 2008.

Each candidate will be notified automatically of his or her nomination, and be asked to accept by completing a candidate questionnaire. Answers to the questionnaire will be available online to all ISCB members for participation in a question and answer period from September 3 through 10. Elections will be held online from September 15 – 28, 2008.

Please visit www.iscb.org/call_nominations for further details on eligibility, as well as www.iscb.org/nominations for additional information on the ISCB nominations and elections procedures for 2008. And, be sure to nominate your favorite candidate today!

IN MEMORY OF KAMALAKAR-RAO METTANI

By Edna Nerona, ISCB Webmaster

In February 2008, just weeks before the initially scheduled launch of the new ISCB website, we were saddened to learn that we lost a valued member of our web development team, Kamalakar-Rao Mettani. Kamal, from Secundrabad, India, was 31 years old and had just finished his Master of Science (M.Sc.) degree at the University of Applied Science Heidelberg, in the department of Computer Science.

His thesis presented a thorough study of the ISCB website and a detailed proposal to increase member benefits by allowing for greater web-based community interactions. In the process he attended ISMB/ECCB 2007 in Vienna, Austria, for the express purpose of meeting face-to-face with members and elected leaders of ISCB to assess member satisfaction and uncover needs that could be fulfilled through an interactive web portal. Kamal received the university's distinguished honor of Best Master of Science Thesis in 2007 for his work on behalf of ISCB.

Ultimately, Kamal and his thesis were instrumental to the redevelopment of the ISCB web site into a true web portal. For several months after receiving his degree, right up until the time of his sudden death, he worked with the ISCB staff and leadership to implement his plan. As you look through the new layout and functionality, please know that Kamal's energy and talents are the inspiration for every part of the code and design.

We are all proud to have worked with someone who was as bright, conscientious and professional as Kamal; he is missed dearly by all who knew him. We are especially grateful to his family for having nurtured and supported him throughout his education, helping him to develop into the gentle, dedicated and inspirational being he had become.

Therefore, as ISCB launches its new web presence, we dedicate the new www.iscb.org to Kamalakar-Rao Mettani.

Become an ISMB Reporter!

ISCB is looking for a few aspiring reporters, who also happen to be attending ISMB 2008 in Toronto. A small group of professional writers attend ISMB each year to publish conference reports in their respective journals and publications. This year we are also seeking a select corps of students and Jr. Scientists to take on the role of writing about the vast scientific content of the conference and the personal experience of participating in this large, international bioinformatics event. Submissions will be reviewed for posting to the ISMB website, and will be considered for publication in the designated ISCB pages of *PLoS Computational Biology,* the Society's official journal, as a single author report or as part of a larger report compiled from the contributions of multiple authors.

If interested, please write to BJ Morrison McKay, ISCB Executive Officer, at bj@iscb.org. Inquiries from more senior scientists are welcome on behalf of an enthusiastic student/post doc, or even on your own behalf. If you are not reading this until the conference is already underway, just make contact with the ISCB Booth in the exhibition area to express your interest. First draft report submissions will be due within 30 days of the close of the conference.

6th Annual Rocky Mountain Bioinformatics Conference

December 5 –7, 2008

Aspen/Snowmass, Colorado

Silvertree Hotel

Rocky is an official conference of the
International Society for Computational Biology

ISCB presents the sixth Rocky Mountain Bioinformatics Conference (Rocky '08) in Snowmass/Aspen, Colorado from December 5 - 7, 2008. The meeting brings together computational scientists from around the world to share research results and build community.

A mixture of invited lectures, discussions on topics of special interest and short talks from many research groups will make up the scientific program. Informal community building opportunities include discounted lift tickets and a catered dinner.

The conference will feature keynote speakers, flash presentations and posters. We are accepting applications for presentations for the conference starting July 31 until October 10, 2008.

