



GECON 2024

20th International Conference on the Economics of Grids
Clouds, Systems, and Services

26-27th September 2024
Rome, Italy

Welcome and Introduction





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Welcome To Rome
Maurizio Naldi

A few words about our university



LUMSA
UNIVERSITÀ

- A Catholic university in the heart of Rome (and Palermo)
 - 3 sites in Rome
 - 1 site in Palermo
 - A history dating back to 1939
- 7.200 students from 55 countries
- ~130 full-time professors
- 18 degree courses
- 5 PhD programmes



The venue

- A historical building dated back to the 17th century
- The house of the Sisters of Santa Lucia Filippini



Some very close attractions

- Pantheon (7 minutes)
- Piazza Navona (9 minutes)
- Campidoglio (7 minutes)
- Campo dei Fiori (8 minutes)
- Altare della Patria (6 minutes)



Some practical information

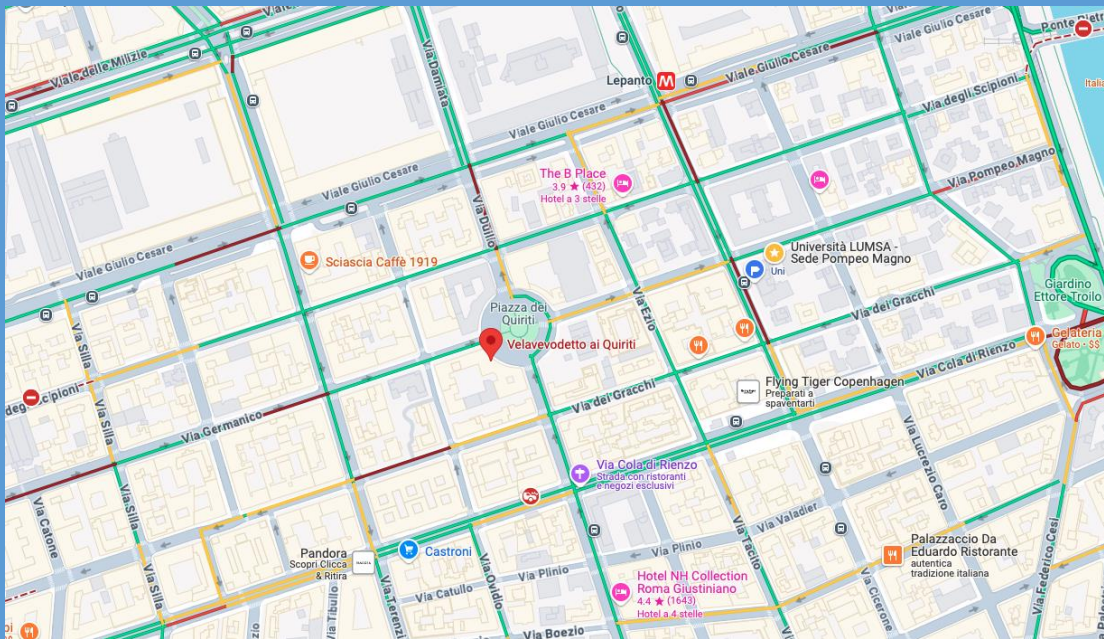
- **WiFi**

- SSID: Santa Lucia Filippini
- psw: arcodeiginnas



Some practical information

- Social dinner
 - September 26th at 20.30
 - Ristorante Velavevodetto ai Quiriti
<https://www.ristorantevelavevodetto.it/quiriti/>
 - Piazza dei Quiriti 4/5





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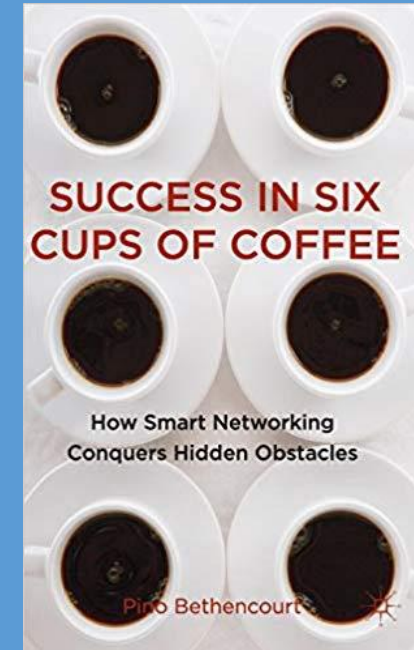
GECON Conference Series

José Ángel Bañares

... many interesting presentations ...

