

Sergio JIMÉNEZ CELORRIO

PERSONAL DATA

PLACE AND DATE OF BIRTH: Burgos, Spain. 28 May 1980.
ADDRESS: Universitat Politècnica de València.
Camino de Vera s/n. 46022.
Valencia (SPAIN).
EMAIL: serjice@dsic.upv.es
WEBSITE: serjice.webs.upv.es

AREAS OF SPECIALIZATION

Artificial Intelligence, Automated Planning, Bayesian inference, Machine Learning, Reinforcement Learning

APPOINTMENTS HELD

2022-2017 | 'Ramón y Cajal' post-doctoral research fellow
Dept. of Computer Systems and Computation. Universitat Politècnica de València, Spain.

2017-2016 | Post-doctoral research fellow
Dept. of Computing and Information Systems. University of Melbourne, Australia

2016-2013 | 'Juan de la Cierva' post-doctoral research fellow
AI research group led by Prof. Hector Geffner. Universitat Pompeu Fabra de Barcelona, Spain.

2013-2004 | Teaching assistant
Planning and Learning research group. Universidad Carlos III de Madrid, Spain.

EDUCATION

2011 | PhD in Computer Science, **Universidad Carlos III de Madrid**, Spain
Thesis: "Planning and Learning under Uncertainty" | Advisor: Prof. Daniel BORRAJO

2004 | MSc in Computer Science, **Universidad Autónoma de Madrid**, Spain

2003 | MEd in Maths Education, **Universidad Complutense de Madrid**, Spain

2002 | BSc in Computer Science, **Universidad Autónoma de Madrid**, Spain

LANGUAGE SKILLS

SPANISH: Mother tongue
ENGLISH: Fluent
FRENCH: Basic Knowledge
CATALAN: Basic Knowledge

RESEARCH GRANTS AND AWARDS

2017 | 'Ramón y Cajal' post-doctoral research grant, **Spanish government**, Spain

2016 | Distinguished Paper Award, **International Joint Conference on Artificial Intelligence**, USA

2013 | 'Juan de la Cierva' post-doctoral research grant, **Spanish government**, Spain

2012 | Distinguished Thesis Award, **Universidad Carlos III de Madrid**, Spain

RESEARCH STAYS

Sep-Dec 2012	NICTA Research Centre of Excellence. Canberra, Australia. “Pruning bad quality causal links in sequential satisfying planning”. S. Jiménez, P. Haslum and S. Thiebaux. ICAPS-13 Workshop on AI Planning and Learning.
Sep-Dec 2009	MBARI Autonomy Research Group. Santa Cruz, USA. “Optimizing Hidden Markov Models for Ocean Feature Detection”. Sandeep Kumar, Sergio Jiménez, Frederic Py, Deepak Khemani, Kanna Rajan. FLAIRS-2011.
June-Sep 2006	Strathclyde Planning Group. Glasgow, UK. “Planning in probabilistic domains using a deterministic numeric planner”. Sergio Jiménez, Andrew Coles and Amanda Smith. PLANSIG-06.
March-June 2006	University of York, AI research group. York, UK. “Combining ILP and Parameter Estimation to Plan Robustly in Probabilistic Domains”. Sergio Jiménez and James Cussens. ILP-2006.

JOURNAL PAPERS

1. *Diego Aineto, Sergio Jiménez and Eva Onaindia*. Learning action models with minimal observability. **Artificial Intelligence Journal**. 2019.
2. *Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson*. Computing programs for generalized planning using a classical planner. **Artificial Intelligence Journal**. 2019.
3. *Sergio Jiménez, Javier Segovia-Aguas, and Anders Jonsson*. A review of generalized planning. **Knowledge Engineering Review**. 2019.
4. *Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson*. Computing Hierarchical Finite State Controllers with Classical Planning. **Journal of Artificial Intelligence Research**. 2018.
5. *Eva Onaindia, Diego Aineto and Sergio Jiménez*. A common framework for learning causality. **Progress in Artificial Intelligence**. 2018.
6. *Carlos Linares López, Sergio Jiménez, Angel García Olaya*. The deterministic part of the seventh International Planning Competition. **Artificial Intelligence Journal**. 2015.
7. *Carlos Linares López, Sergio Jiménez, Malte Helmert*. Automating the evaluation of planning systems. **AI Communications**. 2013.
8. *Sergio Jiménez, Fernando Fernández, Daniel Borrajo*. Integrating Planning, Execution, and Learning to Improve Plan Execution. **Computational Intelligence**. 2013.
9. *Amanda Jane Coles, Andrew Coles, Angel García Olaya, Sergio Jiménez, Carlos Linares López, Scott Sanner, Sungwook Yoon*. A Survey of the Seventh International Planning Competition. **AI Magazine**. 2012.
10. *Sergio Jiménez, Tomás de la Rosa, Susana Fernández, Fernando Fernández, Daniel Borrajo*. A review of machine learning for automated planning. **Knowledge Engineering Review**. 2012.
11. *Tomás de la Rosa, Sergio Jiménez, Raquel Fuentetaja, Daniel Borrajo*. Scaling up Heuristic Planning with Relational Decision Trees. **Journal of Artificial Intelligence Research**. 2011.