CONFERENCE CHAIR

Lawrence Hunter, Ph.D., Director
Center for Computational Pharmacology
University of Colorado School of Medicine
http://compbio.uchsc.edu/hunter

CONTACTS

Rocky Conference Coordinator
Stephanie Hagstrom
rocky@iscb.org
360-239-9177

Registration Coordinator
Suzi Smith
admin@iscb.org

❖ KEY DATES 2008

Registration opens	September 1
Abstract submission opens	July 31
- Abstract submission deadline	October 10
- Abstract notification	October 24
Housing Cut-off deadline	November 4
Rocky Conference Dates	December 5 - 7

❖ KEYNOTE SPEAKERS

Andrea Califano, PhD
Professor
Department of Biomedical Informatics (DBMI)
Institute of Cancer Genetics (ICG)
Columbia University Medical Center
Columbia University

Edward H. Shortliffe, MD, PhD
Professor
Department of Basic Medical Sciences
Department of Medicine
College of Medicine
University of Arizona, Phoenix

✿ ROCKY SPONSORS

Platinum Level:

IBM

www.iscb.org/rocky08

FASEB Update

By Barbara Bryant, ISCB Advisor to the FASEB Board

Since 2003 ISCB has been one of 21 member societies of the Federation of American Societies for Experimental Biology (FASEB). We joined in order to provide our members with a voice in the US Government on issues relating to science policy, and we continue to seek members who can help develop similar arrangements in other countries or regions.

To really understand what FASEB is all about you are invited to visit their website at www.faseb.org. For easy to find updates on activities and accomplishments, ISCB posts FASEB's most recent news and press releases, updates on the political climate of science funding and policy in Washington, DC, and other updates and links of greatest interest to ISCB members at www.iscb.org/faseb.

FASEB provides tools to help each of us advocate for scientific research and science policy. See http://opa.faseb.org for information.

FASEB also administers a large grant to help U.S. citizen and permanent resident minority students with the costs of attending conferences, including ISMB and Rocky. See http://marc.faseb.org/pages/page2a.htm for information.

ISCB members have served on various FASEB commi tees, including the committee overseeing science policy directions, the evolution education committee, the publications committee, and committees that develop federal funding recommendations. A new International Issues subcommittee has very recently been formed, which should address the needs of ISCB members outside the US well. We are looking forward to important initiatives and excellent outcomes of that subcommittee in the months to come. We thank the members of ISCB for their past and current service, and invite other interested members to contact us at policy@iscb.org.

KEY DATES FOR KEY CONFERENCES

Make a note of the important Key Dates of the ISCB and ISCB co-sponsored/affiliated conferences that will take place within the next six months. Please visit the respective conference websites for updates to these key dates, as some may change without notice.

ECCB'08 – Cagliari, Sardinia-Italy – www.eccb08.org

ECCB Conference Dates	Sep 22 – 26, 2008
Early Registration Deadline	Aug 22, 2008

EMBnet Conference 2008 – Martina Franca, Puglia, Italy – www.embnet.org/EMBnet20thAnniversary

EMBnet Conference Dates	Sep 17 – 20, 2008
Abstract Submission Deadline from ISCB members	Jul 20, 2008
- Acceptance Notification for ISCB members	Jul 30, 2008
Early Registration Deadline	Jul 30, 2008
- Late Registration Deadline	Aug 30, 2008
Travel Fellowship Application Opens	Jun 25, 2008
- Travel Fellowship Application Deadline	Jul 20, 2008
- Travel Fellowship Award Notification	Jul 30, 2008
Housing Reservation Cut Off Date	Jul 30, 2008

InCoB 2008 – Taipei, Taiwan – http://incob.binfo.org.tw/

InCoB Conference Dates	Oct 20 - 23, 2008
Abstracts Deadline (poster, highlights, technology)	Jul 25, 2008
- Acceptance Notification	Aug 22, 2008
Registration Opens	Aug, 2008 (date TBA)
- Early Registration Deadline	Sep 12, 2008
Housing Reservation Cut Off Date	Jul 30, 2008

Rocky '08 – Snowmass, CO, USA – www.iscb.org/rocky08

Rocky Conference Dates	Dec 5 – 7, 2008
Abstract Submission Opens	Jul 31, 2008
- Abstract Submission Deadline	Oct 10, 2008
- Acceptance Notification	Oct 24, 2008
MARC Travel Fellowship Application Deadline	Oct 28, 2008
Registration Opens	Sep 1, 2008
- Early Registration Deadline	Oct 30, 2008
Housing Cut-Off Deadline	Nov 4, 2008

