

WODES 30th Anniversary

@WODES 2022
Prague, Czechia
7 September 2022



WODES SERIES

- The **first Workshop on Discrete Event Systems** was organized in Prague on Aug 26-28, 1992 by the initiative of **Petr Kozák**.
- The workshop has been held biannually since (on even years) and finally **30 years later** the 16th WODES comes back to Prague.
- It is time for a short celebration to say **thank you to all those that contributed to this success story** and have helped in creating that sense of community that we still feel today.

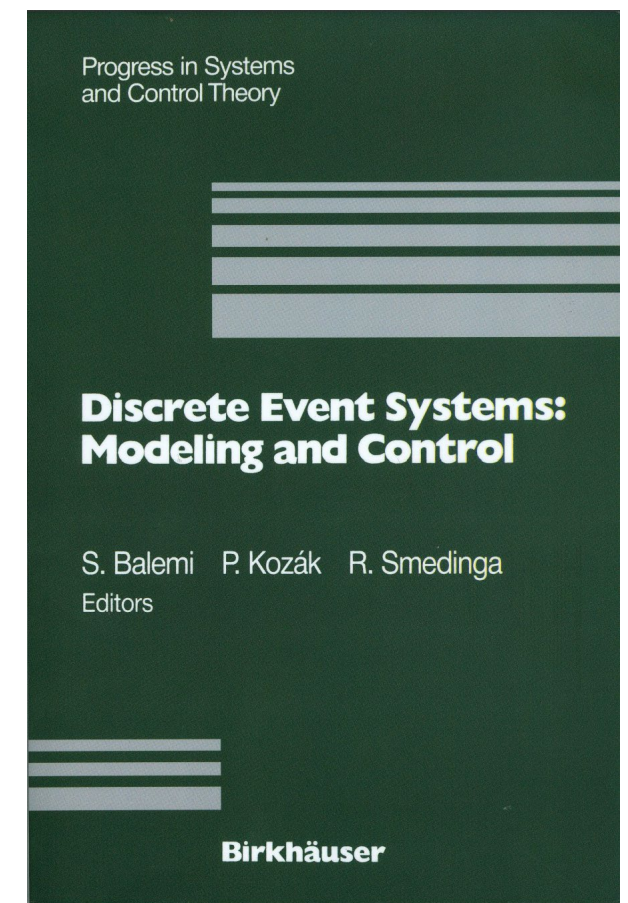
A (minimal) webpage devoted to the series can be found at:

<https://www.alessandro-giua.it/WODES/>



WODES 1992

- First workshop on Discrete Event Systems, 26-28 August 1992
- Initiated by Petr Kozák
- Organized by Petr Kozák (Prague), Silvano Balemi (Zurich), Rein Smedinga (Groningen)
- 4 invited lectures by: Steven I. Marcus (Maryland), Kemal M. Inan (Ankara), Geert-Jan Olsder (Delft), Peter J. Ramadge (Princeton)
- 42 participants, 20 presentations and 10 exercise-solutions
- 1 workshop exercise (“how to model a cat and mouse control problem in your approach”)
- 1 conference diner
- 1 sight seeing tour (guided by Petr himself)
- No website but a ftp-site with all DES researchers of that moment created afterwards (by Petr): <http://web.archive.org/web/20081219161652/http://ftp.utia.cas.cz/pub/staff/DES/DES.html>



WODES 1994

11th Int. Conf. on Analysis and Optimization of Systems

Discrete Event Systems

Sophia-Antipolis, France. 15-17 June 1994

Organizers: G. Cohen, J.-P. Quadrat, S. Gaubert

Eight "key" sessions organized by different researchers:

- The Automata Theoretic Approach (W.M. Wonham)
- The Petri Net Approach (B.H. Krogh)
- The Max-Plus Algebraic Approach (G. Cohen, G.J. Olsder and J.-P. Quadrat)
- Hybrid Systems (J.H. van Schuppen)
- Simulation and Perturbation Analysis (R. Brémaud and C. Cassandras)
- Network Stability (F. Baccelli)
- Large DES (G. Fayolle and V. Malyshev)
- Manufacturing Systems (S. Gershwin and R. Suri)

Each session was composed of a tutorial lecture giving a survey of the domain, an invited lecture developing some aspects introduced in the survey, and finally more specialized contributions.

This conference organized by INRIA and Ecole des Mines de Paris can also be considered as the second WODES/CODES conference (series of WOrkshop or COnferences on Discrete Event Systems).

