Curriculum Vitae of Mariano Ceccato

Personal information:

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Mariano Ceccato is associate professor in the Computer Science department in University of Verona. Until 2019 he was tenured researcher in the Security & Trust research unit in Fondazione Bruno Kessler, Trento, and until 2018 in the Software Engineering research unit. He was principal investigator of publicly funded research projects, that received funding by European Union (FP7, EIT Digital and H2020) and by the Italian Ministry of Education, University and Research (Prin). Additionally, he was principal investigator of several industrial research contracts.

Academic career:

- 2023-now: associate professor, Computer Science Department, University of Verona.
- 2020-2022: assistant professor (tenure track), Computer Science Department, University of Verona.
- 2010-2019: researcher, permanent position (tenured) at 3rd level, equivalent to assistant professor. Fondazione Bruno Kessler, Trento, Italy.
- 2008-2010: researcher, temporary position (tenure track) at 3rd level, equivalent to assistant professor. Fondazione Bruno Kessler (former Istituto Trentino di Cultura).
- 2007: post-doc researcher, former Istituto Trentino di Cultura, Trento, Italy.

National scientific habilitation:

- 2023: National scientific habilitation to Full Professor in Computer Science (national sector 1/B1 INF-01) and Software Engineering (national sector 9/H1 ING-INF/05) in Italian Universities.
- 2017: National scientific habilitation to Associate Professor in Computer Science (national sector 1/B1 INF-01) in Italian Universities.
- 2013: National scientific habilitation to Associate Professor in Software Engineering (national sector 9/H1 ING-INF/05) in Italian Universities.
- 2003: National habilitation to professional engineer.

Education:

- 2006: PhD in Information and Communication Technology, awarded by University of Trento (Italy) on December 15th, 2006. Thesis title *"Migrating Object Oriented Code to Aspect Oriented Programming".* Advisor: Professor Paolo Tonella.
- 2003: MsC in Software Engineering, Awarded by University of Padua (Italy) on March 11th, 2003, mark 109/110. Advisor: Professor Sergio Congiu.

TEACHING ACTIVITY:

PhD Board:

- 2020-now: Member of the Board of the PhD Program in Computer Science, Department of Computer Science of the University of Verona (Italy).
- 2016-2020: Member of the Board of the PhD Program in Computer Science and System Engineering, Department of Computer Science, Bioengineering, Robotics and Systems Engineering of the University of Genova (Italy).

Lecturer in PhD Schools/Courses:

- 2022-23 (two editions): ISE School. International School on Software Engineering. Bolzano, Italy. https://seschool-series.github.io/2022/speakers.html#mariano
- 2022-24 (three terms): "Automated Software Testing" University of Verona
- 2019: "3rd International Genoa Software Engineering PhD School on Automated Functional and Security Testing of Web and Mobile Applications". University of Genova. May 2019. http://sepl.dibris.unige.it/GaSES2019/

- 2018: “14TH Tarot Summer School 2018 on Software Testing, Verification & Validation”, University College London, London, UK. July 2018. https://wp.cs.ucl.ac.uk/tarot2018/
- 2017: “Automated Software Testing”, University of Genova. May 2017. https://sites.google.com/site/automatedswtesting

Lecturer MsC Courses:

- University of Verona:
  - 2024-now: “Design and Validation of Software Systems”, Master Degree in Computer Science and Engineering (48h)
  - 2024-now: “Requirement Engineering”, Master Degree in Computer Science and Engineering (48h)
  - 2021-2023: “Foundation of Software Engineering”, Master Degree in Computer Science and Engineering (48h)
  - 2021-2023: “Cyber Security for IoT”, Master Degree in Computer Engineering for Robotics and Smart Industry (48h);
  - 2021-now: “Data Security and Privacy”, Master Degree in Data Science (8h);
  - 2020: “Foundation of Software Engineering”, Master Degree in Computer Science and Engineering (52h);
  - 2020: “Cyber Security for IoT”, Master Degree in Computer Engineering for Robotics and Smart Industry (52h);
  - 2020: “Data Security and Privacy”, Master Degree in Data Science (20h);
- University of Genova:
  - 2020: “Functional and Security Testing Techniques” Master Degree in Computer Science , (20h);
- University of Trento:
  - 2012-2019: “Security Testing”, Master Degree in Computer Science(48h);
  - 2009-2011: “Software Analysis and Testing”, Master Degree in Computer Science;
  - 2004-2008: “Laboratory of Software Analysis and Testing” Master Degree in Computer Science(49h);
- University of Bolzano:
  - 2011: “Empirical Software Measurements”, Master degree in Computer Science, Italy (24h);

