Matteo Biagiola

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https://matteobiagiola.github.io

Employment

2020 - present **Postdoctoral Fellow at Software Institute**, *Università della Svizzera italiana, Lugano*, Switzerland.

Education

2016 - 2020 **PhD in Computer Science and Systems Engineering**, *Università di Genova*, Italy, joint PhD with Fondazione Bruno Kessler (FBK), Trento, Italy.

August 2018 **Visiting student**, *University of British Columbia (UBC), Vancouver*, Canada.

2016 **MSc in Computer Science and Systems Engineering**, *Università Politecnica delle Marche, Ancona*, Italy, grade 110/110 cum laude.

2014 **BSc in Computer Science and Systems Engineering**, *Università Politecnica delle Marche, Ancona*, Italy, grade 110/110.

Program Co-organizer

2023 **DeepTest**, *International Workshop on Deep Learning for Testing and Testing for Deep Learning*, `https://conf.researchr.org/home/icse-2023/deeptest-2023`.

2023 **Search Based Software and Fuzz Testing**, *Cyber-physical systems (CPS) testing competition*, `https://sbft23.github.io/tools/`.

2022 **Formula USI**, *AI-Based Autonomous Car Racing Competition*, Università della Svizzera italiana, Lugano, Switzerland.
`https://formulausi.si.usi.ch/2022/`

2021 **Formula USI**, *AI-Based Autonomous Car Racing Competition*, Università della Svizzera italiana, Lugano, Switzerland.
`https://formulausi.si.usi.ch/2021/`

Program Committee

2023 **Search Based Software and Fuzz Testing**, *SBFT*, `https://sbft23.github.io/`.

2023 **International Conference on Software Testing, Verification and Validation**, *ICST*, `https://conf.researchr.org/home/icst-2023`.

2022 **A-Test Workshop**, *A-TEST*, `https://a-test.org/a-test-2022`.

2022 **Symposium on Search Based Software Engineering**, *SSBSE*, https://conf.researchr.org/home/ssbse-2022.

2022 **International Conference on Software Testing, Verification and Validation**, *ICST*, https://icst2022.vrain.upv.es/.

2022 **Search Based Software Testing**, *SBST*, https://sbst22.github.io/.

2021 **A-Test Workshop**, *A-TEST*, https://a-test.org/a-test-2021/.

Journal Reviewer

ACM Transactions of Software Engineering and Methodology, *TOSEM*.

IEEE Transactions on Software Engineering, *TSE*.

Empirical Software Engineering, *EMSE*.

Journal of Software: Evolution and Process, *JSEP*.

Journal of Systems and Software, *JSS*.

Information and Software Technology, *IST*.

Supervision/Co-supervision

2022 - present **Andréa Doreste**, *PhD Co-supevisor*, Università della Svizzera italiana, Lugano, Switzerland.

2022 **Giorgio Macauda**, *Training a Real World Reinforcement Learning Agent*, MSc in Artificial Intelligence, Università della Svizzera italiana, Lugano, Switzerland.

Publications

[1] Matteo Biagiola. "Test Generation and Dependency Analysis for Web Applications". PhD thesis. University of Genoa, Italy, 2019. DOI: 10.15167/biagiola-matteo_phd2020-01-15. URL: http://hdl.handle.net/11567/991607.

[2] Matteo Biagiola, Filippo Ricca, and Paolo Tonella. "Search Based Path and Input Data Generation for Web Application Testing". In: *Search Based Software Engineering - 9th International Symposium, SSBSE 2017, Paderborn, Germany, September 9-11, 2017, Proceedings*. Ed. by Tim Menzies and Justyna Petke. Vol. 10452. Lecture Notes in Computer Science. Springer, 2017, pp. 18–32. DOI: 10.1007/978-3-319-66299-2_2. URL: https://doi.org/10.1007/978-3-319-66299-2_2.

[3] Matteo Biagiola and Paolo Tonella. "Testing the Plasticity of Reinforcement Learning-based Systems". In: *ACM Trans. Softw. Eng. Methodol.* 31.4 (2022), 80:1–80:46. DOI: 10.1145/3511701. URL: https://doi.org/10.1145/3511701.

[4] Matteo Biagiola et al. "Dependency-Aware Web Test Generation". In: *13th IEEE International Conference on Software Testing, Validation and Verification, ICST 2020, Porto,*

Portugal, October 24-28, 2020. IEEE, 2020, pp. 175–185. DOI: 10.1109/ICST46399.2020.00027. URL: https://doi.org/10.1109/ICST46399.2020.00027.

[5] Matteo Biagiola et al. "Diversity-based web test generation". In: *Proceedings of the ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering, ESEC/SIGSOFT FSE 2019, Tallinn, Estonia, August 26-30, 2019*. Ed. by Marlon Dumas et al. ACM, 2019, pp. 142–153. DOI: 10.1145/3338906.3338970. URL: https://doi.org/10.1145/3338906.3338970.

[6] Matteo Biagiola et al. "Web test dependency detection". In: *Proceedings of the ACM Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering, ESEC/SIGSOFT FSE 2019, Tallinn, Estonia, August 26-30, 2019*. Ed. by Marlon Dumas et al. ACM, 2019, pp. 154–164. DOI: 10.1145/3338906.3338948. URL: https://doi.org/10.1145/3338906.3338948.

[7] Maurizio Leotta et al. "A Family of Experiments to Assess the Impact of Page Object Pattern in Web Test Suite Development". In: *13th IEEE International Conference on Software Testing, Validation and Verification, ICST 2020, Porto, Portugal, October 24-28, 2020*. IEEE, 2020, pp. 263–273. DOI: 10.1109/ICST46399.2020.00035. URL: https://doi.org/10.1109/ICST46399.2020.00035.

[8] Dario Olianas et al. "STILE: a Tool for Parallel Execution of E2E Web Test Scripts". In: *14th IEEE Conference on Software Testing, Verification and Validation, ICST 2021, Porto de Galinhas, Brazil, April 12-16, 2021*. IEEE, 2021, pp. 460–465. DOI: 10.1109/ICST49551.2021.00060. URL: https://doi.org/10.1109/ICST49551.2021.00060.