

The 19th International Workshop on Principles of Diagnosis (DX-08)

September 22–24, 2008

Blue Mountains, Australia

Call for Papers

Website: <http://www.cs.unisa.edu.au/~dx08/>

Email: dx08 at cs dot unisa dot edu dot au

The International Workshop on Principles of Diagnosis is an annual event that started in 1989 rooted in the Artificial Intelligence (AI) community. Papers presented at the workshop cover a variety of theories, principles, and computational techniques for diagnosis, monitoring, testing, reconfiguration, fault-adaptive control, and repair of complex systems. Applications of these theories, principles, and techniques to industry-related disciplines and other real-world problems are also important topics of the workshop.

Like the previous workshops in this series, DX-08 encourages the interactions and the exchange of theories, techniques, applications, and experiences amongst researchers and practitioners from different backgrounds: Artificial Intelligence, Control Theory, Systems Engineering, Software Engineering and other related areas, who share an interest in different aspects of diagnosis, and the related fields of testing, reconfiguration, maintenance, prognosis, and fault-adaptive control.

Several conferences are to be held in Australia within a month from the conference dates: CP, International Conference on Principles and Practice of Constraint Programming; ICAPS, International Conference on Automated Planning and Scheduling; KR, International Conference on Principles of Knowledge Representation and Reasoning; NMR, International Workshop on Nonmonotonic Reasoning; IJCAR, International Joint Conference on Automated Reasoning. DX-08 proposes to promote the exchanges between the diagnosis community and these communities. Papers in connection with these conferences are strongly encouraged.

DX is a lively forum that has traditionally adopted a single-track program with a limited number of participants in order to promote detailed technical exchange and debate while at the same time making efforts to develop synergistic approaches to solving real-world problems. We welcome papers on topics that are related but not limited to the following:

- Formal theories and computational methods for diagnosis, that include monitoring, detection and isolation, testing, repair and therapy, reconfiguration, fault tolerance, diagnosability analysis, and other related topics.
- Modeling for diagnosis that includes symbolic, numeric, discrete, discrete-event, continuous, hybrid, probabilistic, functional, behavioral, qualitative, abstractions, and approximation methods. Effective modeling approaches for large systems are of particular relevance.
- Computational issues that address combinatorial explosion, use of structural and hierarchical knowledge, focusing strategies, resource-bounded reasoning, real time analysis, and other related topics.
- Diagnosis processes that include strategies for measurement selection, sensor placement, test actions design, active testing, embedded diagnosis systems, preventive diagnosis, fault tolerance strategies, fault-adaptive control, and distributed diagnosis.
- Bridge between DX (AI-based diagnosis methods) and other diagnosis methodologies: FDI, control-based techniques, statistical and probabilistic methods, design, model checking, machine learning, non-monotonic reasoning, planning, execution, real-time languages, software verification and validation, debugging, and hardware testing.

- Real-world applications and integrated systems in a wide range of fields including transportation systems, space and aeronautics, process industries, medical domains, and bioinformatics. Case studies of tech transfer that resulted in success or failure are especially welcome.

Program Co-chairs

Alban GRASTIEN

NICTA and Australian National University, Canberra, Australia

Markus STUMPTNER

University of South Australia, Adelaide, Australia

Submission Information

Papers should be prepared in [IJCAI'07 format](#) ([L^AT_EX sources](#), [Word template](#)) and must not exceed 8 pages length. Authors must submit their paper in PDF format via the [online paper submission site](#) by **May 9th, 2008**. Postal addresses, electronic mail, fax, and telephone numbers should be listed on the cover page of all papers. Please ensure all fonts are embedded in the PDF file.

For those who wish to attend the Workshop without submitting a paper, please email a short abstract describing your research interests to the Program Chairs [dx08 at cs dot unisa dot edu dot au]. To promote active discussion at the workshop, attendance will be by invitation only.

For additional details, please visit the conference website at <http://www.cs.unisa.edu.au/~dx08/> or send an email to to the Program Chairs (Alban Grastien and Markus Stumptner). We look forward to your paper submissions, and look forward to your attending DX-08.

Important Dates

Paper Submission Deadline:	May 9th, 2008 (Friday)[†]	extended
Reviews Available to Authors for Discussion:	May 26, 2008 (Monday)	
Notification of Acceptance and Rejection:	June 9, 2008 (Monday)	
Final Papers Due:	July 3, 2008 (Thursday)	
Conference:	September 22, 23, and 24, 2008 (Monday to Wednesday).	

[†] Times are Apia, Samoa, standard local time (UTC/GMT-11 hours).