PhD Advisor:

- 2024-now: Sofia Mari. Provisional thesis title: *“Automated Testing REST APIs based on Deep Learning”.* University of Verona.
- 2020-2023: Davide Corradini. Thesis title: *“Automated Generation of Functional and Security Test Cases for REST APIs”.* University of Verona.
- 2019-2023: Andrea Romdhana. Thesis title: *“Deep Reinforcement Learning Application Testing”.* University of Genova.
- 2014-2019: Biniam Fisseha Demissie. Thesis title: *“Security Testing of Permission Re-delegation Vulnerabilities in Android Applications”.* University of Trento.
- 2010-2013: Andrea Avancini. Thesis title: *“Security Testing of Web and Smartphone Applications”.* University of Trento.

MsC Advisor:

- 2024
  - Luigi Hu: "Confronto sperimentale tra tool di ispezione automatizzata della qualità del codice per Java"
  - Robert Timofte: "Iniezione Automatizzata di Vulnerabilità Mass Assignment in REST API"
  - Federico Graziola: "Potenzialità e sfide nell’analisi formale di protocolli per l’identità digitale con Tamarin"
  - Giacomo Gatto: "Porting in Ambiente Cloud di uno strumento Desktop per il Testing Automatizzato di REST API: Progettazione e Implementazione"
  - Ferdinando Santoro: "A systematic literature review of vulnerabilities in Ethereum smart contracts: methodology, categorization, ontology and implementation of a visualization tool"
  - Sofia Mari: "A Systematic Literature Survey About Defects in Ethereum
  - Smart Contracts: Methodology, Classification, Ontology and
  - Visualization"
  - Michele Perlotto: "Validazione della semantica CRUD delle REST API tramite testing automatico"
  - Marco Massagrande: "Traduzione di Requisiti Funzionali in Test di Accettazione per la Validazione Automatizzata di una Migrazione Software"

