

International Joint Conference on Neural Networks (IJCNN) 2005

July 31 - August 4, 2005

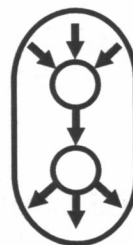
Hilton Montréal Bonaventure Hotel

Montréal, Québec, Canada



Co-organized by:

**THE INTERNATIONAL
NEURAL NETWORK
SOCIETY
(INNS)**



**IEEE
COMPUTATIONAL
INTELLIGENCE
SOCIETY**



Message from the General Chair

Dear IJCNN 2005 Attendees,

On behalf of the IJCNN 2005 Organizing Committee, I am happy to welcome you to the International Joint Conference on Neural Networks! This year's conference marks another year of fruitful cooperation between the International Neural Network Society (INNS) and the new Computational Intelligence Society (CIS) of the IEEE and continues a legacy of exceptional meetings. For many years the IJCNN has been a "must attend" for all leading neural network researchers, especially those who value interdisciplinary viewpoints. The IJCNN also welcomes other researchers in neuroscience, machine learning, computational intelligence and AI who are undoubtedly attracted by the open-mindedness and the bold spirit of the IJCNN. The IJCNN 2005 is also truly international, with submissions from over 1,500 authors representing 66 countries.

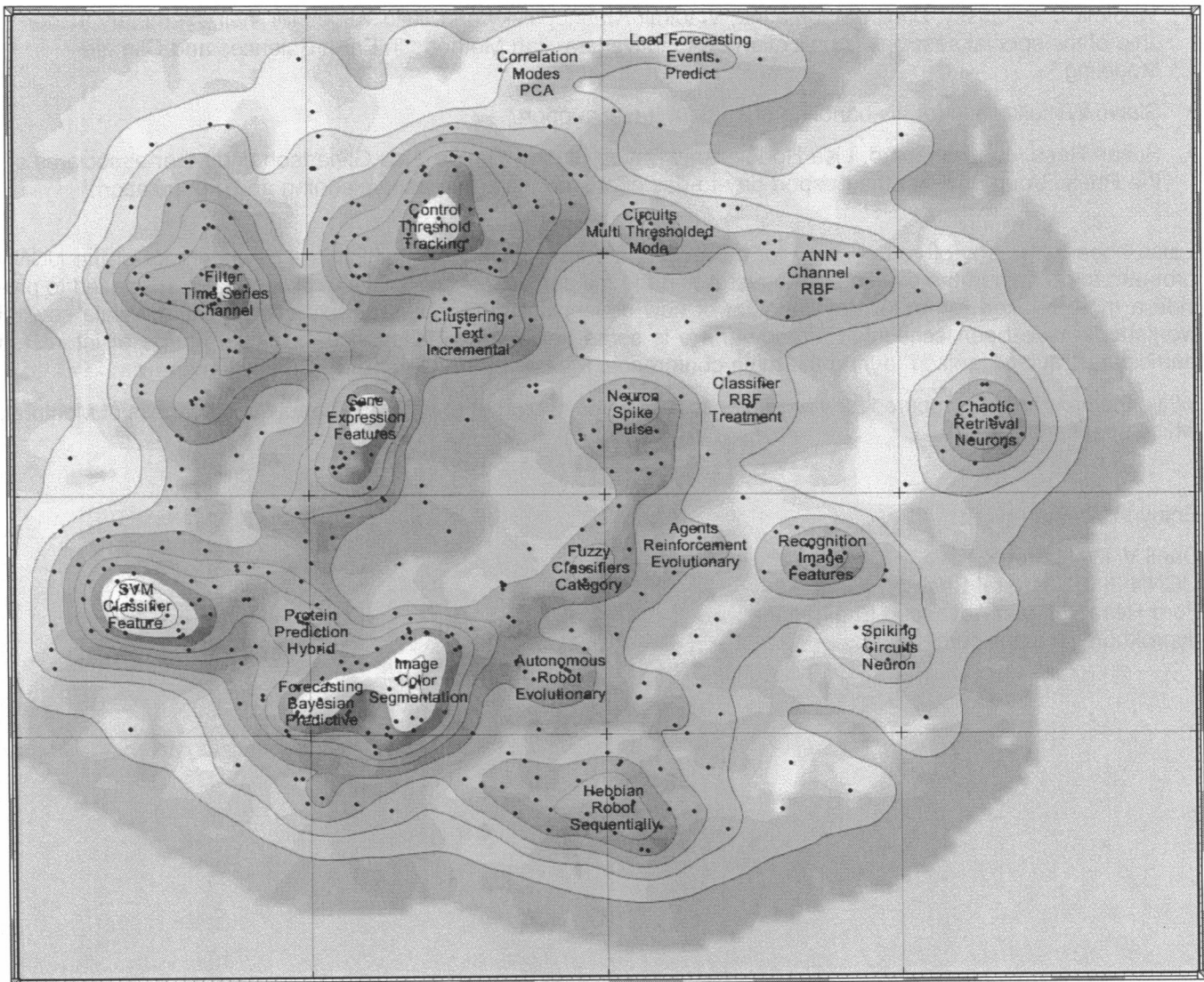
The IJCNN 2005 continues our tradition of quality papers. Our on-line paper collection and review system, expertly created and maintained by Tomasz Cholewo, registered 2,430 reviews from more than 350 reviewers for 752 submitted papers. Moreover, many additional reviews were performed outside of the on-line system. All regular and most of the special session papers received at least three reviews each, which allowed the Program Committee to do a careful job when rejecting 25% of papers. While other conferences may boast higher rejection rates, the high rates do not always guarantee high quality, as those other conferences in the past have accepted papers which could have not made it into the IJCNN Proceedings.

