

Francesco Fuggitti

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EDUCATION

- **Sapienza University & York University** Rome, Italy – Toronto, Canada
Ph.D. Candidate in Engineering in Computer Science; A+ average *Jan. 2019 – present*
 - **In International Joint Cotutelle Agreement**
 - **Dissertation topic:** Linear-time Temporal and Dynamic Logic on Finite Traces with Applications to Planning and Reactive System Synthesis
 - **Supervisors:** Prof. Giuseppe De Giacomo and Prof. Yves Lespérance.
- **Sapienza University** Rome, Italy
Master of Science in Engineering in Computer Science (ENG); 110/110 cum laude *Oct. 2016 – Oct. 2018*
 - **Thesis:** LTL and Past LTL on Finite Traces for Planning and Declarative Process Mining, Supervisor Prof. Giuseppe De Giacomo.
- **Campus Bio-Medico University** Rome, Italy
Bachelor of Science in Industrial Engineering (ITA); 110/110 *Oct. 2013 – Oct. 2016*
 - **Thesis:** Design and Development of a Web Service Platform for Surveys Management, Supervisor Prof. Luca Vollero.
- **Convitto Nazionale “Vittorio Emanuele II” High School** Rome, Italy
High School Diploma, Scientific studies (ITA); 100/100 *Sept. 2008 – Jul. 2013*

PROFESSIONAL AND VOLUNTEERING EXPERIENCES

- **Sapienza University** Rome, Italy
Teaching Assistant (Graduate courses) *Feb. 2021 – May 2022*
 - Artificial Intelligence & Machine Learning 2021/2022
 - Reasoning Agents 2020/2021
- **York University** Toronto, Canada
Teaching Assistant (Undergraduate courses) *Jan. 2019 – Apr. 2020*
 - EECS1022: Programming for Mobile Computing
 - EECS2030: Advanced Object Oriented Programming
 - EECS2021: Computer Organization
 - EECS1021: Object Oriented Programming from Sensors to Actuators
- **Campus Bio-Medico University** Rome, Italy
Computer Lab Assistant *Feb. 2016 – Oct. 2016*
 - Part-time collaboration fully funded by Campus Bio-Medico University
 - Support faculty and students for computer software and hardware
- **Opera Don Guanella** Rome, Italy
Volunteer *Apr. 2016 – Oct. 2016*
 - Provide support to life-threatened patients (meals and/or simple comfort measures)
- **Ospedale Santo Stefano** Porto Potenza Picena, Italy
Volunteer *Aug. 2014 and Aug. 2015*
 - Provide companionship and support to life-threatened patients

AWARDS, SCHOLARSHIPS AND QUALIFICATIONS

- **National Licensure in Engineering** Nov. 2020
- **Excellence Program**
Sapienza University Mar. 2018 – Oct. 2018
 - Among top students of the academic year (10%)
- **European Exhibition of Scientific Research**
Trieste Next Sept. 2015
- **Excellence Ceremony**
Convitto Nazionale “Vittorio Emanuele II” High School Mar. 2014
 - Among best High School Diploma results
- **“Amici del Convitto”**
Convitto Nazionale “Vittorio Emanuele II” High School Mar. 2013
 - Among Best High School marks of the year

LANGUAGE SKILLS

- **Italian:** Native
- **English:** Fluent (Academic IELTS, overall score 7.5)

TECHNICAL SKILLS

- **Programming Languages:** Python, Java, C++, Javascript, HTML5, Swift
- **Operating Systems:** macOS, Linux
- **Typesetting:** L^AT_EX