- **2 keynote talks:**
 - **Evangelos Pournara.** *Collective privacy recovery: Data-sharing coordination via decentralized AI.* Leeds University.
 - **Arianna Martinelli.** *Patents and the Technological Evolution of AI.* Sant'Anna, Scuola Universitaria Superiore Pisa.
- **24 research paper presentations**
 - **12 full papers**
 - **10 paper-in-progress**
 - **2 New Idea papers**
 - This combination of full and work-in-progress papers fulfills the twofold aim of gathering **original work and build a strong multidisciplinary community**

... but most importantly, an opportunity for networking!



Supported through:

- coffee breaks
- lunch breaks
- Social events

enabling more open and informed dialogue between researchers

GECON Statistics

GECON2024, Rome, Italy

GECON2022 Izola, Slovenia

GECON2021, Virtual, Rome, ONLINE

GECON2020, Virtual Izola, ONLINE

GECON2019, Leeds, UK

GECON2018, Pisa, Italy

GECON2017, Biarritz, France

GECON2016, Athens, Greece

GECON2015, Cluj-Nabuca, Romania

GECON2014, Cardiff, UK

GECON2013, Zaragoza, Spain

GECON2012, Berlin, Germany

GECON2011, Paphos, Cyprus

GECON2010, Ischia, Italy

GECON2009, Delft, Netherlands

GECON2008, Las Palmas, Spain

GECON2007, Rennes, France

GECON2006, Singapore

GECON2005, Seoul, South-Korea

GECON2004, Seoul, South-Korea



GECON is becoming mature!

- 21 years old!
- Speaks many languages! A lot of countries represented.
- Travelled a lot..



GECON Paper Submission Statistics

Conference	Number of Accepted Papers	Rate of Accepted Papers	Number of Invited Papers or Accepted Work-in-Progress Papers
GECON 2024	12	33%	10
GECON 2022	4	18%	3+6
GECON 2021	7	17%	12
GECON 2020	11	27%	3+6
GECON 2019	12	25%	10
GECON 2018	9	23%	12
GECON2017	10	26%	10
GECON2016	10	26%	10
GECON2015	11	28%	10
GECON2014	8	34%	6
GECON2013	12	28%	8
GECON2012	12	33%	6
GECON2011	9	33%	5
GECON2010	6	31%	6
GECON2009	8	32%	6
GECON2008	10	37%	9
GECON2007	12	40%	6
GECON2006	11	-	4
GECON2005	6	-	4
GECON2004	6	-	3

All members of Committees

Thanks a lot for their support,

... lot of work done!!!

Conference chair

Maurizio Naldi (Libera Università Maria SS. Assunta (Lumsa, Italy)

Local Organization

Paolo Fantozzi (Libera Università Maria SS. Assunta, Lumsa, Italy)

Valerio Rughetti (Libera Università Maria SS. Assunta, Lumsa, Italy)

Conference vice-chairs:

Karim Djemame (University of Leeds, UK)

Jörn Altmann (Seoul National University, South-Korea)

José Ángel Bañares (Zaragoza University, Spain)

Bruno Tuffin (INRIA, France)



LUMSA
UNIVERSITÀ



CAST (Program Committee (50 members !!!))