    - Elia Confente: "Sviluppo di un protocollo sperimentale per la validazione di PUF di tipo SRAM su commodity hardware economico"
    - Gabriele Nicolosi: "Integrazione di Sistemi Cloud: Sviluppo e Validazione di un Connettore Custom tra Power Apps e Snowflake"
- 2023
    - Leonardo Zuanazzi: "Metodologia e Supporto Automatizzato al Model-Driven Engineering applicato all'Ingegneria Ambientale Idrologica"
    - Andrea Rossetti: "Classificazione automatizzata e black-box della semantica di operazioni di REST API"
    - Francesco Tubini: "Reverse Engineering del Layout di una Rete di Distribuzione di Energia Elettrica: uno Strumento Automatizzato per lo Standard IEC-61850"
    - Muhammad Anas Uddin: "A Comparative Empirical Comparison of MQTT Broker's Performance"
    - Matteo Grella: "Generazione Automatizzata di Casi di Test per Vulnerabilità Mass Assignment su REST API"
    - Sara Beschi: "Validazione di un Motore di Business Process Tramite Generazione Automatica di Scenari di Test End-to-End"
    - Matteo Cavaliere: "A Black-Box Approach for Automated Inference and Refinement of REST API Specifications"
    - Cristiano Di Bari: "A framework for securing low-cost and legacy IoT devices with Physical Unclonable Functions"
    - Francesco Cecconello: "Verifica, monitoraggio e miglioramento della sicurezza informatica tramite Purple Team all'interno del framework 20 CIS"
    - Alessandro Righi: "Automazione di test di accettazione per dispositivi IoT embedded integrati nel cloud"
    - Montolli Zeno: "Reinforcement Learning per la generazione automatica di casi di test per REST API"
- 2022
    - Nicolò Lutteri: "Automatic black-box test case generation for access control vulnerabilities in RESTful APIs"
    - Enrico Guerra: "Formal verification and risk assessment of an implementation of the OPC-UA Protocol"
    - Fabio Bissoli: "Deep Learning per Network Intrusion Detection: CNN, Autoencoder e LSTM"
    - Paolo Graziani: "Classificazione Automatizzata di Documenti Aziendali Tramite Machine Learning"
- 2021:
    - Amedeo Zampieri: "Empirical Comparison among Automated Approaches for Black-box Testing of RESTful APIs"
- 2020:
    - Valentina Odorizzi: "Introducing Automated Security Testing in the Context of Corporate Agile Development Process"
    - Filippo Contro: "Computing an Accurate Control-flow Graph from Ethereum Bytecode"
    - Michael Dallago: "Resttestgen: Automated Black-Box Testing of Restful APIs"
- 2019:
    - Leonidas Vasileiadis: "Remote Runtime Detection of Tampering and of Dynamic Analysis Attempts for Android Apps"
    - Luigi Coniglio: "Combining Program Synthesis and Symbolic Execution to Deobfuscate Binary Code"
    - Davide Corradini: "In-Vivo Testing of Android Apps: Implementation and Empirical Evaluation"
    - Davide Pizzolotto: "Fully Automatic Transformation of Selected Portions of Java Bytecode to C Source Code"
- 2018:
    - Roberto Fellin: "Obfuscation of Java Bytecode with Xor Masking and Opaque Constants based on K-clique"
    - Emanuele Viglianisi: "A Federated Society of Bots for Smart Contract Testing"
    - Luca Gasparetto: "Cyber Security in the API Economy: Vulnerability Detection in Android Apps"
    - Andrea Giarrusso: "Experimental investigation of the runtime performance in cloud computing integration: an industrial case study"
- 2016: Alessandro Valentini: "An Experimental Study on Run-Time Overhead Introduced by Data Obfuscation Transformations"
- 2014:
    - Davide Ghio: "Security Testing of Communication Mechanisms among Android Applications"

    - Biniam Fisseha Demissie: “Implementation and Assessment of Data Obfuscation for C/C++ Code Based on Residue Number Coding”
    - Yosief Weldezghi Frezghi: “Code Obfuscation and Clustering Heuristic to Prevent Code Tampering”.
- 2009: Andrea Avancini: *“Migrazione automatica di sistemi legacy: un caso di studio”*

BsC Advisor:

- 2022: Alessandro Marconcini: “Progettazione e prototipazione di un servizio REST di pubblica utilità”
- 2021: Mattia Santi: “Studio e Pratica su Vulnerabilità di API REST”
- 2017: Andrea Arrighi: *"NATAN - Offuscazione di bytecode Java tramite traduzione automatica verso codice C di invocazioni a metodo"*

RESEARCH LEADERSHIP

International visiting:

- 2015: Interdisciplinary Centre for Security, Reliability and Trust, University of Luxembourg. Collaboration with Professor Lionel Briand (3 months).
- 2005: King's College London. UK. Collaboration with Professor Mark Harman (3 month).

