KR 2023

The 20th International Conference on Principles of Knowledge Representation and Reasoning

Rhodes, Greece. September 2-8, 2023.

Opening Ceremony

Organization

Organization

- **General Chair**

    Gabriele Kern-Isberner, TU Dortmund, Germany

- **Program Chairs**

    Pierre Marquis, Univ. Artois, CNRS, CRIL – IUF, France

    Tran Cao Son, New Mexico State University, USA

- **Local Arrangement Chair**

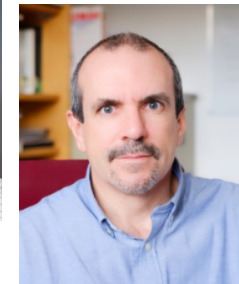   Pavlos Peppas, University of Patras, Greece

Organization: F&S, Publicity, Web Site

- **Funding & Sponsorship**

  Marcello Balduccini, Saint Joseph's University, USA

  Pedro Cabalar, Corunna University, Spain

- **Publicity Chairs**

  Theofanis (Fanis) Aravanis, University of Patras, Greece

  Guillermo Simari, Universidad Nacional del Sur, Argentina

- **Web Site**

  Ioannis (Yannis) Konstantoulas, University of Patras, Greece

Organization: Tracks

- **RPR Track**
  - Leila Amgoud, IRIT-CNRS, France
  - Martin Gebser, Graz University of Technology, Austria

- **Applications & Systems Track**
  - Matti Järvisalo, University of Helsinki, Finland
  - Francesco Ricca, University of Calabria, Italy

Organization: Special Sessions

- **Special Session on KR & ML**
  - Tias Guns, KU Leuven, Belgium
  - Luciano Serafini, Fondazione Bruno Kessler, Italy

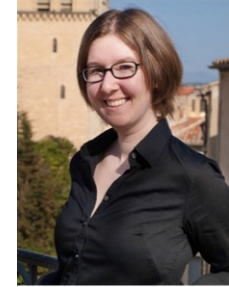- **Special Session on KR, Robotics & Planning**
  - Esra Erdem, Sabanci University, Turkey
  - Shiqi Zhang, SUNY Binghamton, USA
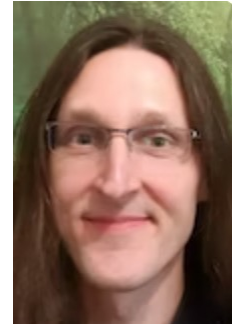
Organization: D&I, DC, T&W

- **Diversity & Inclusion Session**
  - Meghyn Bienvenu, LaBRI-CNRS, France
  - Stefan Schlobach, Vrije U. Amsterdam, The Netherlands