PSB 2008 – Big Island, Hawaii, USA – http://psb.stanford.edu

PSB Conference Dates (tutorials presented day 1)	January 5 – 9, 2009
Paper Submission Deadline	Jul 14, 2008
- Acceptance Notification	Sep 8, 2008
Posters Abstract Submission Opens	Jul 14, 2008
- Poster Abstract Submission Deadline	Nov 7, 2008
Registration Opens	Jul 14, 2008
Travel Fellowship Application Opens	Jul 14, 2008
- Travel Fellowship Application Deadline	Sep 26, 2008
- Travel Fellowship Award Notification	TBA

2009 AMIA Summit on Translational Bioinformatics – San Francisco, CA, USA – www.amia.org/meetings/stb09/ (website opening soon)

STB Conference Dates	March 15 – 17, 2009
Paper Submission Opens	Sep 1, 2008
- Paper Submission Deadline	Sep 15, 2008
Posters Abstract Submission Opens	Sep 1, 2008
- Poster Abstract Submission Deadline	Sep 15, 2008

ISMB/ECCB 2009 – Stockholm, Sweden – www.iscb.org/ismbeccb2009/ (website opening soon)

ISMB/ECCB Conference Dates	June 27–July 2, 2009
Special Sessions Submission Deadline	Early Oct, 2008 *
SIG Proposal Deadline	Early Nov, 2008 *
Paper Submission Deadline	Early Dec, 2008 *

* Actual deadlines and additional tracks to be announced on the conf website soon.

ISCB Annual Conferences

Rocky '08
Rocky Mountain Bioinformatics Conference
United States - CO - Snowmass/Aspen
Dec 05, 2008 - Dec 07, 2008
ISCB Member Discount: 75 USD
http://www.iscb.org/rocky08

ISMB/ECCB 2009
Sweden - Stockholm
Jun 27, 2009 - Jul 02, 2009
www.iscb.org/ismbeccb2009

ISMB 2010
United States - MA - Boston
Jul 10, 2010 - Jul 14, 2010

ISCB Co-Sponsored Events

Pacific Symposium on Biocomputing 2009
United States - HI - Kohala Coast
Jan 05, 2009 - Jan 09, 2009
ISCB Member Discount: 75 USD
http://psb.stanford.edu/

EMBnet Conference 2008
20th Anniversary Celebration -
Leading applications and technologies in
Bioinformatics
Italy - Martina Franca (Puglia)
Hosted By: Italian EMBnet National Node
Institute for Biomedical Technologies - CNR
Sep 18, 2008 - Sep 20, 2008
ISCB Member Discount: 50 Euros
http://www.embnet.org/
EMBnet20thAnniversary

ECCB'08 (European Conference on
Computational Biology)
Italy - - Cagliari
Hosted By: ECCB
Sep 22, 2008 - Sep 26, 2008
ISCB Member Discount: 100 Euros
http://eccb08.org/

ISCB Affiliated Events

2009 AMIA Summit on
Translational Bioinformatics
United States - CA - San Francisco
Hosted By: The American Medical Informatics
Association in Partnership with ISCB
Mar 15, 2009 - Mar 17, 2009
ISCB Member Discount: 200 USD
Restrictions: Discount available before Jan 11 2009
100 USD Discount Jan 11 until Feb 29 2009
http://www.amia.org/meetings/

InCoB: The 7th International
Conference on Bioinformatics
Taiwan - Taipei
Hosted By: Center for Systems and Synthetic
Biology, Natioanl Yang-Ming University
Oct 20, 2008 - Oct 23, 2008
ISCB Member Discount: 15%
http://incob.binfo.org.tw/

Other Conferences & Events of Interest

BIT's 1st Annual World Summit of
Antivirals-2008 (WSA-2008)
China - Yunnan - Kunming
Hosted By: BITlifesciences
Jul 20, 2008 - Jul 26, 2008
http://www.bitlifesciences.com/wsa2008