CONFERENCE PAPERS

1. *Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson*. Generalized Planning as Heuristic Search. **ICAPS 2021**.

2. *Diego Aineto, Sergio Jiménez and Eva Onaindia. Generalized Temporal Inference via Planning. KR 2021.*
3. *Diego Aineto, Sergio Jiménez and Eva Onaindia. Observation decoding with sensor models: recognition tasks via classical planning. ICAPS 2020.*
4. *Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson. Generalized Planning with Positive and Negative Examples. AAAI 2020.*
5. *Antonio Garrido and Sergio Jiménez. Learning Temporal Action Models via Constraint Programming. ECAI 2020.*
6. *Diego Aineto, Sergio Jiménez, Eva Onaindia and Miquel Ramírez. Model Recognition as Planning. ICAPS 2019.*
7. *Diego Aineto, Sergio Jiménez and Eva Onaindia. Learning STRIPS action models with classical planning. ICAPS 2018.*
8. *Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson. Generating Context-Free Grammars using Classical Planning. IJCAI 2017.*
9. *Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson. Unsupervised learning of planning tasks. ICAPS 2017.*
10. *Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson. Hierarchical Finite State Controllers for Generalized Planning. IJCAI 2016.*
11. *Damir Lotinac, Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson. Automatic Generation of High-Level State Features for Generalized Planning. IJCAI 2016.*
12. *Javier Segovia-Aguas, Sergio Jiménez and Anders Jonsson. Generalized Planning With Procedural Domain Control Knowledge. ICAPS 2016.*
13. *Sergio Jiménez, Anders Jonsson, Héctor Palacios. Temporal Planning With Required Concurrency Using Classical Planning. ICAPS 2015.*
14. *Sergio Jiménez, Anders Jonsson. Computing Plans with Control Flow and Procedures Using a Classical Planner. SOCS 2015.*
15. *Sergio Jiménez, Fernando Fernández, Daniel Borrajo. The PELA Architecture: Integrating Planning and Learning to Improve Execution. AAAI 2008.*
16. *Tomás de la Rosa, Sergio Jiménez, Daniel Borrajo. Learning Relational Decision Trees for Guiding Heuristic Planning. ICAPS 2008.*
17. *Sergio Jiménez, Fernando Fernández, Daniel Borrajo. Machine Learning of Plan Robustness Knowledge About Instances. ECML 2005.*

RESEARCH PROJECTS (PRINCIPAL INVESTIGATOR)

1. GV/2019/082. Artificial Intelligence for the Automated Synthesis and Validation of Programs. Funded by the regional government (Generalitat Valenciana).

TEACHING

- 2022,2021 **Automata Theory and Formal Languages (Labs)**
Course of the Computer Science BSc. Universitat Politècnica de València, Spain.
- 2020-2018 **Automated planning**
Course of the MSc in Artificial Intelligence. Universitat Politècnica de València. Spain.
- 2020-2017 **Automated planning (Labs)**
MOOC course of the MSc in Artificial Intelligence. Spanish Association for Artificial Intelligence. Spain.
- 2016-2013 **Software engineering (Labs and seminars)**
Course of the Computer Science BSc. Universitat Pompeu Fabra. Barcelona, Spain.
- 2012-2008 **Artificial Intelligence (Labs and seminars)**
Course of the Computer Science BSc. Universidad Carlos III de Madrid, Spain.
- 2008-2004 **Programming (Labs and seminars)**
Course of the Computer Science BSc. Universidad Carlos III de Madrid, Spain.

OTHER ACADEMIC ACTIVITIES

- 2021, 2020 **Senior Program Committee** at the International Joint Conference on Artificial Intelligence (**IJCAI**).
- 2022, 2019 - 2015 **Program Committee** at the International Joint Conference on Artificial Intelligence (**IJCAI**).
- 2022 - 2020 **Program Committee** at the AAAI Conference on Artificial Intelligence (**AAAI**).
- 2021 - 2017 **Program Committee** at the International Conference on Automated Planning and Scheduling (**ICAPS**).
- 2021, 2020 **Program Committee** at the International Workshop on Generalization in Planning (**IJCAI21, AAAI20**).
- 2018 - 2016 **Program Committee** at the International Symposium on Combinatorial Search (**SOCS**).
- 2013 **Invited Speaker** at the Summer School of ICAPS 2013. Perugia, Italy.
Talk titled 'Hands-On Planning: Evaluating planners'.
- 2013, 2011, 2009 **Co-organizer** of 3 editions of the International Workshop on Planning and Learning (ICAPS-2013, ICAPS-2011 and ICAPS-2009).
- 2011 **Co-organizer** of the 7th International Planning Competition at ICAPS
- ANECA (Spanish agency for quality assessment) positive evaluation for "Titular de Universidad" and for the *MINECO I3 Program*.
 - General quality indicators of scientific research: **707 citations** (461 since 2016) and **h-index 14**. Source *google scholar*.