

# Proceedings of the 26<sup>th</sup> International Workshop on Principles of Diagnosis (DX-15)

August 31-September 3, 2015

Paris, France

Yannick Pencolé, Louise Travé-Massuyès, Philippe Dague, Editors



# Foreword

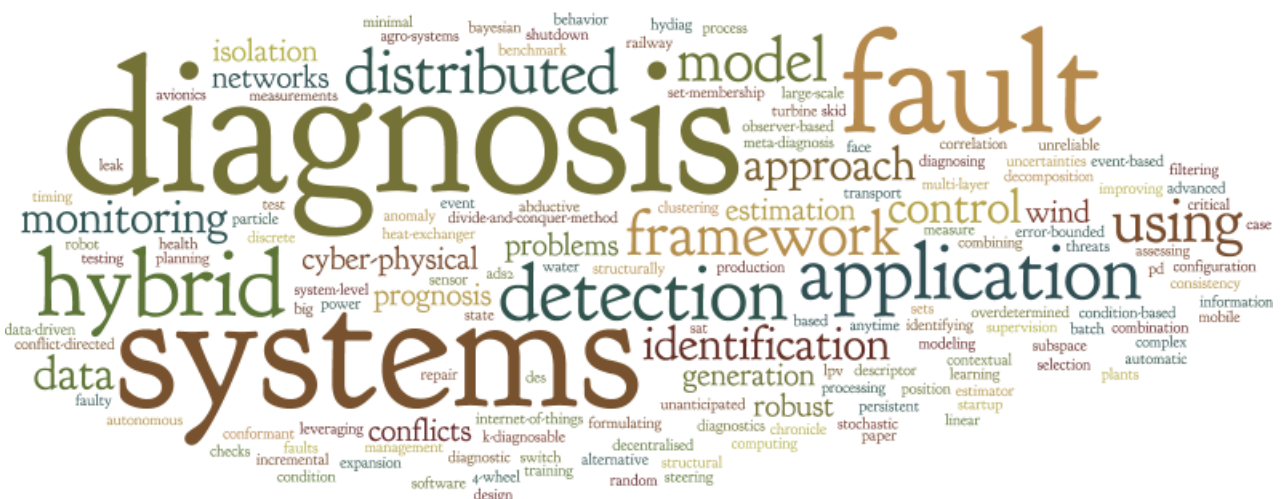
The International Workshop on Principles of Diagnosis is an annual event that started in 1989, originating in the Artificial Intelligence community. Its focus is on theories, principles and computational techniques for diagnosis, monitoring, testing, reconfiguration and repair of complex systems and applications of these techniques to real world problems.

This year, DX-15 received 41 submissions (39 full papers and 2 tool papers) from 15 countries, from 5 continents. Each paper was thoroughly peer reviewed by three reviewers. We accepted 17 regular papers (selection rate 43.6%), 18 posters and 2 benchmark/tool papers. We wish to thank all the authors of submitted papers, the program committee members for the time and effort spent, the invited speakers for their participation.

As the DX-15 workshop is co-located with the IFAC International Symposium SAFEPROCESS 2015, its organization would not have been possible without the full support of the SAFEPROCESS organization team and especially Vincent Cocquempot who did a tremendous coordination job between the two events. Also special thanks to our local contact Nazih Mechbal at *École Nationale Supérieure d'Arts et Métiers* (ENSAM), ParisTech, where DX-15 and SAFEPROCESS take place. Thanks also to the local organization team at LAAS-CNRS and at the CNRS administrative department of Toulouse (DR14) for their full technical and administrative support.

We also wish to thank our sponsors: *Centre National de la Recherche Scientifique* (CNRS), *Université de Toulouse*), *Laboratoire de Recherche en Informatique*, *Université Paris-Sud*, *École Nationale Supérieure d'Arts et Métiers* (ENSAM), *Institut National des Sciences Appliquées de Toulouse* (INSA-Toulouse), *Université Pierre et Marie Curie* (UMPC), and ACTIA.

Yannick Pencolé, Louise Travé-Massuyès, Philippe Dague.  
August 2015



Word cloud generated from the titles of the DX-15 papers by <http://www.wordle.net>.