Society for Developmental Biology
67th Annual Meeting
United States - PA - Philadelphia
Hosted By: Society for Developmental Biology
Jul 26, 2008 - Jul 30, 2008
http://www.sdbonline.org/2008Mtg/
webpage.htm

Programmatic Access to Proteomic Resources
United Kingdom - Hinxton, Cambridge
Hosted By: EMBL-EBI
Jul 28, 2008 - Jul 31, 2008
http://www.ebi.ac.uk/training/handson

11th International Congress on Amino Acids,
Peptides and Proteins
Austria - Vienna
Hosted By: Prof. Gert Lubec
Aug 03, 2009 - Aug 07, 2009
http://www.meduniwien.ac.at/ICAAP09/

3SBSS: 3 S Biology Summer School
(Systems, Synthetic, Semantic)
Italy - Trento
Hosted By: Centre for Integrative Biology,
University of Trento
Aug 18, 2008 - Aug 22, 2008
http://www.3sbiology.org/

IB 2008 - 5th International Symposium
on Integrative Bioinformatics
Germany - Wittenberg
Hosted By: MLU Halle-Wittenberg and IPK
Gatersleben
Aug 20, 2008 - Aug 22, 2008
http://www.imbio.de/conference/index.php

International Symposium on Integrative Bioinformatics
Germany - Wittenberg
Hosted By: Lutherstadt Wittenberg, Germany
Aug 20, 2008 - Aug 22, 2008
http://www.imbio.de/conference/

8th International Workshop on Data Mining in
Bioinformatics
United States - NV - Las Vegas
Hosted By: held in conjunction with ACM KDD 2008
Aug 24, 2008 - Aug 27, 2008
http://bio.informatics.iupui.edu/biokdd08/

Agricultural Biotechnology International Conference
Ireland - Cork
Hosted By: University College Cork, Ireland
Aug 24, 2008 - Aug 27, 2008
http://www.abic.ca/abic2008/index.html

CSB 2008 - Computational Systems
Bioinformatics Conference
United States - CA - Stanford
Hosted By: Life Sciences Society
Aug 25, 2008 - Aug 29, 2008
http://csb2008.org/
ICNC'08-FSKD'08
China - Shandong - Jinan
Hosted By: Shandong University, China
Aug 25, 2008 - Aug 27, 2008
http://www.icnc-fskd2008.sdu.edu.cn

Interactions and Pathways
United Kingdom - Hinxton, Cambridge
Hosted By: EMBL-EBIAug 26, 2008 - Aug 27, 2008
http://www.ebi.ac.uk/training/handson

Network Biology
United Kingdom - Cambridge
Hosted By: Wellcome Trust/Cold Spring
Harbor Laboratory
Aug 27, 2008 - Aug 31, 2008
http://www.cshl.edu/meetings.html

First ENFIN Advanced course on methods for
protein function prediction
United Kingdom - Hinxton, Cambridge
Hosted By: ENFIN at EMBL-EBI
Sep 01, 2008 - Sep 03, 2008
http://www.ebi.ac.uk/training/handson

Systems Biology of Cancer - Signaling
Networks, Modeling and Clinical Implications
Israel - Rehovot
Hosted By: Weizmann Institute of Science
Sep 02, 2008 - Sep 03, 2008
http://www.weizmann.ac.il/conferences/SBC08

Biomedical Informatics without borders: enabling
collaboration to strengthen research and care
United States - MD - Bethesda
Hosted By: National Cancer Institute
(NCI-US) and National Cancer Research Institute
(NCRI-UK)
Sep 02, 2008 - Sep 03, 2008
http://www.cancerinformatics.org.uk/

Genomic Perspectives to Host Pathogen Interactions
United Kingdom - Cambridge
Hosted By: Wellcome Trust/Cold Spring Harbor
Laboratory
Sep 03, 2008 - Sep 06, 2008
http://www.cshl.edu/meetings.html

1st INCF Congress of Neuroinformatics:
Databasing and Modeling the Brain
Sweden - Stockholm
Hosted By: INCF - International
Neuroinformatics Coordinating Facility
Sep 07, 2008 - Sep 09, 2008
http://www.neuroinformatics2008.org