Competitive research grants:

- 2023-2026: Principal investigator for the project “NeuroPlus: NEUROmorphic energy-efficient secure accelerators based on Phase change materials aUgmented siLicon photonicS” admitted to funding as RIA project within Horizon EU work programme, Ultra-low-power, secure processors for edge computing. Duration 48 months. **Project budget: 8.3M/€.** My budget: 510k/€.
- 2022-2025: Task contributor for the project “iNest: Interconnected Nord-Est Innovation Ecosystem” Fundend as Innovation Ecosystem by the Italian Ministery of University and Research, under the National Recovery and Resilience Plan (NRRP) funded from the European Union, NextGenerationEU. Duration 36 months.
- 2023-2025: Principal investigator for the project “Smartitude: Automated Testing and Security Assessment of Smart Contracts” funded by the European Union under NextGenerationEU with the which has been funded by MUR under the PRIN 2022 program (Fondo per il Programma Nazionale di Ricerca e Progetti di Rilevante Interesse Nazionale PRIN). Duration 24 months. **Project budget: 298k/€.** My budget: 102k/€.
- 2022-2024: Principal investigator for the project *“Integrazione di servizi rivolti al cittadino per facilitare la corretta raccolta differenziata dei rifiuti urbani”*. Funded by the Italian Ministry of University and Research, withing the PON "RICERCA E INNOVAZIONE" work programme. **Project budget: 156k/€**
- 2019: Principal investigator for the project *“Teichos - Technical Environment for Intelligent Cyber Operational Security”*. Innovation Action, awarded by European Community within EIT Digital. **Project budget: 972k/€.** My budget: 330k/€. My funding: 247k/€.
- 2019: Principal investigator for the project *“API-Assistant 2: Automated Security Assessment of 3rd party apps for the API economy”*. Innovation Action, awarded by European Community within EIT Digital. **Project budget: 1115k/€.** My budget: 360k/€. My funding: 236k/€.
- 2018-2019: Principal investigator for the PRIN project *“GAUSS: Governing Adaptive and Unplanned Systems of Systems”*. Funded by Italian Ministry of Education, University and Research (Contract 2015KWREMX). **Project budget: 666k/€.** My budget:81 k/€. My funding: 57k/€.
- 2018: Principal investigator for the project *“API-Assistant: Automated Security Assessment of 3rd party apps for the API economy”*. Innovation Action, awarded by European Community within EIT Digital. **Project budget: 1100k/€.** My budget: 477k/€. My funding: 370k/€.
- 2013-2016: Principal investigator of the STREP project *“ASPIRE: Advanced Software Protection: Integration, Research and Exploitation”*, awarded by European Community within the 7th Framework Programme (FP7/2007-2013) contract number 609734. **Project budget: 4509k/€.** My budget: 495k/€. My funding: 373k/€.

Industrial project:

- 2023 Principal investigator for the project “Organisation of informative events for the small and medium enterprises of the Veneto region and production of digital contents” funded by Unione regionale delle camere di commercio industria artigianato e agricoltura del Veneto. **Project budget: 7k/€**.
- 2023 Principal investigator for the project “Automated Testing of REST APIs” funded by Muscope Cybersecurity S.r.l. **Project budget: 24k/€**.
- 2023: Principal investigator for the project “Machine Learning for automated testing of REST APIs” funded by Equixely Srl. **Project budget: 23k/€**.

- 2022: Principal investigator for the project “Requirement elicitation for an environmental engineering software framework for modelling the physical processes that control natural water cycle” funded by MobyGIS. **Project budget: 3k/€**.
- 2021: Principal investigator for the project “Assistenza nella verifica dei requisiti hardware e software da capitolato d’appalto nell’acquisizione da parte di AMIA Verona SpA di una piattaforma informatica di gestione integrata dei processi aziendali legati al servizio di gestione dei rifiuti urbani” funded by AMIA Verona. **Project budget: 16k/€**.