The Organizing Committee worked very hard to create an exciting IJCNN 2005 program. We secured plenary talks from such exceptional speakers as Pierre Baldi, Michael Petrides, Frank Lewis, Mitsuo Kawato and Carver Mead. We scheduled special and regular sessions on the same day to match their plenary talks. Two of our plenary speakers also agreed to give tutorials, complementing an already strong and multidisciplinary tutorial selection. Our 17 special sessions will surely attract your attention.

The IJCNN 2005 landscape is revealed on the next page, with dots representing accepted papers. No differentiation was made in the review and publication processes of papers scheduled for poster or oral presentations. In fact, the majority of the IJCNN 2005 presentations are assembled into two four-hour plenary poster sessions, offering not only plenty of time to present and thoroughly discuss your work with colleagues but also to enjoy the exhibits of our sponsors and the books offered by our invited booksellers. Each poster presentation is much more visible than any of the (just 20-minute!) oral presentations. All poster presenters are in very good company, with several exciting topics appearing only as posters.

We are extremely grateful to the following organizations for their support:

- The INNS (lead society for this year's IJCNN), the IEEE-CIS and their respective leadership.
- Co-sponsors: Florida Institute of Technology, University of Texas at Arlington, Ford Motor Company (the largest donor), ACIL of the University of Missouri-Rolla, Siemens Canada, Cisco Systems and Elsevier.
- Montreal Tourism Bureau.



Effective conference organization is impossible without the right people assigned to appropriate positions. In addition to our International Program and Review Committees listed later, I am especially thankful to the following members of the IJCNN 2005 Organizing Committee:

- Dan Levine, Fred Ham and Bill Howell for their outstanding work on both the conference program and the preparations for the IJCNN Special Issue 18(5/6) of Neural Networks. Bill Howell also helped other members of the Organizing Committee on miscellaneous issues including invitation letters for Canadian visas and special sessions.
- Jean-Philippe Thivierge, Oury Monchi and Mohamed Cheriet for their solid control of all local arrangement issues including the wireless Internet and coordination of volunteers.
- Mike Stiber (conference home page) and Tom Cholewo (on-line paper submission and review system) were invaluable as our web co-chairs. As in the previous years, Tom and his on-line system saved countless hours for our reviewers, the Program and the Organizing Committees.
- Mary Lou Padgett and Carlo Morabito for their expert handling of all tutorial matters.
- David Brown for his timely publicity efforts.
- Daniel Silver and his International Co-Chairs (Emilio del Moral Hernandez, De-Shuang Huang and Radosveta Sokullu) for their extremely critical work on assuring that our international attendees get their Canadian visas on time.

- Vladimir Cherkassky, Dimitri Solomatine, Vladimir Krasnopolsky and Julio Valdes for their exemplary leadership of the special sessions “Application of Adaptive Learning Methods in Earth Sciences and Climate Modeling.”
- Slawo Wesolkowski for his handling of student travel support.
- Susan Rees, Jane Shepard, Lisa Horton, Amy Bayer, Stacey Phelps, Lisa Gilbertson and other associates at the Rees Group, Inc., for their expert day-to-day efforts on the conference planning and organization.

I also hope that many of you will stay for our post-conference workshops, which is a new element of the IJCNN program to be held in the evening of August 4 and the full day on August 5. The workshops are supposed to provide a more relaxed forum for development of new concepts and themes and expertise sharing. While several workshops have been scheduled already, there is some flexibility to accommodate small groups of interested participants “self-organized” during the main conference. Please let the Organizing Committee know.

While the program we prepared for you is intense, please do not forget to enjoy the beauty and richness of Montréal, which speaks for itself.

Enjoy the conference!

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Organizing Committee

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