Alvaro Arenas (IE University, Spain)
Unai Arronategui (University of Zaragoza, Spain)
Ashraf Bany Mohamed (University of Jordan, Jordan)
Orna Agmon Ben-Yehuda (University of Haifa, Israel)
Rajkumar Buyya (University of Melbourne, Australia)
María Emilia Cambronero (University of Castilla-La Mancha, Spain)
Emanuele Carlini (ISTI-CNR, Italy)
Jeremy Cohen (Imperial College London, UK)
Massimo Coppola (ISTI-CNR, Italy)
Daniele D'Agostino (CNR-IMATI, Italy)
Patrizio Dazzi (ISTI-CNR, Italy)
Alex Delis (University of Athens, Greece)
Luca Ferrucci (università di Pisa, Italy)
Sebastian Floercke (University of Passau, Germany)
Felix Freitag (Universitat Politècnica de Catalunya, Spain)
Yodit Gebrealif (Addis Ababa Science and Technology University, Ethiopia)
Daniel Grosu (Wayne State University, USA)
Bahman Javadi (Western Sydney University, Australia)
Songhee Kang (Software Policy and Research Institute)
Odej Kao (TU Berlin, Germany)
Tobias Knoch (Erasmus MC, Netherlands)
Somayeh Koochborfardhaghghi (University of Amsterdam, Netherlands)
Dieter Kranzlmüller (Ludwig Maximilian University of Munich, Germany)
Wool-Rim Lee (Seoul National University, South-Korea)
Patrick Maillé (IMT Atlantique, France)
Marco Netto (IBM, Brazil)
Mara Nikolaidoy (Harokopio University, Greece)
Umara Noor (International Islamic University, Pakistan)
Alberto Nuñez (Complutense University of Madrid, Spain)
Frank Pallas (TU Berlin, Germany)
Dana Petcu (West University of Timisoara, Romania)
Ioan Petri (Cardiff University, UK)
Congduc Pham (University of Pau, France)
Zahid Rashid (Seoul National University, South Korea)
Rizos Sakellariou (The University of Manchester, UK)
Dongnyok Shim (Konkuk University, South-Korea)
Vlado Stankovski (University of Ljubljana, Slovenia)
Burkhard Stiller (University of Zurich, Switzerland)
Stefan Tai (TU Berlin, Germany)
Luis Veiga (Universidade de Lisboa, Portugal)
Ramin Yahya (University of Göttingen, Germany)
Muhammad Zakarya (Abdul Wali Khan University Mardan, Pakistan)



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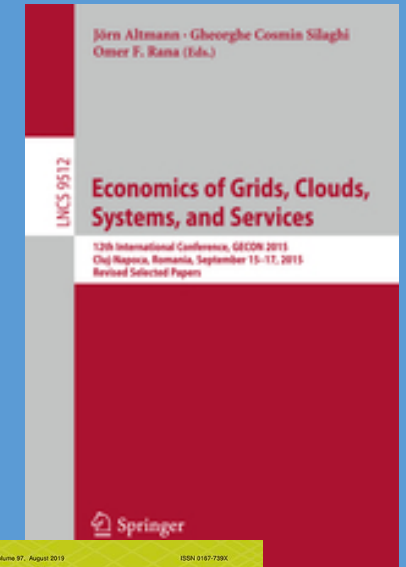
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GECON Conference Series, Publications

Jörn Altmann

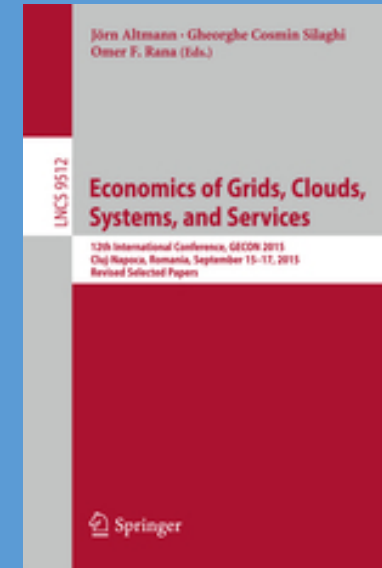
Past Publications

- GECON proceedings have been published in Springer LNCS
- Several special issues have been conducted:
 - Elsevier special issue of Future Generation Computing Systems (FGCS)
 - Springer special issue of Electronic Markets



GECON Proceedings at LNCS

- GECON proceedings will comprise 26 articles will be in LNCS
 - 14 full papers accepted
 - 10 work-in-progress or invited papers
 - 2 new idea papers
- The proceedings should be out in November, depending on Springer (so, no volume number yet **LNCS XXXX**)



Next FGCS Special Issue

- Next Special issue at Future Generation Computer Systems (FGCS)
 - **30.Nov.2024**: Submission deadline to FGCS Special Issue "FGCS VSI: GECON"
(<http://gecon2024.gecon-conference.org>)
 - <https://www.sciencedirect.com/journal/future-generation-computer-systems/about/call-for-papers#special-issue-on-the-economics-of-computing-services>
 - 50% different content to GECON Proceedings
 - Modified text to GECON Proceedings
 - 15.Mar.2025: Latest acceptance notification
 - 1.Apr.2025: Publication of FGCS Special Issue