Lecture Notes in Control
and Information Sciences 199

Guy Cohen and
Jean-Pierre Quadrat (Eds.)

**11th International Conference
on Analysis and Optimization
of Systems**

Discrete Event Systems

Sophia-Antipolis
June 15–16–17, 1994

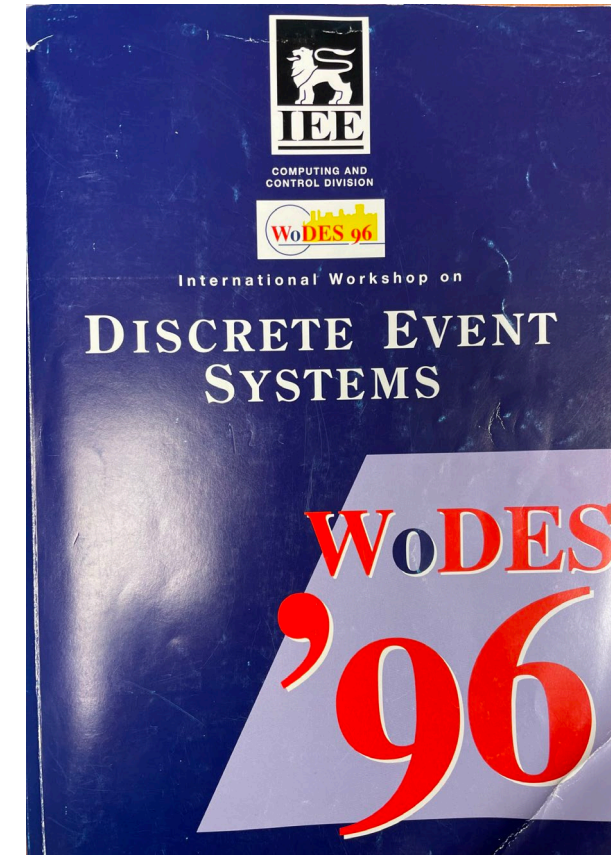


Springer-Verlag London Ltd.

WODES 1996



- Third workshop
- Organized by Michael Spathopoulos (Glasgow), Rein Smedinga (Groningen), Petr Kozák (Prague)
- In Edinburgh, Scotland
- 19-21 August 1996
- 72 participants
- Main theme: “Discrete Event Systems: applications and tools”
- Plenary speakers: Robin Milner, Robert Kurshan, Stéphane Lafortune



Website: <http://web.archive.org/web/19980122220628/http://www.cs.rug.nl/info/WODES/>

WODES 1998



4th Int. Work. on Discrete Event Systems

August 26-28, 1998 -- Cagliari, Italy

- **Main Sponsor:** IEE (we had tea breaks !)
- **Organizers:** A. Giua, R. Smedinga, M. Spathopoulos
- **Local arrangements:** A. Fanni, E. Usai
- **3 Invited Speakers:** Y.-C. Ho, M. Silva, W.M. Wonham
- **83 full papers** (from 23 countries) out of 101 submissions + **14 short papers**
- **5 invited sessions:** Performance analysis + Hybrid systems (C. Cassandras), Supervisory control (M. Fabian & R. Kumar), Safety analysis of processing systems (S. Kowalewski), Failure diagnosis (R. Sengupta)
- First **steering committee was appointed:** Cassandras, Giua, Quadrat, Smedinga, Spathopoulos
- **Relaxed atmosphere** in Hotel Chia Laguna overlooking a scenic beach. Dinners were particularly appreciated. Argiolas Vino offered two bottles of wine to all participants.

