Mike Papadakis - Curriculum Vitae, January 2023

Contact Details

Michail Papadakis (Mike Papadakis),
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Current Position

Associate Professor/Chief Research Scientist, Interdisciplinary Centre for Security, Reliability and Trust (SnT, `http://wwwen.uni.lu/snt`), University of Luxembourg. `Jan 2023 - Present`.
Deputy head of the SERVAL research group, (SerVal, `https://wwwen.uni.lu/snt/research/serval`). `Aug 2020 - Present`.

Previous Positions

Assistant Professor/Senior Research Scientist, Interdisciplinary Centre for Security, Reliability and Trust (SnT, `http://wwwen.uni.lu/snt`), University of Luxembourg. `Aug 2020 - Dec 2022`.
Research Scientist, Faculty of Science, Technology and Communication (FSTC), University of Luxembourg. `Jan 2016 - Aug 2020`.
Visiting Research Scholar, Centre for Research on Evolution, Search and Testing (CREST, `http://crest.cs.ucl.ac.uk/`), University College London (UCL). `Jun 2014 - Dec 2015`.
Research Associate, Interdisciplinary Centre for Security, Reliability and Trust (SnT, `http://wwwen.uni.lu/snt`), University of Luxembourg. `Mar 2012 - Dec 2015`.

Publications (Peer Reviewed)

Journal papers accepted or in print:	**26,**
Refereed conference papers:	**81, (18 Core A*)**
Other refereed publications:	**17**
Total:	**124**

Principal Peer Esteem Indicators

Editorial boards:	**2**
Distinguished (journal) review boards:	**3**
Program chair:	**17**
General chair:	**2**
Steering committee membership:	**4**
Program committee membership:	**84**
Special issue co-editor:	**6**
Keynotes & invited talks:	**7 & 21**
Awards:	**11**
H-index on Google Scholar:	**41 (5,674 citations**; 4 February, 2023)

Principal Industrial Impact Indicators

My work includes industrial collaborations with Google, Facebook, PayPal, BGL (BNP-Paribas group), CETREL (six company group) and MERCE (Mitsubishi Electric). So far PayPal, Facebook, BGL and CETREL have funded my work with approximately $1,000,000$ €.

Qualifications

Right to supervise PhD students (ADR - "Autorisation à Diriger des Recherches"), *University of Luxembourg*, 2016. Doctoral Program in Computer Science and Computer Engineering - Doctoral School in Science and Engineering.
Ph.D. in Software Testing and Verification, *Athens University of Economics and Business*, 2006-2011. Thesis title: *Reducing the Effort of Mutation Testing using its Variants while Automating the Test Case Generation Process*.
MSc in Computer Science, *Athens University of Economics and Business*, 2003-2005.
BSc in Computer Science, *Athens University of Economics and Business*, 1999-2003.

Quantitative Evidence for Research Quality

I am an expert in my field with international reputation as indicated by my key peer esteem indicators (e.g., h-index 41, 5,600+ citations, etc). According to recent bibliometric studies[1], conducted in October 2018 and in June 2021, I am among **the most impactful researchers in Software Engineering**. In particular the first study (covers the timeperiod 2010-2017) ranks me among the top-5 most impactful *early stage* researchers in Software Engineering and lists me among the "Top Scholars" in the general category of Software Engineering, while the second study (regards the time period 2013-2020) ranks me among the top-20 most impactful *consolidator stage* researchers in Software Engineering. It is noted that both these studies are peer-reviewed and independent of my work, thereby offering an independent impact indicator of the recognition of my work by the research community.

My work on Mutation Testing is widely recognised, for which I have been awarded the **IEEE TCSE Rising Star Award (2020)**. I have published widely on Software Engineering topics from code analysis to software maintenance and testing and have given 28 invited talks (on various topics). My work has received 11 research awards, including an IEEE TCSE and an ACM-SIGSOFT Distinguished paper awards, at ICSME 2020 and ESEC/FSE 2019, which are among the most prestigious events in Software Engineering. I have also received **2 industry related awards**, a Facebook Research Award, prestigious award given to *"exceptional" academics* to support their research efforts, and a Microsoft Azure Research Award, award given to academics to develop their work on Azure cloud computing platform.

My work has also been published on the main top-tier venues of my area, includes 26 journal papers and 18 regular papers in the main research tracks of ICSE, ESEC/FSE, ASE, AAAI and ECCV, which are CORE A* venues (16 papers in A* Software Engineering venues and 2 papers in A* AI-related venues). I also have a strong reputation as a distinguished researcher and have been invited to participate to 80+ international program committees (including top-tier, Core A*, venues such as ICSE, ESEC/FSE & AAAI, CVPR), elected into 4 international conference steering committees (ICSME, ICST, SSBSE and Mutation), invited to serve on 2 editorial and 3 distinguished review boards (STVR, E-Informatica, ACM-TOSEM, EMSE & JSS). Perhaps more importantly, I serve as a **deputy Editor of the Software Testing, Validation and Verification (STVR) journal**, which is the main journal in Software Testing, and as a **Program Committee co-chair for the International Conference on Software Testing (ICST'23)**, a premier Software Testing conference. I have also co-Organized, among many events and tracks, the 37th IEEE International Conference on Software Maintenance and Evolution (ICSME'21), a premier Software Engineering conference.