- **Doctoral Consortium**
  - Tanya Braun, University of Münster, Germany
  - Nico Potyka, Imperial College London, UK
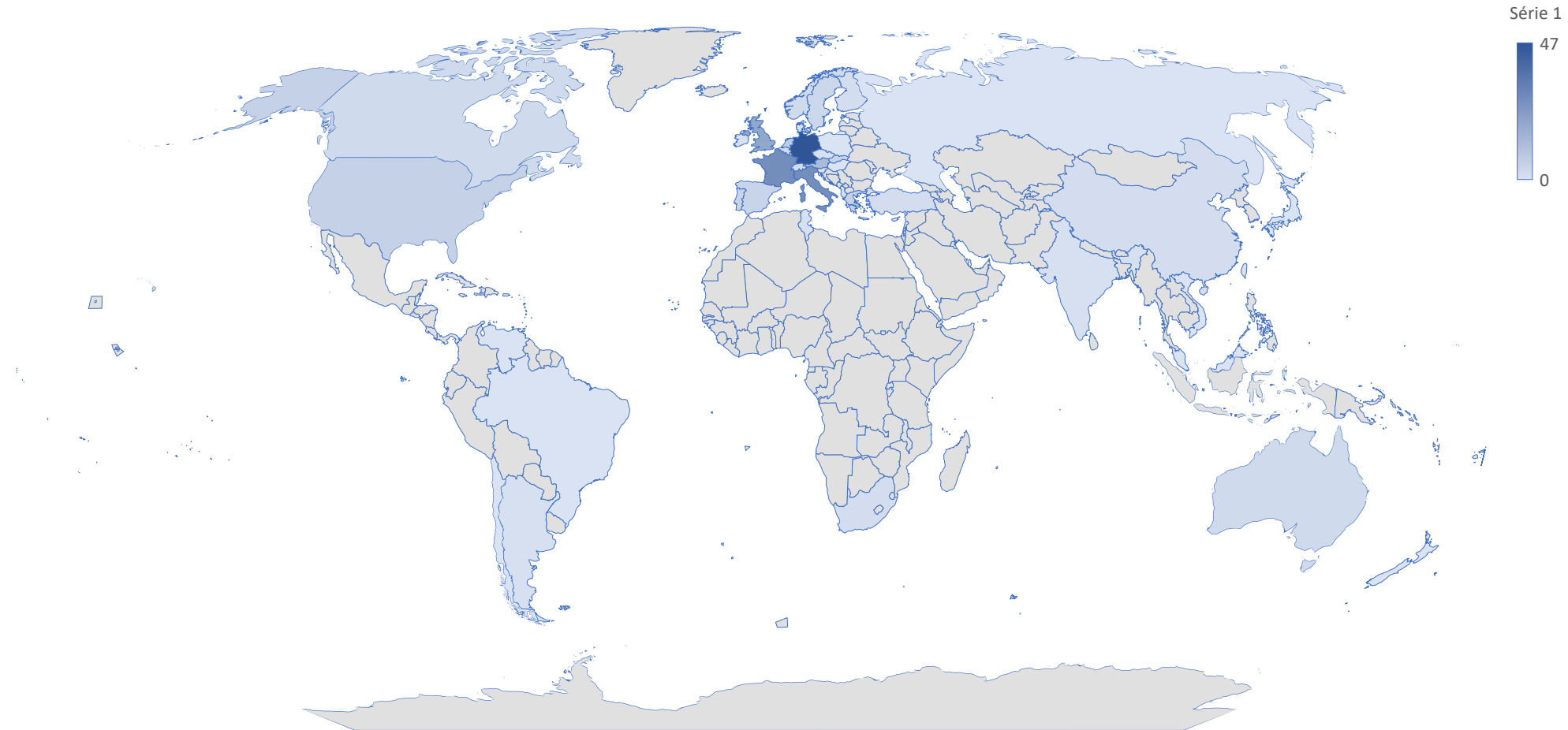
- **Tutorials & Workshops**
  - Nicolas Schwind, AIST, Japan
  - Serena Villata, I3S-CNRS, France

Program

Participation (as of August 16)

237 participants (43 countries, 5 continents)

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Avec Bing

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Schedule

Use Whova
https://whova.com/portal/webapp/icpok_202309/sign_in/

Day 1 - September 5

Time	Track 1	Track 2	DC
8:30-9:00	Opening		
9:00-10:15	3 full papers (Session 1)	3 full papers (Session 2)	DC Invited (9:05-10:15)
10:15-10:45	Break		
10:45-12:05	2 full + 3 shorts (Session 3)	2 full + 3 shorts (Session 4)	DC 6 talks (10:40-12:10)
12:05-14:00	Lunch		
14:00-15:00	Invited Talk (Luc de Raedt)		
15:00-15:50	RPR (5)	2 full papers (Session 5)	DC 3 talks (15:05-15:50)
15:50-16:20	Break		
16:20-18:00	RPR (9) (16:20-17:50) / ICCMA Comp. (17:50-18:00)	4 full papers (Session 6)	DC 7 talks (16:15-18:00)
18:00-18:30	KR Manifesto		

Day 2 - September 6

Time	Track 1	Track 2
8:30-9:30	Invited Talk (Michael Gelfond)	
9:30-10:20	2 full papers (Session 25)	2 full papers (Session 8)
10:20-10:50	Break	
10:50-12:10	2 full + 3 shorts (Session 9)	2 full + 2 shorts (Session 10)
12:10-14:00	Lunch	
14:00-15:00	Invited Talk (Claudia d'Amato)	
15:00-15:30	Break	
15:30-16:00	RPR (3) (15:30-16:00)	4 full papers (Session 11) (15:30 - 17:10)
16:00-17:15	3 full papers (Session 15)	
From 17:20	Excursion	

Day 3 - September 7

Time	Track 1	Track 2
8:30-9:30	Invited Talk (Torsten Schaub)	
9:30-10:45	3 full papers (Session 12)	3 full papers (Session 13)
10:45-11:15	Break	
11:15-12:15	DI Session	
12:15-14:00	Lunch	
14:00-15:40	4 full papers (Session 17)	4 full papers (Section 16)
15:40-16:10	Break	
16:10-17:50	4 papers (Section 7 + 26)	4 full papers (Session 18)