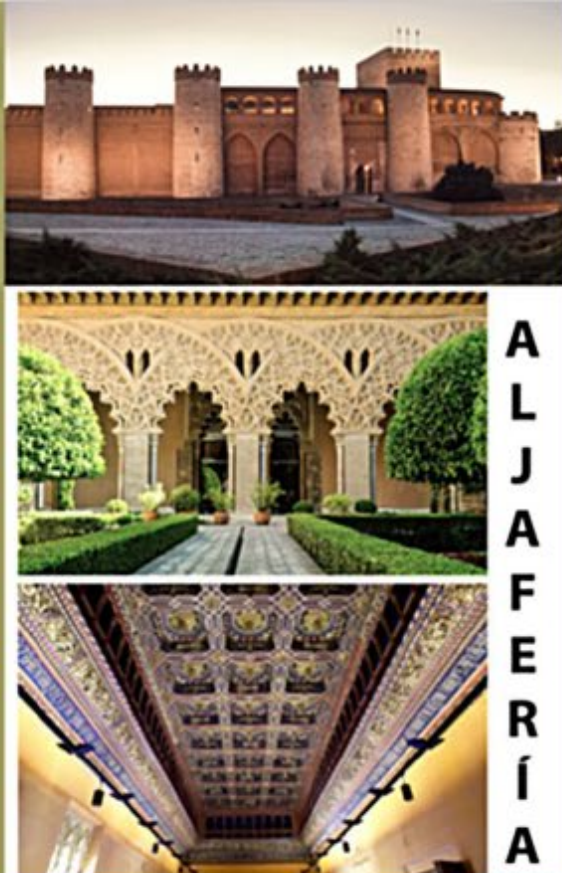


5th WODES, Gent, Belgium, 21-23/8/2000



- organizers: René Boel and Geert Stremersch
 - 85 participants, 14 sessions, 48 contributed papers
 - tool presentation session
 - discussion on past and near future of DES research with: Xiren Cao, Guy Cohen, Alessandro Giua, W. Murray Wonham, Jan van Schuppen
 - special issue JDEDS (4 papers + report discussion)
-
- Plenary speakers: Edward Lee (Discrete-Event Modeling and Design of Embedded Software), Bertil Brandin (VALID Tool set: Validation of Software Applications)
 - Minicourses: Christos Cassandras and Yorai Wardi (Hybrid Dynamical Systems)
Felisa Vazquez-Abad (Sensitivity Analysis for Gradient Estimation)

...and a sweltering reception in a tropical greenhouse plus some visa problems...



**Singing & Dancing JOTA
Gran Hotel, Zaragoza**

WODES: control theoreticians and control engineers, software engineers and computer scientists, operations research specialists

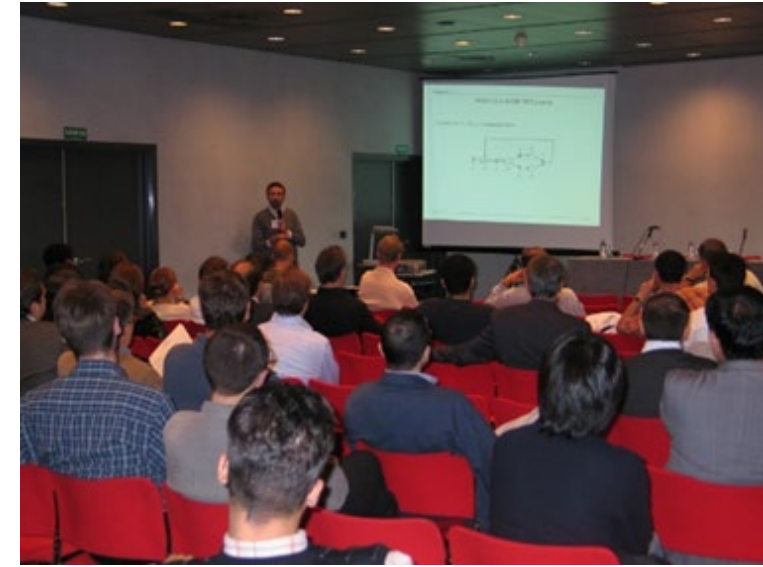
- * **Papers:** 78 submitted; 55 selected (70%). **Proceedings** by IEEE Computer Society
- * **Three plenary talks:** **Christos G. Cassandras**, "From discrete event to hybrid systems"; **Ed Brinksma**, "Model checking embedded system designs"; & **Bruce H. Krogh**, "Recent advances in discrete analysis and control of hybrid systems".
- * **Four special sessions:** **B. De Schutter & A. Di Febbraro**, "Discrete event systems and transportation"; **F. Martinelli & P. Valigi**, "Optimization techniques for discrete event systems"; **M. Fabian**, "Implementation of supervisory controllers"; & **F. Vázquez-Abad**, "Discrete event methodologies in telecommunications".

The cover art is inspired by **Mudéjar**, a genuine Spanish architectural-decorative style coexisting with Gothic, Renaissance and Baroque, **symbol of cooperation among cultures**. In 2002 several **mudéjar** buildings in Aragón were recognized from UNESCO as **Patrimony of the Humanity**. The cover art is composed using decorative **mudéjar** elements. The general shape expresses universality (circle) and dynamism (blades or propellers). Multiculturalism, tolerance, universality and dynamism are also good descriptors of the WODES community.