German Conference on Bioinformatics
Germany - Dresden
Hosted By: Biotec, Dresden
Sep 09, 2008 - Sep 12, 2008
http://www.gcb2007.de

Genome Informatics
United Kingdom - Cambridge
Hosted By: Wellcome Trust/Cold Spring Harbor
Laboratory
Sep 10, 2008 - Sep 14, 2008
http://www.cshl.edu/meetings.html

2nd International Workshop on Machine Learning
in Systems Biology
Belgium - Brussels
Hosted By: MLSB
Sep 13, 2008 - Sep 14, 2008
http://www.montefiore.ulg.ac.be/services/
stochastic/mlsb08

WATOC 2008
Australia - NSW - Sydney
Hosted By: World Association of
Theoretical and Computational Chemists
Sep 14, 2008 - Sep 19, 2008
http://www.watoc2008.com/

X-Meeting 2008
Brazil - BA - Salvador
Hosted By: Brazilian Association for
Bioinformatics and Computational Biology
Sep 14, 2008 - Sep 16, 2008
http://xmeeting.cpqrr.fiocruz.br

Mini EURO Conference on Computational Biology,
Bioinformatics and Medicine
Italy - Rome
Hosted By: The Institute of Systems
Analysis and Computer Science (IASI) , CNR,
Rome - Italy
Sep 15, 2008 - Sep 17, 2008
http://euro-cbbm.ku.edu.tr/RomeConference/
homepage.htm

WABI 2008 - 8th Workshop on
Algorithms in Bioinformatics
Germany - Karlsruhe, Germany
Hosted By: ALGO 2008
Sep 15, 2008 - Sep 19, 2008
http://algo2008.org

Structure-Based Drug Design
Hungary - Budapest
Hosted By: Informa Life Sciences
Sep 16, 2008 - Sep 17, 2008
http://www.informa-ls.com/structure

International Conference on Biotechnology
and Bioinformatics
India - Bangalore City
Hosted By: Century Foundation,
Bangalore, India
Sep 18, 2009 - Sep 20, 2009
http://www.cenfoundindia.org
Computational Systems Biology and Dose
Response Modeling Workshop
United States - NC - Research Triangle Park
Hosted By: The Hamner Institutes for
Health Sciences
Sep 22, 2008 - Sep 26, 2008
http://www.thehamner.org/docs/CSB-DRM-08.pdf

Integrated Approaches to Brain Complexity
United Kingdom - Cambridge
Hosted By: Wellcome Trust/Cold Spring Harbor
Laboratory
Oct 01, 2008 - Oct 04, 2008
http://www.cshl.edu/meetings.html

The 9th International Congress on
Cell Biology (ICCB)
South Korea - Seoul
Hosted By: the Korean Society for
Molecular and Cellular Biology
Oct 07, 2008 - Oct 10, 2008
http://www.iccb2008.org/

Eurobio Paris 2008
France - Paris
Hosted By: Paris, France
Oct 07, 2008 - Oct 09, 2008
http://www.eurobio2008.com/

Pattern Recognition in Bioinformatics
Australia - Melbourne
Hosted By: Monash University
Oct 15, 2008 - Oct 17, 2008
http://www.infotech.monash.edu.au/about/news/
conferences/prib08/

BIOT 2008
United States - TX - Arlington
Hosted By: University of Texas at Arlington
Oct 17, 2008 - Oct 18, 2008
http://www.biotconf.org
Biotechnology and Bioinformatics
Symposium (BIOT-2008)
United States - TX - Arlington
Hosted By: University of Texas at Arlington
Oct 17, 2008 - Oct 18, 2008
http://www.biotconf.org/

Protein Design and Evolution for Biocatalysis
Spain - Sant Feliu de Guixols
Hosted By: European Science Foundation (ESF)
in partnership with European
Molecular Biology Organization (EMBO)
Oct 25, 2008 - Oct 30, 2008
http://www.esf.org/conferences/08255

