

Thiago D. Simão

Curriculum Vitae

Education

- 2017– **PhD in Computer Science**, *Delft University of Technology*, TU Delft, Netherlands.
promotor Matthijs Spaan
co-promotor Rob Stikkelman
- 2014–2017 **M.Sc. in Artificial Intelligence**, *University of São Paulo*, USP, Brazil.
supervisor Leliane Nunes de Barros
- 2009–2013 **Bachelor of Computer Science**, *Federal University of Lavras*, UFLA, Brazil.
supervisor Joaquim Quinteiro Uchôa





Selected Publications

- AAMAS **TDS**, Nils Jansen, and Matthijs Spaan. *AlwaysSafe: Reinforcement Learning Without Safety Constraint Violations During Training*. In: AAMAS. 2021, pp. 1226–1235.
- AAAI Qisong Yang, **TDS**, Simon H. Tindemans, and Matthijs Spaan. *WCSCAC: Worst-Case Soft Actor Critic for Safety-Constrained Reinforcement Learning*. In: AAAI. 2021.
- AAMAS **TDS**, Romain Laroche, and Rémi Tachet des Combes. *Safe Policy Improvement with an Estimated Baseline Policy*. In: AAMAS. 2020, pp. 1269–1277.
- AAAI **TDS** and Matthijs Spaan. *Safe Policy Improvement with Baseline Bootstrapping in Factored Environment*. In: AAAI. 2019, pp. 4967–4974.

Experience

- 2017– **PhD Candidate**, *TU Delft*, Netherlands.
 - Guest lecture on *Safe Reinforcement Learning* on the Algorithms for Intelligent Decision Making course.
 - Published on major AI conference (AAMAS'21, AAAI'21, AAMAS'20, IJCAI'19, AAAI'19).
 - Reviewer for AAAI'21, JAMAAS'19;
 - Sub-reviewer for ICAPS'21; ICRA'20.
 - Supervision of project in master's course Algorithms for Planning and Scheduling.
 - Organization of the Belgium Netherlands Workshop on Reinforcement Learning 2018.
 - Local organization of ICAPS'18.
- 2019 **Research Intern**, *Microsoft Research*, Montreal, Canada.
Jun–Aug Safe policy improvement in *offline RL* without the behavior policy (AAMAS'20).
- 2014–2016 **MSc Student**, *IME*, USP, São Paulo.
 - Published in national conferences ENIAC 2016 and ENIAC 2015 conferences
 - Sub-reviewer for AAAI 2017, AAAI 2016 and BRACIS 2016.
 - Subsequent collaboration to model problems involving human help (Iberamia'18).

Delft – The Netherlands

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- 2016 **Teaching Assistant**, *Object Oriented Programming Laboratory*, IME USP, São Paulo.
- 2011–2013 **Scholarship for Scientific Initiation**, DCC, UFLA, Lavras.
Development of scheduling algorithm based on Genetic Algorithms.
- 2013 **Teaching Assistant**, *Design and Analysis of Algorithms*, UFLA, Lavras.
- 2012–2013 **Volunteer – Student Representative**, UFLA, Lavras, Student housing mayor.
Volunteer representative of student housing residents.
- 2012–2013 **Volunteer – Student Representative**, *Students' union – UFLA*, Lavras, Press officer.
Representation of university students and development of the students' union website.
- 2011 **Teaching Assistant**, *Theory of Computation*, UFLA, Lavras.
- 2010–2011 **Scholarship for Scientific Initiation**, UFLA, Lavras.
Development of an educational game prototype to teach physics with Blender (ESUD 2011).





Technical Skills

- Programming python (numpy, matplotlib, seaborn, cvxpy, pytorch, cython, flask); c++; java; julia.
node.js (express, socket.io, liquidjs); prolog;
- OS linux/unix
- Other git; latex; gurobi; jekyll; inkscape; kdenlive.

Events

- 2021 May **Presentation**, AAMAS, Online.
- Mar **Presentation**, *5th Workshop on Learning in Verification*, Online.
- Feb **Presentation**, *SWS-seminar at Radboud University*, Nijmegen, The Netherlands.
- 2020 May **Presentation**, AAMAS, Online.
- 2019 Nov **Presentation**, *Microsoft Research Group*, Online.
- 2019 **Presentation and Poster**, *IJCAI*, Macau, China.
- Aug **Presentation and Poster**, *Doctoral Consortium IJCAI*, Macau, China.
- Jul **Visit**, *RLDM*, Montreal, Canada.
- May **Poster**, *INSY/ST Department Poster Session*, TU Delft, The Netherlands.
Best Poster Prize
- Mar **Presentation and Poster**, *ICT.Open*, Hilversum, The Netherlands.
- Jan **Spotlight and Poster**, *AAAI*, Honolulu, US.
- 2018 Nov **Organizing commit**, *Belgium-Netherlands Workshop on RL*, Delft, The Netherlands.
- Oct **Visit**, *European Workshop on Reinforcement Learning*, Lille, France.
- Jul **Talk and Poster**, *Planning and Learning (PAL) workshop*, Stockholm, Sweden.
- Jul **Poster**, *ICAPS*, Delft, The Netherlands.
- Jun **Visit**, *ICAPS Summer School*, Noordwijk, The Netherlands.
- 2017 Nov **Poster**, *Power Web Energy Event*, TU Delft, The Netherlands.
- Nov **Poster**, *EEMCS PhD Event*, TU Delft, The Netherlands.
- Oct **Visit**, *ACAI Summer School on Reinforcement Learning*, Nieuwpoort, Belgium.
- Aug **Visit**, *European Agent Systems Summer School*, Gdańsk, Poland.





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Publications

- IJCAI DC **TDS**. *Safe and Sample-Efficient Reinforcement Learning Algorithms for Factored Environments*. In: *IJCAI*. 2019, pp. 6460–6461.
- IJCAI **TDS** and Matthijs Spaan. *Structure Learning for Safe Policy Improvement*. In: *IJCAI*. 2019, pp. 3453–3459.
- IBERAMIA Ignasi Andrés, Leliane Nunes de Barros, Denis Deratani Mauá, and **TDS**. *When a Robot Reaches Out for Human Help*. In: *IBERAMIA*. 2018, pp. 277–289.
- PAL **TDS** and Matthijs Spaan. *An Empirical Evaluation of Safe Policy Improvement in Factored Environments*. In: *ICML / IJCAI / AAMAS Workshop on Planning and Learning (PAL-18)*. 2018.
- ENIAC **TDS**, Ignasi Andrés, Viviane B. Santos, and Leliane N. Barros. *Heuristics for Dead-Ends Detection in Probabilistic Planning*. Portuguese. In: *ENIAC*. 2016.
- ENIAC **TDS**, Leliane N. Barros, and Felipe L. Silva. *Probabilistic Planning with Dead-Ends*. Portuguese. In: *ENIAC*. 2015.
- ESUD Ulisses A. Leitão, **TDS**, and Jeffeson A. Neves. *Development of 3D Games for Distance Education*. Portuguese. In: *ESUD*. 2011.

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