# Workshop Organization

## Program Co-Chairs

|                       |  |
|-----------------------|--|
| Yannick Pencolé       | LAAS-CNRS, Univ. Fédérale Toulouse, France |
| Louise Travé-Massuyès | LAAS-CNRS, Univ. Fédérale Toulouse, France |
| Philippe Dague        | LRI, Université Paris-Sud, France          |

## International Program Committee

|                         |  |
|-------------------------|--|
| Rui Abreu               | PARC, USA  |
| Jose Aguilar            | Universidad de los Andes, Venezuela                                      |
| Carlos Alonso           | Universidad de Valladolid, Spain   |
| Gautam Biswas           | Vanderbilt University, USA   |
| Anibal Bregon           | Universidad de Valladolid, Spain   |
| Luca Console            | Università di Torino, Italy  |
| Matthew Daigle          | NASA Ames Research Center, USA   |
| Johan de Kleer          | PARC, USA  |
| Michael Hofbauer        | Joanneum Research, Austria   |
| Alexander Feldman       | PARC, USA  |
| Gerhard Friedrich       | Klagenfurt University, Austria   |
| Alban Grastien          | NICTA, Australia   |
| Claudia Isaza           | University of Antioquia, Medellín, Colombia                              |
| Meir Kalech             | Ben-Gurion University of the Negev, Israel                               |
| Mattias Krysander       | Linköping University, Sweden   |
| Anastassia Küstenmacher | Bonn-Rhein-Sieg University of Applied Science, Germany                   |
| Ingo Pill               | TU Graz, Austria   |
| Gregory Provan          | University College Cork, Ireland   |
| Xavier Pucel            | ONERA CERT, France   |
| Martin Sachenbacher     | LION Smart GmbH, Germany   |
| Ramon Sarrate           | Universitat Politècnica de Catalunya, Spain                              |
| Neal Snooke             | Aberystwyth University, UK   |
| Gerald Steinbauer       | TU Graz, Austria   |
| Peter Struss            | TU München, Germany  |
| Anna Sztyber            | The Institute of Automatic and Robotics, Warsaw University of Technology |
| Gianluca Torta          | Università di Torino, Italy  |
| Franz Wotawa            | TU Graz, Austria   |
| Marina Zanella          | Università degli Studi di Brescia, Italy                                 |

## **Additional Reviewers**

|                       |  |
|-----------------------|--|
| Moussa Maiga          | LAAS-CNRS, Univ. Fédérale Toulouse, France                           |
| Nathalie Barbosa Roa  | LAAS-CNRS, Univ. Fédérale Toulouse, France                           |
| Euriell Le Corronc    | LAAS-CNRS, Université Paul Sabatier, Univ. Fédérale Toulouse, France |
| Élodie Chanthery      | LAAS-CNRS, INSA Toulouse, Univ. Fédérale Toulouse, France            |
| Indranil Roychoudhury | SGT Inc, NASA Ames Research Center, USA                              |

## **Workshop Organizing Committee**

|                       |   |
|-----------------------|---|
| Yannick Pencolé       | LAAS-CNRS, Univ. Fédérale Toulouse, France                |
| Louise Travé-Massuyès | LAAS-CNRS, Univ. Fédérale Toulouse, France                |
| Vincent Cocquempot    | CRISTAL, Université Lille 1, France                       |
| Audine Subias         | LAAS-CNRS, INSA Toulouse, Univ. Fédérale Toulouse, France |
| Nazih Mechbal         | ENSAM Paris, France                                       |

## **Technical and Administrative Support**

|                    |   |
|--------------------|---|
| Christèle Mouclier | LAAS-CNRS, Toulouse, France                 |
| Régine Duran       | LAAS-CNRS, Toulouse, France                 |
| Dominique Daurat   | LAAS-CNRS, Toulouse, France                 |
| Fabienne Baduel    | LAAS-CNRS, Toulouse, France                 |
| Bruno Birac        | LAAS-CNRS, Toulouse, France                 |
| Stéphanie Saluden  | Délégation Régionale CNRS, Toulouse, France |
| Régine Barthes     | Délégation Régionale CNRS, Toulouse, France |