Day 4 - September 8

Time	Track 1	Track 2
8:30-9:30	Invited Talk (Rineke Verbrugge)	
9:30-10:45	3 full papers (Session 19)	3 full papers (Session 20)
10:45-11:15	Break	
11:15-12:05	2 full papers (Session 21)	2 full papers (Session 22)
12:05-14:00	Lunch	
13:30-14:00	Coffee Break	
14:00-15:15	3 full papers (Session 23)	3 full papers (Session 24)
16:35-17:05	Closing	

Main Track

- Including the A&S track, and the two special sessions
- 24 sessions in the program (see schedule)

- **Program committee:** 30 AC + 236 PC (+ 82 auxiliary reviewers)
- 445 abstracts received
- 345 papers received
  - 62 desk rejected, 283 papers reviewed (241 full, 42 short)
  - At least 3 reviews per paper
  - 80 papers selected (69 full, 11 short)
  - Overall acceptance rate: 23.1% (28% among the papers sent for review)

Comparison to previous years

- Number of papers received:

  2014 (218), 2016 (182), 2018 (243), 2020 (241), 2021 (287), 2022 (218),
  2023 (345)

- Percentages of papers accepted:

  2014 (26.6%), 2016 (26.9%), 2018 (26.7%), 2020 (34.4%), 2021 (26.1%), 2022 (26.6%),
  2023 (23.1%)
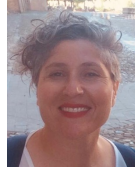
Distribution per country

Top 10 (submitted)

Italy	38
France	34.02
Germany	31.53
UK	27.04
China	24.9
USA	20.35
Australia / Austria	10.2
Spain	7.83
Netherlands	7.65

Top 10 (accepted)

Germany	14.2
France	10.67
UK	9.32
Italy	8.07
Austria	6.03
Netherlands	4.4
USA	4.1
Israel	2.5
Portugal	2.25
Australia / Spain	2

Invited Talks

- **Claudia d'Amato**, University of Bari

  On the need of semantics when tackling Knowledge Graph completion under a Machine Learning perspective (Sep. 6, 14h-15h)

- **Luc de Raedt**, KU Leuven

  How to Make Logics Neurosymbolic (Sep. 5, 14h-15h)

- **Michael Gelfond**, Texas Tech University

  Knowledge Representation in the Languages of Logic Programs under Answer Set Semantics (``Great Moments in KR'') (Sep. 6, 8h30-9h30)

- **Torsten Schaub,** University of Potsdam

  ASP in Industry, here and there (Sep. 7, 8h30-9h30)

- **Rineke Verbrugge,** University of Groningen

  Reasoning about reasoning about reasoning: from logic to the lab (Sep. 8, 8h30-9h30)

RPR Track

- Abstracts of previously published research

- Handled by a separate committee (27 members)

- Three sessions (see schedule)

24 abstracts submitted

17 abstracts accepted
(available from https://kr.org/KR2023/recently-published-research/)

Workshops (Sep. 2 – Sep. 4)

- **4th Workshop on Explainable Logic-Based Knowledge Representation (XLoKR 2023)**
  Franz Baader, Bart Bogaerts, Gerhard Brewka, Joerg Hoffmann, Thomas Lukasiewicz, Nico Potyka, Francesca Toni

- **First International Workshop on Argumentation and Applications (Arg&App 2023)**
  Oana Cocarascu, Sylvie Doutre, Jean-Guy Mailly, Antonio Rago

- **The Second Workshop on Knowledge Diversity (KoDis)**
  Lucía Gómez Alvarez, Rafael Peñaloza, Srdjan Vesic

- **CME: the 2nd International Workshop on Computational Machine Ethics**
  Maurice Pagnucco, Yang Song, Louise Dennis

- **Graphical Reasoning with Imperfect Data (GRID)**
  Sihem Belabbes, Juergen Landes

- **The Seventh Image Schema Day (ISD7)**
  Maria M. Hedblom, Oliver Kutz

- **AI-driven Heterogeneous Data Management : Completing, Merging, Handling Inconsistencies and Query-answering (ENIGMA-2023)**
  Salem Benferhat, Giovanni Casini, Andrea Tettamanzi, Thomas Meyer

- **Cognitive Aspects of Knowledge Representation (CAKR)**
  Jesse Heyninck, Thomas Meyer, Clayton Baker

Tutorials (Sep. 2 – Sep. 4)

- **Towards Causal Foundations of Safe AI**
  Francis Rhys Ward, James Fox, Ryan Carey

- **Concept Learning in Description Logics**
  Maurice Funk, Jean Christoph Jung, Axel-Cyrille Ngonga Ngomo, Frank Wolter