Invited talks:

- 2023: Invite speech: 13th Workshop Computer Science Research Meets Business, presentation title “Security Testing of Web APIs”. Univeristy of Bolzen/Bolzano.
- 2021: Keynote at Intuitestbeds 2021: International Workshop on User Interface Test Automation and Testing Techniques for Event Based Software.
- 2020: Invited speech in University of Trento, in the De Cifris Athesis seminar series. Title: *“A Federated Society of Bots for Smart Contract Testing”*.
- 2018: *“AnFlo: Detecting Anomalous Sensitive Information Flows in Android Apps”.* University of Udine.
- 2015: *“ASPIRE Advanced Software Protection: Integration, Research and Exploitation”.* University of Luxembourg.
- 2014: *“A Study on the Effect of Code Obfuscation: Quality of code and Efficiency of attacks”*. University of Luxembourg.
- 2012: *“Security testing of fast time-to-market code”.* Linkoping University, Sweden.
- 2012: *“A search based approach for security testing”*. 18th CREST Open Workshop Managing and Optimising Multiplicity Computing, London, UK.
- 2011: *“Towards security testing with taint analysis and genetic algorithms”*. University of East London, UK.

Awards:

- 2022: **Best Research paper** for the paper “IFRIT: Focused Testing through Deep Reinforcement Learning” presented at 15th IEEE International Conference on Software Testing, Verification and Validation (ICST 2022)
- 2020: **Best paper award** for the paper “RestTestGen: Automated black-box testing of RESTful APIs”, presented at the 13th IEEE International Conference on Software Testing, Validation and Verification (ICST 2020)
- 2017: **Best paper award** for the paper “How professional hackers understand protected code while performing attack tasks”, presented at the *25th International Conference on Program Comprehension* (ICPC 2017)
- 2017: **ACM distinguished paper award** for the paper “How professional hackers understand protected code while performing attack tasks”, presented at the *25th International Conference on Program Comprehension* (ICPC 2017)
- 2016: **ACM distinguished paper award** for the paper “Sofia: An automated security oracle for black-box testing of SQL-injection vulnerabilities” presented at the *31st IEEE/ACM International Conference on Automated Software Engineering* (ASE 2016)

Spinoff and technology transfer:

Founder and CTO (2017-2019) of 2Aspire, a startup meant to implement and commercialize the results of the Aspire EU-FP7 research project.

- 2018: Recognized as official spin-off by the FBK Board of Directors
- 2017: Selected by the Tim-Wcap acceleration program by Telecom Italia. Cash contribution €10k
- 2016: The business plan won the D2T StartCup competition (IT category) promoted by Trentino Sviluppo. Price €15k

SERVICE TO THE SEARCH COMMUNITY:

Organization of Scientific International Conferences:

- Steering Bord of IEEE International Working Conference on Source Code Analysis and Manipulation
- General char of 22nd IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2022). Cyprus. (89 participants).
- Most influential paper co-chair in 22nd IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2022). Cyprus. (89 participants)

- Program chair of PhD Forum, Itasec20: Phd Forum, colocated within the Italian Conference on Cybersecurity, 2020, Ancona.
- Program chair: 12th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2012). Riva del Garda, Italy. (62 participants).
- Local arrangement chair: 28th IEEE International Conference on Software Maintenance (ICSM 2012). Riva del Garda, Italy. (141 participants).
- Local arrangement chair: International Symposium on Software Testing and Analysis (ISSTA 2010). Trento, Italy. (95 participants)

Organization of Scientific International Workshops:

- MAOS 2009: Workshop on Maintenance of Aspect Oriented Systems. 2009, Fraunhofer IESE, Kaiserslautern, Germany.
- RE-TRUST 2009: Second International Workshop on Remote Entrusting. 2009, Riva del Garda.
- RE-TRUST 2008: First International Workshop on Remote Entrusting. 2008, Trento.
- EWAS'06: 3rd European Workshop on Aspects in Software. 2006, University of Twente, Enschede, The Netherlands.
- LATE workshop 2006: Linking Aspect Technology and Evolution workshop held with 5th Aspect-Oriented Software Development Conference (AOSD 2006). 2006, Bonn, Germany.
- LATE workshop 2005: Linking Aspect Technology and Evolution held with 4th Aspect-Oriented Software Development Conference (AOSD 2005). 2005, Chicago, USA.