WODES'04

September 22-24, 2004, Reims – France

- Main Sponsor: IFAC
- 3 Invited Speakers: A. Giua, O. Maler, S. Kowalewski
- 129 participants from 22 countries
- 76 papers accepted (from 23 countries) out of 130 submissions
- Extended versions of 10 papers published in 2 special issues of JDEDS
- IPC: J. Zaytoon (Chair), X. Cao (Co-Chair), C. Cassandras (Co-Chair)
- NOC: V. Carré-Ménétrier and J. Zaytoon (Co-Chairs)
- The Banquet took place in a prestigious Champagne House.
- A post-Workshop tour was organized to some Villages and traditional “Champagne Crus”



8th WODES - Ann Arbor, Michigan, USA - July 10-12, 2006

- Organizers: Stéphane Lafortune, Dawn Tilbury (U. of Michigan) and Feng Lin (Wayne State U.) [photo]
- Website: <https://vhosts.eecs.umich.edu/wodes2006/>
 - Includes a photo album!
- 109 participants from 19 countries
- Plenary speakers: Albert Benveniste, Xiren Cao, Nancy Lynch
- Panel discussion: Eelco Scholte, Darren Cofer, Bruce Krogh, Yi-Liang Chen, Georg Frey [photo]
- Banquet remarks by Murray Wonham (read by Peter Caines) and Yu-Chi Ho (read by Christos Cassandras)
- Fun fact 1: Live Jazz music at banquet (but not much dancing)
- Fun fact 2: Final game of 2006 FIFA World Cup was on July 9, 2006



Photo credits: Patrícia Nascimento Pena

WODES' 08

9TH INTERNATIONAL WORKSHOP ON DISCRETE EVENT SYSTEMS

Chalmers, Gothenburg, May 28-30



Organizers: Bengt Lennartson, Martin Fabian, Knut Åkesson, Alessandro Giua, Ratnesh Kumar

Plenary talks: Panos Antsaklis, Kim G. Larsen, Stephan Biller
107 submitted (71 regular, 36 invited)
77 accepted (44 regular (62%), 33 invited (92%))

Most cited papers:

- 1) J Marques-Silva *"Practical applications of Boolean Satisfiability"*
167 GS citations
- 2) J Dubreil, P Darondeau, H Marchand *"Opacity enforcing control synthesis"* **80 GS citations**
- 3) A Saboori, CN Hadjicostis *"Verification of initial-state opacity in security applications of DES"* **78 GS citations**



Wodes 2010

- 10th International Workshop on Discrete Event Systems, held under the auspices of IFAC
- Date: August 30 - September 1, 2010
- Location: Technische Universität Berlin
- Organiser (NOC chair): Jörg Raisch
- Programme committee chairs: Jörg Raisch (Technische Universität Berlin, Germany), Alessandro Giua (Università di Cagliari, Italy) Stéphane Lafortune (University of Michigan, USA), Thomas Moor (Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany)
- Plenary talks by: Paulo Tabuada (UCLA), Rajeev Alur (Univ. of Pennsylvania). Rene Boel (Ghent Univ.)
- Number of submitted papers: 103- Number of accepted papers: 72 (invited: 22, regular: 50)
- Satellite event: DISC Workshop on Distributed Discrete Event Systems (September 2nd), organised by A. Giua (University of Cagliari, Italy) and L. Ricker (Mt Allison University, Canada).