MAIN PROJECTS

- **Plan4Past:** Planning for temporal goals expressed in past temporal logic PLTL_f. (Python)
- **LTL_f2DFA:** Direct translation of LTL_f/PLTL_f formulas to Deterministic Finite-state Automata. (Python) *doi: 10.5281/zenodo.3888410, ltlf2dfa.diag.uniroma1.it*
- **FOND4LTL_f:** Fully Observable Non-Deterministic planning for LTL_f and PLTL_f goals. (Python) *doi: 10.5281/zenodo.4876281, fond4ltlf.herokuapp.com*
- **Trace-Alignment:** Planning-based trace alignment in Business Process Mining. (Java) (*under submission to the Journal of Artificial Intelligence Research*)
- **Pddl:** An unquestionable and complete parser for PDDL 3.1. (Python)
- **Janus:** A proof-of-concept algorithm for discovering declarative process models out of event logs. (Python)
- **EasyCurrency:** iOS app for real-time currency exchange rates, plots and wallet management. (Swift)

PUBLICATIONS

- Fraga Pereira, R.; **Fuggitti**, F.; De Giacomo, G.. Temporally Extended Goal Recognition in Fully Observable Non-Deterministic Domain Models. In the Journal of Applied Intelligence, 2022. (*submitted*)
- De Giacomo, G.; Favorito, M.; **Fuggitti**, F.. Planning for Temporally Extended Goals in Pure-Past Linear Temporal Logic: A Polynomial Reduction to Standard Planning. CoRR, abs/2204.09960, arXiv, 2022.
- De Giacomo, G.; **Fuggitti**, F.. FOND4LTL_f: FOND Planning for LTL_f/PLTL_f Goals as a Service. In Proceedings of the International Conference on Autonomous Planning and Scheduling (ICAPS), System Demonstration Track, 2021.
- Fraga Pereira, R.; **Fuggitti**, F.; De Giacomo, G.. Recognizing LTL_f/PLTL_f Goals in Fully Observable Non-Deterministic Domain Models. CoRR, abs/2103.11692, arXiv, 2021.
- De Giacomo, G.; Di Stasio, A.; **Fuggitti**, F.; Rubin, S.. Pure-Past Linear Temporal and Dynamic Logic on Finite Traces. In Proceedings of the Twenty-Ninth International Joint Conference on Artificial Intelligence (IJCAI), pp. 4959–4965, Survey Track, 2020. doi: 10.24963/ijcai.2020/690
- **Fuggitti**, F.. FOND Planning for LTL_f and PLTL_f Goals. In International Workshop on Reasoning about Actions and Processes: Highlights of Recent Advances at (ICAPS), 2020.
- **Fuggitti**, F.. LTL and Past LTL on Finite Traces for Planning and Declarative Process Mining, MSc Thesis, Sapienza University. Roma, 2018.

TALKS & SEMINARS

- “ $PLTL_f$ and $PLDL_f$ to DFA + PDDL Encoding of DFAs”, Seminar at the 2021 Reasoning Agents M.Sc. course (Prof. Giuseppe De Giacomo), Sapienza University, Rome, 2021.
- “Pure-Past Linear Temporal and Dynamic Logic on Finite Traces”, Workshop Presentation, FMAI, London (UK), 2021, (*online*).
- “Pure-Past Linear Temporal and Dynamic Logic on Finite Traces”, Conference Presentation, IJCAI, Yokohama (JP), 2021, (*online*).
- “FOND Planning for LTL_f and $PLTL_f$ Goals”, Workshop Presentation, ICAPS, Berkeley (US), 2019.

ACADEMIC SERVICE

- PC Member: PMAI@IJCAI 2022, IJCAI 2022 (Survey Track), IJCAI 2021 (Survey Track), AAAI 2021
- Reviewer: KR 2022, CAIAC 2020

OTHER INTERESTS AND ACTIVITIES

- Professional swimmer, Forum S.C. (2008–2014)

REFERENCES

- Prof. Giuseppe De Giacomo, degiacomo@diag.uniroma1.it
- Prof. Yves Lespérance, lesperan@eecs.yorku.ca
- Prof. Fabio Patrizi, patrizi@diag.uniroma1.it

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