Member of program committee for international conferences:

- 2025: ACM SIGSOFT International Symposium on Software Testing and Analysis
- 2011 - 2024 (4 editions): IEEE International Conference on Software Maintenance and Evolution (ICSME).
- 2017 - 2024 (9 editions): IEEE International Conference on Software Testing, Verification and Validation (ICST) research, testing tools, tool demo tracks.
- 2020 - 2023 (4 editions): IEEE/ACM International Conference on Mobile Software Engineering and Systems (MobileSoft)
- 2010 - 2024 (10 editions): IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM)
- 2022: ESORICS European Symposium on Research in Computer Security
- 2020: IEEE/ACM International Conference on Mobile Software Engineering and Systems (MobileSoft) Vision Track
- 2013 - 2022 (6 editions): International Conference on Program Comprehension (ICPC).
- 2014 - 2018 (2 editions): Conference on Software Maintenance, Reengineering and Reverse Engineering (Software Evolution Week) (CSMR-WCRE/SANER).
- 2010 - 2014 (5 editions): Euromicro International Conference on Parallel, Distributed and Network-Based Processing (PDP).
- 2010 - 2013 (4 editions): IEEE Working Conference on Reverse Engineering, (WCRE).
- 2012: Genetic and Evolutionary Computation Conference (GECCO).
- 2010: International Conferences on Mathematical Methods, Models and Architectures for Computer Network Security. (MMM-ACNS).
- SNDS 2010: Special Session “Security in Networked and Distributed Systems” in 18th Euromicro International Conference on Parallel, Distributed and network-based Processing (PDP)

Member of program committee for international workshops:

- 2025: SECUTE International Workshop on Security Testing for Complex Software Systems
- 2021 - 2024 (3 editions): CheckMATE Workshop on Research on offensive and defensive techniques in the context of Man At The End (MATE) attacks
- 2020 - 2023 (3 editions): The A-TEST workshop
- 2020 - 2019 (2 editions): International Workshop on Governing Adaptive and Unplanned Systems of Systems (Gauss)
- 2018 - 2023 (6 editions): International Workshop on User Interface Test Automation and Testing Techniques for Event Based Software (INTUITESTBEDS).
- 2016 - 2019 (4 editions): Software Security, Protection, and Reverse Engineering Workshop. (SSPREW).
- 2012 - 2016 (5 editions): International Workshop on Search-Based Software Testing (SBST), IEEE
- 2015 - 2019 (3 editions): International Workshop on Software PROtection (SPRO).
- 2016: International Workshop on Software Mining (SoftwareMining).

- 2010: First International Workshop on Scientific Analysis and Policy Support for Cyber Security (SA&PS4CS 2010).
- 2009: First International Workshop on Software Security Process (SSP 2009).
- 2008: First International Workshop on Remote Entrusting. (RE-TRUST 2008).
- 2006: 3rd European Workshop on Aspects in Software. (EWAS 2006).
- 2005: Linking Aspect Technology and Evolution workshop (LATE 2005).

EDITORIAL BOARD MEMBER AND REVIEWER:

Boards in scientific journals:

- Journal of Software: Evolution and Process. Wiley. Guest editor of *"Special Issue on Source Code Analysis and Manipulation"*.
- Board of Distinguished Reviewers. ACM Transactions on Software Engineering and Methodology, ACM.
- Empirical Software Engineering, An International Journal. Springer. Review board.

Reviewer for international scientific journals:

- IEEE:
  - Transactions on Software Engineering, IEEE computer society.
  - Transactions on Computers, IEEE computer society.
  - Transactions on Information Forensics & Security
  - Software, IEEE computer society.
  - Computer, IEEE computer society.
- ACM
  - Transactions on Software Engineering and Methodology, ACM.
  - Transactions on information and System Security, ACM.
  - Transactions on Privacy and Security, ACM
- Springer
  - Journal of Automated Software Engineering.
  - Empirical Software Engineering.
  - International Journal of Information Security.
  - Journal of the Brazilian Computer Society.
- Elsevier
  - Science of Computer Programming.
  - Computers & Security.
  - Journal of System and Software.
- Wiley
  - Software Testing, Verification and Reliability.
  - Journal of Software Maintenance and Evolution: Research and Practice.
  - Software: Practice and Experience.
- IET
  - Software.
  - Information Security.