Impact Factor 6.2

Future GECON and Special Issues

- **GECON FACE2FACE**

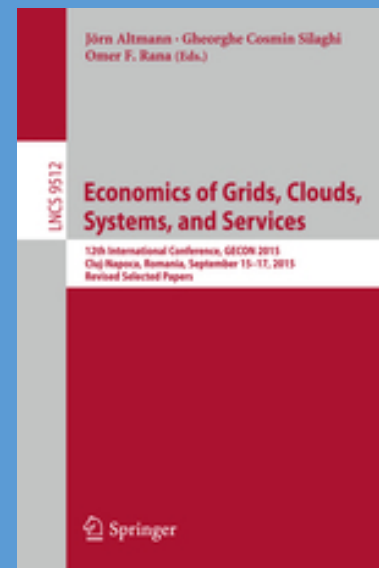
- Run GECON every 1.5 years
- Proceedings will be in LNCS
- Next ones will be Feb.2026 and Sep.2028

- **GECON ONLINE**

- About 6 months before next GECON FACE2FACE
- For presenting ideas and work-in-progress to GECON and FGCS special issue
- No publications
- Next ones will be Sep.2025 and Feb.2028.

- **Special issue at Future Generation Computer Systems (FGCS)**

- Next ones will be 30.May.2026 and 30.Dec.2028



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Attendees Introduction

*Your name, your affiliation, your work
... and anything else you wish to share !*

Karim Djemame



Program (1/3)

- **11.00. Keynote 1.** Evangelos Poumaras. Collective privacy recovery: Data-sharing coordination via decentralized AI
- **11:10-12:10 Session 1 (part 1): Function as a Service: Resource Management and QoS**
- (Full Paper) Marginal Cost of Computation as a Collaborative Strategy for Resource Management at the Edge. Emanuele Carlini, Patrizio Dazzi, Luca Ferrucci, Jacopo Massa and Matteo Mordacchini. (20 min presentation+10min Q&A)
- (Full Paper) FaaS@Edge: Bringing Function-as-a-Service to Voluntary Computing at the Edge. Catarina Gonçalves, José Simão and Luis Veiga. (20P+10Q&A)
- **12:20-13:10 Session 1 (part 2): Function as a Service: Resource Management and QoS**
- FaaS-Utility: Tackling FaaS Cold Starts with User-preference and QoS-driven Pricing. Henrique Santos, José Simão and Luis Veiga. (20P+10Q&A)
- (WIP) Icarus: a Testing-as-a-Service Utility for Serverless Functions. Thomas Tomtsis and Kyriakos Kritikos. (15P+5Q&A)
- **14:10-15:30 Session 2 (part 1): Cloud Business Models, Pricing, trading, Network Neutrality**
- (Full Paper) A Cloud Resources Portfolio Optimization Business Model - From Theory to Practice. Valentin Haag, Maximilian Kiessler, Benedikt Pittl and Erich Schikuta. (20P+10Q&A)
- (Full Paper) ISP pricing and Platform pricing interaction under net neutrality. Luis Guijarro, Vicent Pla and Jose R. Vidal. (20P+10Q&A)
- (WIP) How to Accommodate Network Slicing & Network Neutrality?. Yassine Hadjadj-Aoul, Patrick Maillé and Bruno Tuffin. (15P+5Q&A)
- **16:00-17:00 Session 2 (part 2): Cloud Business Models, Pricing, Trading, Network Neutrality**
- (WIP) PricingTheCloud: A Pricing Estimator for an Informed Cloud-Migration Process. Ines Raissa Djouela Kamgang, Abdessalam Elhabbash and Yehia Elkhatib.(15P+5Q&A)
- (WIP) Innovating Letter-of-Credit Mechanisms: The Integration of RSA-Encrypted NFTs for Enhanced Security and Efficiency. Khanh Vo Hong, Minh Triet Nguyen, Bang Le, Hung Nguyen Nhat, Vinh Nguyen Thanh, Kha Nguyễn, Ngan Nguyen Thi Kim, Minh Van Nguyen and Son Ha Xuan. (15P+5Q&A)
- (WIP) Enhancing Transparency and Ethical Sourcing in Handicraft Supply Chains through Blockchain, Smart Contracts, NFTs, and IPFS Integration. Trung Phan, Bang Le, Hung Nguyen Nhat, Khoa Tran Dang, Khiem Huynh Gia, Loc Van Cao Phu, Ngan Nguyen Thi Kim, Nam Tran, Anh Nguyen and Son Xuan. (15P+5Q&A)