I have acquired and led multiple (highly competitive) **industrial, national and international research projects (approximately 10 million Euros of total budget)** in collaboration with world leading companies such as PayPal, BNP Paribas and Mitsubishi Electric, and international institutions such as UC-Berkeley (US), UCL (UK), CEA-List. In total I have collaborated with 20 different institutions and more than 80 different authors across the globe. These facts demonstrate the strong contribution of my work on the development of knowledge and research of Software Engineering.

I am the **deputy head of the SerVal research group (SEcurity, Reasoning and VALidation)**, currently composed of 25 PhD students and 15 Post Doctoral researchers. The team is specialized in a diverse number of topics (Artificial Intelligence, Optimization, Code Analysis, Software Engineering, Smart Grid and others) with a mixed number of industrial and basic research projects with a total budget of more than 20 million Euro. All-in-all, I have successfully supervised 7 PhD students (one of them awarded with the *FNR Outstanding PhD thesis Award 2019* and one awarded with the *University of Luxembourg Excellent Thesis Award 2022*) and currently supervising and co-supervising 12 PhD students. Since January 2016, I am leading the software testing and debugging team of the SerVal group, which is composed of 10 PhD students and 5 PostDocs.

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[1]Dimitra Karanatsiou, Yihao Li, Elvira-Maria Arvanitou, Nikolaos Misirlis, W. Eric Wong: *A bibliometric assessment of software engineering scholars and institutions (2010-2017)* Journal of Systems and Software 147: 246-261 (2019), and W. Eric Wong, Nikolaos Mittas, Elvira Maria Arvanitou, Yihao Li: *A bibliometric assessment of software engineering themes, scholars and institutions (2013-2020)*, Journal of Systems and Software, June 2021.

Funding

Overview

Project Title	Source of Funding	Year Awarded	Role	≈Total project Budget
MeMoRIA	FNR	2022	Principal	940,000 €
Ikora	FNR	2022	Principal	250,000 €
SnT Acceleration Program	UniLu	2021	Co-PI	40,000 €
FinInclusion	UniLu	2021	Co-PI	400,000 €
TestFlakes	FNR	2020	Principal	1,000,000 €
RESCOM	FNR	2020	Principal	50,000 €
LAIWYERS	UniLu	2019	Co-Inv	390,000 €
RASoRS	FNR	2019	Principal	830,000 €
PAYPAL	PayPal	2019	Principal	730,000 €
UITFlaky	FaceBook	2019	Principal	50,000$
BGL-RobustML	BGL	2019	Co-Inv	230,000 €
SATOCROSS	FNR-ANR	2018	Principal	1,500,000 €
STELLAR	FNR	2018	Co-Inv	1,090,000 €
TESTFAST	FNR	2018	Co-Inv	1,000,000 €
CODEMATES	FNR	2017	Principal	710,000 €
AutoGEM	FNR	2017	Co-Inv	160,000 €
BGL-DevOps	Weicker Foundations	2016	Co-Inv	230,000 €
TASTRA	FNR	2016	Co-Inv	160,000 €
MBTD	Microsoft	2015	Principal	30,000$
TDHCS	FNR	2014	Principal	165,000 €
ADDOPF	UniLu	2014	Co-Inv	295,000 €
CETREL	Cetrel	2011	Co-Inv	200,000 €
TOTAL for which I am Principal Investigator				**6,005,000 €**
TOTAL for which I am Co-Investigator				**3,795,000 €**

Principal Peer Esteem Indicators

Awards & Honours

- **Best Paper Award** (IEEE Reliability Society) at the 21st IEEE International Conference on Software Security and Reliability (QRS) 2021. Paper title: "Confuzzion: A Java Virtual Machine Fuzzer for Type Confusion Vulnerabilities".

- **Facebook Research Award Finalist** at the Facebook 2021 RFP on "agent-based user interaction simulation to find and fix integrity and privacy issues" - Project "Refining state equivalence relations for effective metamorphic testing" `https://research.fb.com/blog/2021/09/announcing-the-winners-of-the-2021-rfp-on-agent-based-user-interaction-simulation-to-find-and-`

- **Most Impactful Software Engineering Researcher**. A bibliometric study by Wong et al. "A bibliometric assessment of software engineering themes, scholars and institutions (2013-2020)", Journal of Systems and Software, June 2021, ranks me among the top-20 "Most Impactful" consolidator stage Software Engineering researchers.