PUBLICATIONS:

Bibliometric Indexes:

According to Google Scholar:
H-index: 35
Citations: 3628
i10index: 74

Number of publications:
34 in international scientific journals (peer reviewed)
54 in international conferences (peer reviewed)

Papers in scientific journals:

1. Davide Pizzolotto, Stefano Berlato, and Mariano Ceccato. "Mitigating debugger-based attacks to java applications with self-debugging". *ACM Transactions Software Engineering and Methodology*, jan 2024

2. Lwin Khin Shar, Biniam Fisseha Demissie, Mariano Ceccato, Yan Naing Tun, David Lo, Lingxiao Jiang, Christoph Bienert, “Experimental comparison of features, analyses, and classifiers for Android malware detection”. *Empirical Software Engineering*, Springer, 28(6):1–40, 2023.
3. Andrea Romdhana, Alessio Merlo, Mariano Ceccato, and Paolo Tonella. “Assessing the security of inter-app communications in android through reinforcement learning”. *Computers & Security,* 131:103311, Elsevier, 2023.
4. Michele Pasqua, Andrea Benini, Filippo Contro, Marco Crosara, Mila Dalla Preda, and Mariano Ceccato. “Enhancing ethereum smart-contracts static analysis by computing a precise control-flow graph of ethereum bytecode”. *Journal of Systems and Software*, 200:111653, 2023.
5. Andrea Romdhana, Alessio Merlo, Mariano Ceccato, Paolo Tonella. “Deep Reinforcement Learning for Black-Box Testing of Android Apps”. *ACM Transactions on Software Engineering and Methodology*, 31(4), jul 2022.
6. Davide Corradini, Amedeo Zampieri, Michele Pasqua, Emanuele Viglianisi, Michael Dallago, Mariano Ceccato. “Automated Black-Box Testing of Nominal and Error Scenarios in RESTful APIs”. *Software Testing, Verification and Reliability*, Wiley 32(5):e1808, 2022.
7. Salvatore Manfredi, Mariano Ceccato, Giada Sciarretta, and Silvio Ranise. “Empirical validation on the usability of security reports for patching tls misconfigurations: User-and case-studies on actionable mitigations”. *Journal of Wireless Mobile Networks, Ubiquitous Computing, and Dependable Applications*, 13(1):56–86, 2022.
8. Biniam Fisseha Demissie, Mariano Ceccato, Lwin Khin Shar. “Security Analysis of Permission Re-delegation Vulnerabilities in Android Apps” *Empirical Software Engineering*, 25:5084-5136, 2020.
9. Emanuele Viglianisi, Mariano Ceccato, Paolo Tonella. “A Federated Society of Bots for Smart Contract Testing”. *Journal of Systems and Software*, 168:110647, 2020.
10. Roberto Fellin and Mariano Ceccato “Experimental assessment of xor-masking data obfuscation based on k-clique opaque constants”. *Journal of Systems and Software*, 162:110492, 2020.
11. Stefano Berlato and Mariano Ceccato “A large-scale study on the adoption of anti-debugging and anti-tampering protections in android apps”. *Journal of Information Security and Applications*, 52:102463, 2020.
12. Alessio Viticchie, Leonardo Regano, Cataldo Basile, Marco Torchiano, Mariano Ceccato, Paolo Tonella “Empirical Assessment of the Effort Needed to Attack Programs Protected with Client/Server Code Splitting”. *Empirical Software Engineering*, accepted, to appear.
13. Mariano Ceccato, Paolo Tonella, Cataldo Basile, Paolo Falcarin, Marco Torchiano, Bart Coppens, and Bjorn De Sutter. “Understanding the behaviour of hackers while performing attack tasks in a professional setting and in a public challenge”. *Empirical Software Engineering, Springer*, 24(1):240-286, Feb 2019.
14. Mariano Ceccato, Alessandro Marchetto, Leonardo Marian, Cu D. Nguyen, Paolo Tonella. “Do Automatically Generated Test Cases Make Debugging Easier? An Experimental Assessment of Debugging Effectiveness and Efficiency”. In *ACM Transactions on Software Engineering and Methodology*., 25(1):5:1-5:38, Dec. 2015
15. Mariano Ceccato, Andrea Capiluppi, Paolo Falcarin, and Cornelia Boldyreff. “A large study on the effect of code obfuscation on the quality of java code”. In *Empirical Software Engineering*, 20(6):1486-1524, 2015.
16. Luca Sabatucci, Mariano Ceccato, Alessandro Marchetto, Angelo Susi. “Ahab's legs in scenario-based requirements validation: An experiment to study communication mistakes”. In *Journal of Systems and Software*, 109:124-136. Elsevier. 2015.
17. Itzel Morales-Ramirez, Anna Perini, Mariano Ceccato. “Towards supporting the analysis of online discussions in oss communities: A speech-act based approach”. In Information *Systems Engineering in Complex Environments, Lecture Notes in Business Information Processing*, pages 215-232. Springer, 2015.
18. Mariano Ceccato, Zheng Li, James R. Cordy “Guest editorial for the special issue on source code analysis and manipulation, SCAM 2012”. *Journal of Software: Evolution and Process*, Wiley, 26(6):531-532, 2014.
19. Mariano Ceccato, Massimiliano Di Penta, Paolo Falcarin, Filippo Ricca, Marco Torchiano, Paolo Tonella. “A Family of Experiments to Assess the Effectiveness and Efficiency of Source Code Obfuscation Techniques”. In *Empirical Software Engineering. An International Journal*, volume 19, pages 1040-1074. Springer, 2014.
20. Andrea Avancini and Mariano Ceccato. “Security Oracle Based on Tree Kernel Methods”. Volume 379 of *Communications in Computer and Information Science* pages 30-43. Springer Berlin Heidelberg, 2013.
21. Andrea Avancini and Mariano Ceccato. “Comparison and Integration of Genetic Algorithms and Dynamic Symbolic Execution for Security Testing of Cross-Site Scripting Vulnerabilities”. *Information and Software Technology*, Elsevier. 55(12), pages 2209-2222, 2013.

