Francesco Fuggitti

Github: francescofuggitti

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 Cerimony**
  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:** LaTeX

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 Deterministc 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

Updated on June 20, 2022   **Francesco Fuggitti**