Joint RECOMB Regulatory Genomics/
RECOMB Systems Biolgy/DREAM3
United States - MA - Cambridge
Hosted By: The Broad Institute of
MIT and Harvard
Oct 29, 2008 - Nov 02, 2008
http://compbio.mit.edu/recombsat/

2008 IEEE International Conference on
Bioinformatics and BIomedicine
United States - PA - Philadelphia
Hosted By: IEEE CS
Nov 07, 2008 - Nov 09, 2008
http://www.cis.drexel.edu/ieeebibm/bibm08/
about/bibm-about.asp

Computational Structural Bioinformatics Workshop
United States - PA - Philadelphia
Hosted By: IEEE
Nov 07, 2008 - Nov 07, 2008
http://www.cs.nmsu.edu/%7Exqin/
bioworkshop/2008/Bioworkshop.html

4. German Conference on Chemoinformatics
Germany - Goslar
Hosted By: German Chemical Society - CIC
devision
Nov 09, 2008 - Nov 11, 2008
http://www.gdch.de/gcc2008

4th EMBO Conference: From Functional
Genomics to Systems Biology
Germany - Heidelberg
Hosted By: EMBL Heidelberg, Germany
Nov 15, 2008 - Nov 18, 2008
http://www-db.embl.de/jss/EmblGroupsOrg/
conf_82

GIW 2008 - 19th International Conference on
Genome Informatics
Australia - Queensland - Gold Coast
Hosted By: Bioinformatics Australia
Dec 01, 2008 - Dec 03, 2008
http://www.mlaa.com.au/giw2008

Rat Genomics and Models
United Kingdom - Cambridge
Hosted By: Wellcome Trust/Cold Spring Harbor
Laboratory
Dec 03, 2008 - Dec 06, 2008
http://www.cshl.edu/meetings.html

Critical Assessment of Microarray Data Analysis
-- CAMDA 2008
Austria - Vienna
Hosted By: Boku University Vienna
Dec 04, 2008 - Dec 06, 2008
ISCB Member Discount: 10 EUR
Restrictions: Discount for student members
http://camda.bioinfo.cipf.es/

eScience 2008 4th IEEE International Conference
on e-Science
United States - IN - Indianapolis
Hosted By: Indiana University
Dec 07, 2008 - Dec 12, 2008
http://escience2008.iu.edu/

2nd International Workshop on Machine Learning
in Biomedicine and Bioinformatics
United States - CA - San Diego
Hosted By: The Seventh International Conference
on Machine Learning and Applications
(ICMLA'08)
Dec 11, 2008 - Dec 13, 2008
http://bio.informatics.indiana.edu/MLBB08/

NIH Summit: The Science of Eliminating Health
Disparities
United States - MD - National Harbor
Hosted By: NIH
Dec 16, 2008 - Dec 18, 2008
http://www.ncmhd.hig.gov

The Seventh Asia Pacific Bioinformatics
Conference
China - Beijing
Jan 13, 2009 - Jan 16, 2009
http://apbc2009.org/

International Joint Conference on Biomedical
Engineering Systems and Technologies
Portugal - Porto
Hosted By: BIOSTEC 2009
Jan 14, 2009 - Jan 17, 2009
http:// www.biostec.org/

Bioinformatics Track @ ACM Symposium on
Applied Computing (SAC) 2009
United States - Hawaii - Honolulu
Hosted By: ACM SIGAPP
Mar 08, 2009 - Mar 12, 2009
http://www.cs.iupui.edu/~bioin/

Cover Image:

It's called Canada's 'Wonder of the World." As a telecommunications hub and tourism center, Canada's National Tower (CN Tower) is the country's most celebrated icon. Overlooking Canada at an amazing 553.33m (or 1,815 ft., 5 inches), it is the world's tallest free standing tower.

In the foreground is King Street East. Famous for its nightlife, luxury furniture district and galleries, King Street was named after King George III, the reigning British monarch at the time the street was being built in early Toronto, King Street serves as a major east-west commercial thoroughfare in Toronto, Ontario, Canada.

How are We Doing?