22. Mariano Ceccato, Paolo Tonella, “CodeBender: Remote Software Protection Using Orthogonal Replacement”, *IEEE Software*, pp. 28-34, March/April, 2011.
23. Mariano Ceccato, Thomas RoyDean, Paolo Tonella and Davide Marchignoli. “Migrating legacy data structures based on variable overlay to java”. *Journal of Software Maintenance and Evolution-Research and Practice*, 22(3):211-237, 2010. John Wiley & Sons.
24. Filippo Ricca, Massimiliano Di Penta, Marco Torchiano, Paolo Tonella, and Mariano Ceccato. “How developers’ experience and ability influence web application comprehension tasks supported by uml stereotypes: A series of four experiments”. *IEEE Transactions on Software Engineering*, 36(1):96-118, Jan.-Feb. 2010.
25. Mariano Ceccato and Paolo Tonella, “Dynamic Aspect Mining”. *IET Software*,Vol. 3 No. 4 pp.321-336 (2009).
26. Paolo Tonella, Mariano Ceccato, Davide Marchignoli, Cristina Matteotti and Thomas Roy Dean “Migrazione di sistemi software legacy”. *Mondo Digitale*, (30):31-39, 2009.
27. Mariano Ceccato, Thomas Roy Dean and Paolo Tonella. “Recovering structured data types from a legacy data model with overlays”*. Information and Software Technology*, 51(10):1454-1468, 2009.
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