- **Strategic Reasoning in Automated Mechanism Design**
  Munyque Mittelmann, Aniello Murano

- **Termination Analysis of Rule-based Ontological Reasoning**
  Marco Calautti, Andreas Pieris

- **Statistical Relational AI – Exploiting Symmetries**
  Tanya Braun, Marcel Gehrke, Marco Wilhelm

- **How KR Benefits from Formal Concept Analysis**
  Francesco Kriegel, Barış Sertkaya

Doctoral Consortium

- Three sessions (see schedule)
- 16 Ph.D. students involved
- Mentors
- **Invited talk** (Sep. 5, 9h05-10h15)

    Mary-Anne Williams, University of New South Wales

    Leading Innovation and Collaboration in Knowledge Representation Research

Diversity & Inclusion

- One session (Sep. 7, 11h15-12h15)
- Followed by a free lunch for every participant in the conference
- Grant program
- **Invited talk**

    Kerstin Hämmerling, Centre for Teaching & Learning,
    Vrije Universiteit Amsterdam

    From diversity to inclusion

Other events

- Presentation of the ICCMA Competition (Sep. 5, 17h50-18h)

- KR Manifesto (Sep. 5, 18h-18h30)

Awards

KR'23 Best Paper Awards Committee

Ray Reiter Best Paper Award & Marco Cadoli Best Student Paper Award

- Jim Delgrande
  Simon Fraser University

- Jérôme Lang
  CNRS & Université Paris Dauphine-PSL

- Mary-Anne Williams
  University of New South Wales

Paper presentation: Sep 6., 9h30, Room B

The 2023 Ray Reiter Best Paper Prize

Artificial Intelligence
www.elsevier.com/locate/artint

sponsored by **AIJ**
for a paper presented at

the 20th International Conference on
Principles of Knowledge Representation and Reasoning

has been awarded to

Agata Ciabattoni and Dmitry Rozplokhas

for their paper

Streamlining Input / Output Logics with Sequent Calculi

Pierre Marquis
Program Co-Chair

Gabriele Kern-Isberner
General Chair

Tran Cao Son
Program Co-Chair

Paper presentation: Sep 6., 15h30, Room B

The 2023 Marco Cadoli Distinguished Student Paper Prize

sponsored by **KR Inc.**
for a paper presented at

the 20th International Conference on
Principles of Knowledge Representation and Reasoning

has been awarded to

Rafael Kiesel and Thomas Eiter

for their paper

Knowledge Compilation and more with SharpSAT-TD

Pierre Marquis	Gabriele Kern-Isberner	Tran Cao Son
Program Co-Chair	General Chair	Program Co-Chair

KR Awards Committee

Early Career Award and the Test of Time Award

- Meghyn Bienvenu
    CNRS & University of Bordeaux

- Jim Delgrande
    Simon Fraser University

- Tommie Meyer
    University of Cape Town

The KR Early Career Award

of the 20th International Conference on
Principles of Knowledge Representation and Reasoning

goes to

Munyque Mittelmann

for her contribution to

Strategic Reasoning and its Application to Automated Mechanism Design

Pierre Marquis Program Co-Chair	Gabriele Kern-Isberner General Chair	Tran Cao Son Program Co-Chair

The Test of Time Award

of the 20th International Conference on
Principles of Knowledge Representation and Reasoning

goes to

A Theory of Inferred Causation

published in **KR 1991**

by

Judea Pearl and Thomas S. Verma

Pierre Marquis	Gabriele Kern-Isberner	Tran Cao Son
Program Co-Chair	General Chair	Program Co-Chair

Why is Rhodes the place to be for KR?

- A major part of KR&R is based on logic(s)

- Logic has its main roots in Aristotle's syllogistic

- Aristotle was born in Stagira and he studied in Athens (with Plato) …

- But the logical works of Aristotle were compiled into a set of six books (called the *Organon*) by …

Andronicus of Rhodes

Attending KR 2023

Local Information

- There is regular public transport (bus) from a station near Rodos Palace to the town of Rhodes. Tickets can be purchased on the bus for about 2,50€ each way (cash only)

- A visit to the Palace of the Grand Master of the Knights of Rhodes, and a walk around the old town of Rhodes are highly recommended

- Departure for the KR 2023 excursion (Lindos) and conference dinner (Mayia Resort & Spa) is at 17:20, Wed 6 Sep, from Rodos Palace

- Please check regularly the KR 2023 website and Whova for latest announcements

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