Program (2/3)

- **9:30 Keynote 2** Arianna Martinelli . Patents and the Technological Evolution of AI
- **10:40-11:40 Session 4 (part 1): Edge Computing and Energy Awareness**
- (Full Paper) Scheduling Energy-Aware Multi-Function Serverless Workloads in OpenFaaS. Karim Djemame. (20P+10Q&A)
- (Full Paper) Efficient Placement of Interdependent Services in Multi-access Edge Computing. Shuyi Chen, Panagiotis Oikonomou, Zhengchang Hua, Nikos Tziritas, Karim Djemame, Nan Zhang and Georgios Theodoropoulos.(20P+10Q&A)
- **11:50-13:00 Session 4 (part 2): Edge Computing and Energy Awareness**
- (Full Paper) Optimal CPU Frequency Selection to Minimize the Runtime of Tasks Under Power Capping. Fanny Dufossé and Rizos Sakellariou. (20P+10Q&A)
- (WIP) Energy-Efficient Task Offloading in Edge Computing: A Survey of Deep Reinforcement Learning Approaches. Eleftheria Papageorgiou, Theodoros Theodoropoulos and Konstantinos Tserpes.(15P+5Q&A)
- (WIP) Edge Energy Orchestration. Ambarish Nag, Sagi Zisman, Charles Tripp, Paul Shuva, Vijay Kumar, Nima Valizadeh, Ioan Petri and Omer Rana. (15P+5Q&A)
- **14:00 - 15:00 Session 5 (part 1): AI/Forecasting/Prediction Sales**
- (Full Paper) Influencer sales on TikTok: Forecasting prominent factors. Jiahao Liang, Simon Fong, Sandra Méndez-Muros and Antonio J.Tallón-Ballesteros. (20P+10Q&A)
- (Full Paper) Towards Trustworthy Aircraft Safety: Explainable AI for Accurate Incident and Accident Predictions. Maryam Amin, Umara Noor, Manahil Fatima, Zahid Rashid and Jörn Altmann.(20P+10Q&A)

Program (3/3)

- **15:10 - 16:15 Session 5 (part 2): AI/Forecasting/Prediction Sales**

- (Full Paper) Trust and Trust-Building Policies to Support Cybersecurity Information Sharing: A Systematic Literature Review. Richard Posso and Jörn Altmann. (20P+10Q&A)
- (WIP) Machine Learning Explainability as a Service: Service Description and Economics. Paolo Fantozzi, Luigi Laura and Maurizio Naldi. (15P+5Q&A)
- (New Idea) Smart Mobility Solutions for Urban Transportation in ASEAN: A Bibliometric Study of Trends and Innovations. Dany Pambudi and Junseok Hwang. (10P+5Q&A)

- **16:30 - 17:55 Session 6: Resource Management in Cloud Applications: Simulation, Streaming Processing and Workflows**

- (WIP) Strainer: Windowing-based Advanced Sampling in Stream Processing Systems. Nikola Koevski, Sérgio Esteves, and Luis Veiga. (15P+5Q&A)
- (Full Paper) Distributed Simulation with Efficient Fault Tolerance. Javier Vela, Unai Arronategui, José Ángel Bañares and Jose Manuel Colom. (20P+10Q&A)
- (WIP) On digital twins for cloud continuum applications. Luiz F. Bittencourt, Kelly Braghetto, Daniel Cordeiro and Rizos Sakellariou. (15P+5Q&A)
- (New Idea) Specification of Complex Analytics Workflows: A Formal Language Model of Decision Options. Pouriya Miri, Petar Kochovski, Marcela Tuler de Oliveira and Vlado Stankovski. (10P+5Q&A)



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Announcements:
Best Student Paper Award
Best Paper Award

Karim Djemame



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Best Student Paper Award:

Bringing Function-as-a-Service to Voluntary Computing at the Edge
Catarina Gonçalves, José Simão and Luis Veiga



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Best Paper Award:

Marginal Cost of Computation as a Collaborative Strategy for Resource Management at the Edge

Emanuele Carlini, Patrizio Dazzi, Luca Ferrucci, Jacopo Massa and Matteo Mordacchini



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Thank You!