Please email ISCB at admin@iscb.org with any comments, questions, or concerns regarding the website (www.iscb.org), this newsletter, or any other ISCB effort. The ISCB staff aims to meet the needs of ISCB's membership — member advice helps in meeting this objective.

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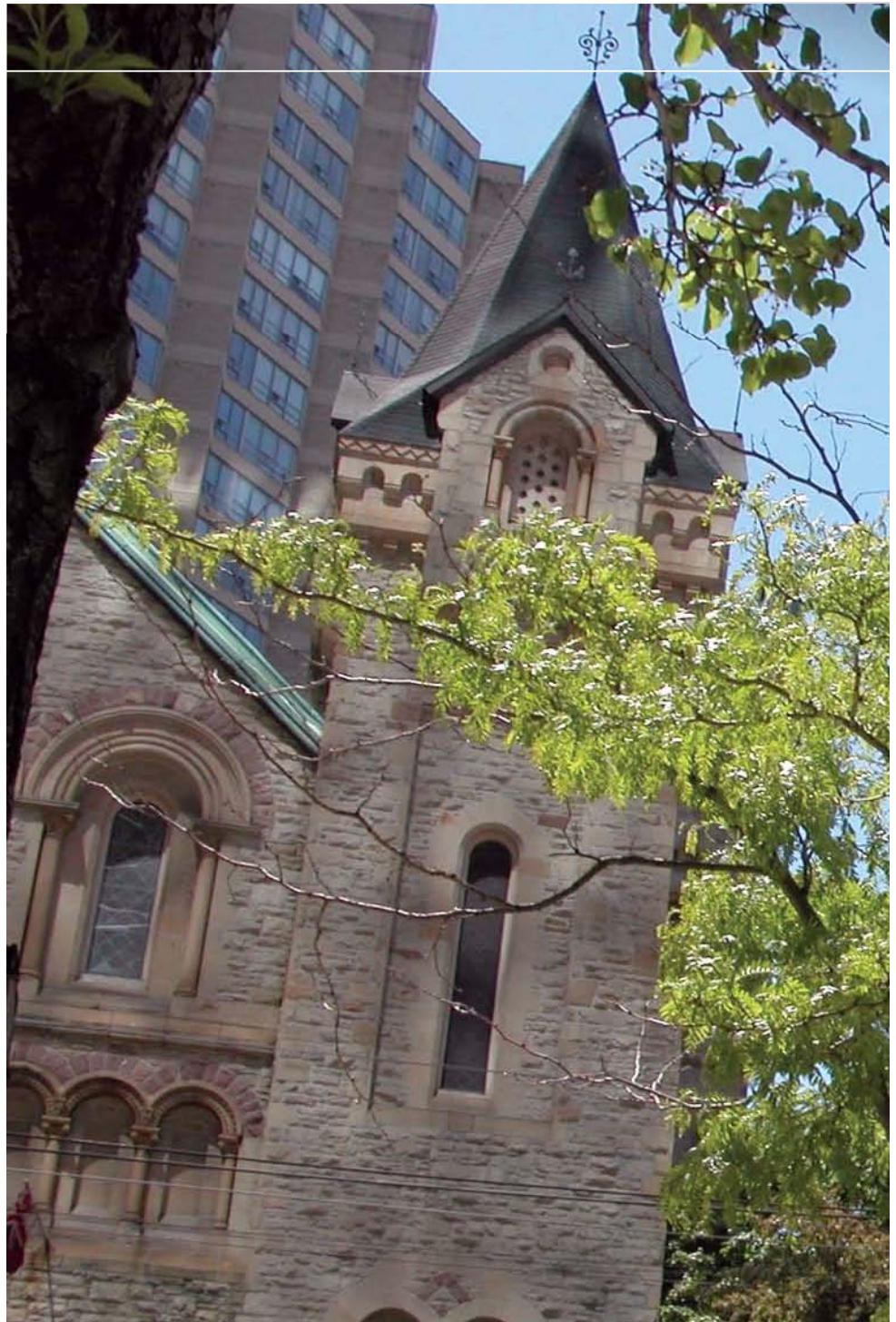
www.iscb.org

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