

León Illanes

40 St. George Street, Rm.7224, Toronto, ON, Canada M5S 2E4
lillanes@cs.toronto.edu • <http://www.cs.toronto.edu/~lillanes>

[CV compiled on 2019-07-26]

EDUCATION

University of Toronto, Toronto, ON, Canada

- Ph.D. in Computer Science Sep 2014 – Present
 - Supervisor: Professor Sheila McIlraith
 - Research areas: Artificial Intelligence, Automated Planning, Knowledge Representation

Pontificia Universidad Católica de Chile, Santiago, Chile

- Master of Engineering Sciences, Department of Computer Science Jul 2011 – Dec 2013
 - Thesis: Reconnection with the ideal tree: a new approach to real-time search
 - Supervisor: Professor Jorge Baier
 - Research areas: Artificial Intelligence, Automated Planning, Real-time Search
 - Graduated with Maximum Distinction
- Degree in Computer Engineering Mar 2006 – Dec 2013
 - Six year engineering program. Four year Bachelor's Degree and two years of specialization.

RESEARCH EXPERIENCE

University of Toronto, Department of Computer Science, Toronto, ON, Canada

- Graduate Research Assistant Sep 2014 – Present
 - Projects: Abstractions for Automated Planning, Numeric Planning, Generalized Planning, Planning and Reinforcement Learning
 - Supervisor: Professor Sheila McIlraith
 - Research areas: Artificial Intelligence, Automated Planning, Knowledge Representation

Pontificia Universidad Católica de Chile, School of Engineering, Department of Computer Science

- Graduate Research Assistant Jul 2011 – Dec 2013
 - Projects: Automated Planning with Preferences, Real-time Heuristic Search
 - Supervisor: Professor Jorge Baier
 - Research areas: Artificial Intelligence, Automated Planning, Real-time Search.
- Undergraduate Research Assistant Mar 2011 – Jun 2011
 - Project: Automated Planning with Preferences
 - Supervisor: Professor Jorge Baier
 - Research areas: Artificial Intelligence, Automated Planning.

PUBLICATIONS

JOURNALS

- [1] N. Rivera, L. Illanes, J.A. Baier, and C. Hernández, "Reconnection with the Ideal Tree: A New Approach to Real-Time Search," *Journal of Artificial Intelligence Research*, vol. 50, pp. 235–264, Jun 2014.

CONFERENCES

- [2] R. Toro Icarte, L. Illanes, M. P. Castro, A. A. Cire, S. A. McIlraith, J. C. Beck, "Training Binarized Neural Networks with MIP and CP," in *Principles and Practice of Constraint Programming - 25th International Conference (CP)*, Stamford, Connecticut, USA, Sep 2019.
- [3] L. Illanes, X. Yan, R. Toro Icarte and S. A. McIlraith, "Symbolic Planning and Model-Free Reinforcement Learning," in *The 4th Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM)*, Montréal, Québec, Canada, Jul 2019.
- [4] L. Illanes, and S.A. McIlraith, "Generalized Planning via Abstraction: Arbitrary Numbers of Objects," in *Proceedings of the 33rd AAAI Conference on Artificial Intelligence (AAAI)*, Honolulu, Hawaii, USA, Jan 2019.
- [5] L. Illanes, and S.A. McIlraith, "Numeric Planning via Abstraction and Policy Guided Search," in *Proceedings of the 26th International Joint Conference on Artificial Intelligence (IJCAI)*, Melbourne, Victoria, Australia, Aug 2017.
- [6] L. Illanes, and S.A. McIlraith, "Numeric Planning via Search Space Abstraction (Extended Abstract)," in *Proceedings of the 9th Annual Symposium on Combinatorial Search (SoCS)*, Tarrytown, New York, USA, Jul 2016.
- [7] N. Rivera, L. Illanes, and J.A. Baier, "Real-Time Pathfinding in Unknown Terrain via Reconnection with an Ideal Tree," in *Proceedings of the 14th Ibero-American Conference on Artificial Intelligence (IBERAMIA)*, Santiago, Chile, Nov 2014.
- [8] N. Rivera, L. Illanes, J.A. Baier, and C. Hernández, "Reconnecting with the Ideal Tree: An Alternative to Heuristic Learning in Real-Time Search," in *Proceedings of the 6th Annual Symposium on Combinatorial Search (SoCS)*, Leavenworth, Washington, USA, Jul 2013. **Best Student Paper Award.**

WORKSHOPS

- [9] L. Illanes, and S.A. McIlraith, "Numeric Planning via Search Space Abstraction," in *Proceedings of the Workshop on Knowledge-based Techniques for Problem Solving and Reasoning (KnowProS)*, New York City, New York, USA, Jul 2016.

ACADEMIC AWARDS

Best Teaching Assistant Team, University of Toronto, Department of Computer Science 2016
For exceptional support of student learning and development in *Introduction to Artificial Intelligence*.

Departmental Entrance Scholarship (DES), University of Toronto 2014 – 2016

Awarded to select students on their first two years at the University of Toronto.

Best Student Paper Award at 6th Symposium on Combinatorial Search

2013

For “Reconnecting with the Ideal Tree: An Alternative to Heuristic Learning in Real-Time Search.”

TEACHING EXPERIENCE

University of Toronto, Department of Computer Science

- Teaching Assistant: *Introduction to Artificial Intelligence, Topics in Knowledge Representation & Reasoning.* 2015 – 2019

Pontificia Universidad Católica de Chile, School of Engineering, Department of Computer Science

- Teaching Assistant: *Introduction to Programming, Discrete Mathematics, Automata Theory and Formal Languages, Artificial Intelligence.* 2009 – 2013

SERVICE

Program Committee Member:

- AAAI 2019 and AAAI 2019 Student Abstract and Poster Program.
- Workshop on Generalized Planning at ICAPS 2017.

Sub-reviewer:

- AAAI 2015, AAAI 2016, AAAI 2017.
- ICAPS 2015, ICAPS 2017, ICAPS 2019.
- SoCS 2016.

PROFESSIONAL EXPERIENCE

Synopsys, Santiago, Chile

- Research & Development Engineer

Jan 2014 – Jun 2014

Worked on semiconductor photomask manufacturing software (CATS).

Apella, Santiago, Chile

- Co-founder and CTO
 - Think tank web-platform for increasing citizen participation in politics
 - Medical platform for communication of physicians and patients

Mar 2012 – Jan 2013

Nimbic, Santiago, Chile

- Software Engineering Intern

Dec 2011 – Jan 2012

Worked on billing scheme for cloud based Electronic Design Automation platform.

LANGUAGES

- Spanish: Native language.
- English: Fluent, native level (speaking, reading, writing).

Bilingual Diploma, IBO 2005

OTHER SKILLS

Programming Languages

Fluent in C, C++, Python. Proficient in Matlab, Java. Dabbled in Clojure, C#, ELisp, Haskell, Prolog, Rust, and more.

Operating Systems

Linux, Windows, OS X

Other

L^AT_EX, HTML