WODES 2012

11th International Workshop on Discrete Event Systems

Guadalajara, Mexico
October 3-5, 2012



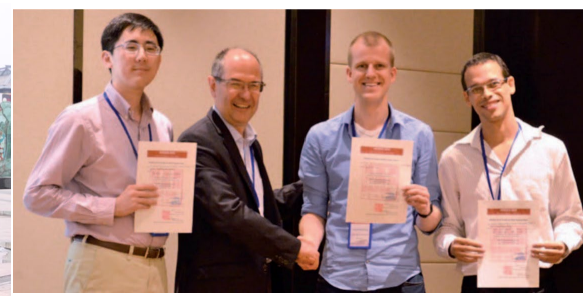
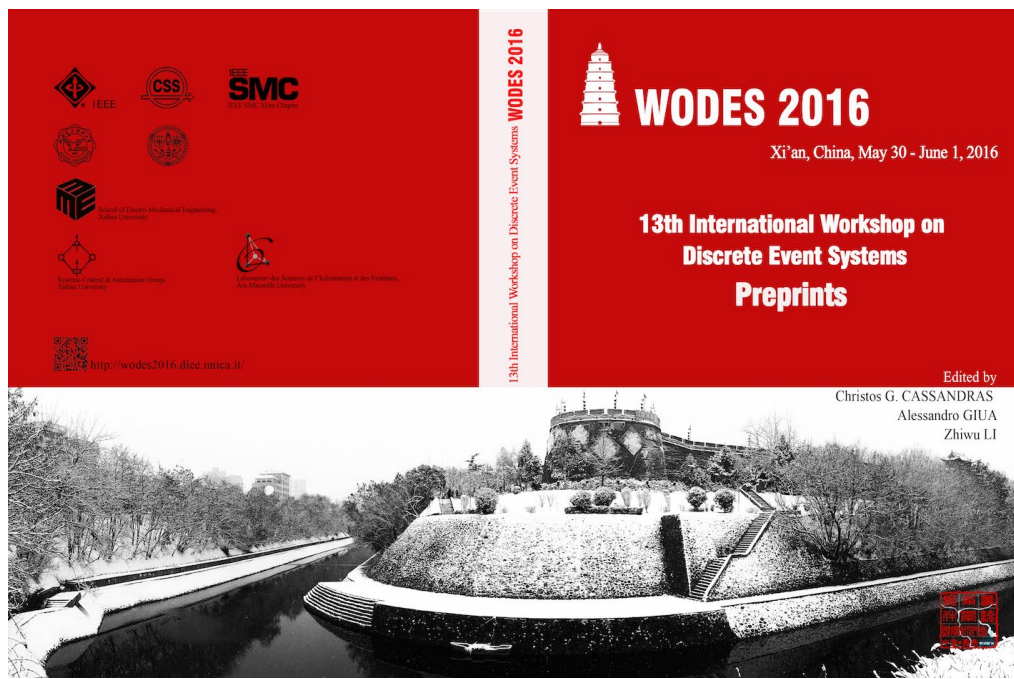
- The eleventh edition of the International Workshop on Discrete Event Systems was held in **Guadalajara México in 2012**. **56 papers were accepted** for presentation. These papers were coauthored by 134 researchers from 19 countries, with the following distribution: 34.1 papers come from Europe, 8.2 from Latin America, 8.1 from US/Canada, 3.35 from Asia, 1.25 from Africa, and 1 from Oceania.
- This edition saw the first event of the **Best Student Paper Award**. The winner was **Anna-Lena Meyer** with paper "Discontinuity Induced Bifurcations in Timed Continuous Petri Nets".
- Also, the four plenary talks "Some Perspectives and Challenges in the (Discrete) Control of Cellular Systems" by **José Eduardo Ribeiro Cury**, "Optimal Control of Switched-Mode Dynamical Systems" by **Yorai Wardi**, "Discussion on the fault diagnosis methods of Discrete Event Systems" by **Janan Zaytoon** and "50 years after the PhD thesis of Carl Adam Petri: A perspective" by **Manuel Silva**.



- IPC: Jean-Jacques Lesage (Chair), José Cury (Co-Chair), Bengt Lennartson (Co-Chair). NOC: J.-M. Faure
- Main Sponsor: IFAC (IEEE was Co-Sponsor). Presented papers published on [IFAC-PapersOnLine](#)
- 132 submitted papers, from 32 countries, 80 accepted papers, from 25 countries
- 133 participants from 24 countries

- Plenary speakers: Wil van der Aalst (Tech. Univ. Eindhoven, the Netherlands), Ratnesh Kumar (Iowa State Univ., USA), Thierry Jéron (INRIA, France)
- Best Student Paper Award: 15 candidates, from 9 countries
- The banquet (and the dance party that followed 🍷) took place on a boat during a cruise on the Seine river.





Best Student paper finalists:
X. Yin;, J. Berkhout (winner),
and C.E. Nunes

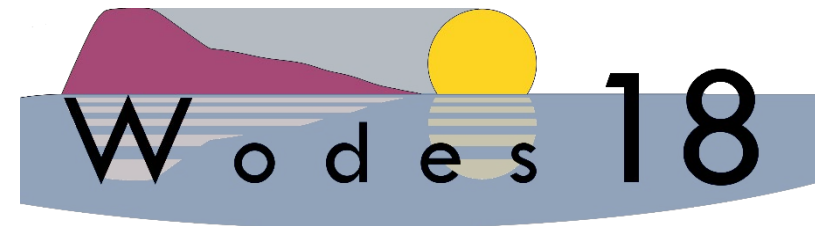


↑ Southwest corner of The Xi'an City Wall, now on tentative list of UNESCO's World Heritage Site under the title "City Walls of the Ming and Qing Dynasties".

Chinese traditional stamp-like logo. *Border: city wall and gates* of Xi'an. *Dotted lines: city blocks* of Chang'an (the old name of Xi'an during the Tang Dynasty, AD 618–907). *Blue curves: ancient city rivers*. *Chinese characters in an ancient font International Workshop on Discrete Event Systems, Xi'an, China*. *Bottom image: The bell tower*, known as city symbol today.

- Papers: 112 submissions, 76 selected (68%). Proceedings published by IEEE
- Three plenary talks: *Jan Lunze*, "Fault-Tolerant Control of DES Described by I/O Automata"; *Edwin K.P. Chong*, "Submodular Optimization Problems and Their Applications"; & *Yiguang Hong*, "Opinion Dynamics in Social Networks: Agreement or Disagreement".
- Sponsors: IEEE, IEEE CSS, IEEE SMC
- Organizers: SCA Group of the School of Mechano-Electronic Eng. of Xidian University in collaboration with LSIS of Aix-Marseille University, France, and University of Cagliari, Italy.

- WODES 2018 was held from May 30– June 1, 2018, at the Towers Hotel Stabiae Sorrento Coast, located on the Sorrento Coast in Italy.
- WODES 2018 received 106 submissions, 76 papers were accepted.
- The corresponding authors of the 76 accepted papers came from 18 countries, with the following distribution: 46 papers came from Europe (which represents about the 60.5% of the total), ten from Latin America, ten from Asia, seven from US/Canada, two from Oceania, and one from Africa.
- More than 130 people attended the opening session in the morning of May 30.
- WODES 2018 was preceeded by the 1 st International school on Discrete Event Systems (<http://schooldes2018.unisa.it/>). The event was a challenge, but turned out to be a success with 44 registrations from all over the world (29 attendees from Europe, 6 from China, 4 from USA & Canada, 3 from Brazil, 1 from Tunisia, 1 from Singapore).



Francesco Basile, General Chair
 Chris Hadjicostis, Program Committee Co-chair
 Jan Komenda, Program Committee Co-chair



WODES 2020

Proceedings of the 15th IFAC Workshop
on Discrete Event Systems

November, 11-13, Virtual Conference

Chair

João Carlos Basilio

Federal University of Rio de Janeiro (UFRJ)

Co-Chair

José E. Ribeiro Cury

Federal University of Santa Catarina (UFSC)

- 117 submissions from all continents,
- 326 different authors
- 79 papers selected
- Due to restrictions imposed by the pandemics, 75 papers were uploaded, authored by 242 authors
- 12 virtual sessions and three virtual plenary sessions.



- Scheduled initially to occur on 13-15 May, Rio de Janeiro, Brazil (postponed due to COVID-19 pandemic)
- International Review Committee
 - Carla Seatzu, Italy
 - Shigemasa Takai, Japan
 - Joerg Raisch, Germany
- Plenary speakers
 - Christoforos Hadjicostis
 - Yorai Wardi
 - Feng Lin

16th WODES 2022, Prague, September 7-8, 2022.



Main sponsoring organization: IFAC

*September 7: **history session**
commemorating **30 years of WODES***

3 Invited Speakers: J. Raisch, S. Coogan, E. Roszkowska

*Team: J. Komenda, S. Reveliotis,
T. Masopust, P. Burget, L. Krivdova*

52 accepted papers and 8 journal papers

*BSP Award winner A. Mainhardt
Finalist: D. Zorzenon*



WODES 30th Anniversary Ceremony

WODES Edition	Organizer
1998 Cagliari, Italy	Alessandro Giua
2000 Gent - Belgium	René Boel
2006 Ann Arbor - USA	Stéphane Lafortune
2008 Göteborg - Sweden	Bengt Lennartson
2010 Berlin - Germany	Joerg Raisch
2014 Paris-Cachan - France	Jean-Jacques Lesage
2018 Sorrento - Italy	Francesco Basile
2020 Rio - Visio	João Carlo Basilio
2022 Prague	Jan Komenda