- **IEEE TCSE Rising Star Award**. IEEE Computer Society Technical Council on Software Engineering (TCSE) 2020.

- **Distinguished Paper Award** (IEEE TCSE) at the 36th International Conference on Software Maintenance and Evolution (ICSME'20). Paper title: "Commit-Aware Mutation Testing".

- **Best Paper Award** for the 26th SIGKDD conference on Knowledge Discovery and Data Mining, (KDD'20), AI for COVID track. Paper title: "Data-driven Simulation and Optimization for Covid-19 Exit Strategies".

- **Facebook Research Award** at the Facebook Testing and Verification 2019 - Project "Detecting flaky test failures of system user interactive tests".

- **Distinguished Paper Award** (ACM SIGSOFT) at the 27th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE'19). Paper title: "An Empirical Study on Vulnerability Prediction of Open-Source Software Releases".

- **Distinguished Artifact Award** (ACM SIGSOFT) at the 28th ACM International Symposium on Software Testing and Analysis (ISSTA'19). Paper title: "Semantic Fuzzing with Zest".

- **Distinguished Artifact Award** (ACM SIGSOFT) at the 28th ACM International Symposium on Software Testing and Analysis (ISSTA'19). Paper title: "Search-based Test and Improvement of Machine-Learning-Based Anomaly Detection Systems".

- **Distinguished Reviewer Award** at the 12th IEEE International Conference on Software Testing (ICST'19).

- **Top Scholar in Software Engineering** a bibliometric study (Karanatsiou et al. Journal of Systems and Software, October 2018), ranks me among the "Top Scholars" in Software Engineering and among the top-5 most impactful early stage researchers.

- **Best Paper Award** at the 16th IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM'16). Paper title: "Analysing and Comparing the Effectiveness of Mutation Testing Tools: A Manual Study".

- **Microsoft Azure Research Award**. Microsoft Azure 2015 - Project "Mutation-Based Testing and Debugging in Microsoft Azure".

- **Honor (performance) Scholarship**, MSc in Computer Science (2003 - 2004).

Keynotes

- 13th International Workshop on Automating Test Case Design, Selection and Evaluation (A-TEST), "Mutation Testing in Evolving Systems", 18th November 2022, Singapore. `https://a-test.org/#Keynotes`.

- 6th International Workshop on Machine Learning Techniques for Software Quality Evolution, "Best practices in the (empirical) assessment of deep learning testing methods", 18th November 2022, Singapore. `https://maltesque2022.github.io/index.html`.

- 12th BElgian-NEtherlands software eVOLution symposium (BENEVOL'22). Keynote talk, title "Applying Mutation Testing in Evolving Systems", 12-13 September, 2022, `https://benevol2022.github.io/`.

- 3rd ACNS Workshop on Security in Machine Learning and its Applications (SiMLA 2021), "Adversarial Attacks in ML-Enabled Systems", 21-24 June 2021 - Kamakura, Japan. `https://asset-group.github.io/simla2021/`.

- Mutation Testing workshop (MUTATION 2020): Keynote talk, title "Continuous Mutation Testing", October 24th, 2020, `https://mutation-workshop.github.io/2020/`.

- Methodes de Test pour la Verification et la Validation (MTV2) workshop (annual workshop of the CNRS research group): Keynote talk, title "Mutation Testing Advances", December 7th, 2018, `http://logimas.mics.centralesupelec.fr/events/mtv2-7-12-2018/`.

- BElgian-NEtherlands software eVOLution symposium (BENEVOL'17). Keynote talk, title "Mutation Testing Advances", 4th and 5th December, 2017, `http://ansymore.uantwerpen.be/events/benevol2017`.

Invited Talks & Seminars

- Training And Research On Testing, Summer School on software testing (TAROT 2022). Invited talk, "Mutation Testing Advances and Future Research Directions", 4-8 July 2022 - Avila, Spain.

- CEA-LIST, Invited talk, "MuDelta: Delta-Oriented Mutation Testing at Commit Time", December 16, 2021, Paris, France.

- TUM Technical University of Munich, Invited talk, "Catching bugs with Mutation Testing" December 13th, 2021, (Remote talk) Munich, Germany.

- University of Bern, Invited talk, "Catching bugs with Mutation Testing" March 22, 2021, (Remote talk) Bern, Switzerland.

- NUAA-International Workshop on Software Reliability (NUAA-IWSR) "Mutation Testing Advances", August 13, 2020, (Remote talk) Nanjing, China `https://mp.weixin.qq.com/s/syVfld9g_2onQfqQNyCsIw`.

- Facebook chalk talk (Facebook London) "Catching Bugs with Mutation Testing", November 22, 2019.

- Facebook Testing and Verification Symposium 2019 (Facebook London) "Mutation Testing", November 21, 2019. `https://fbtavsymposium2019.splashthat.com/`

- CREST Open Workshop (COW), Department of Computer Science, University College London (UCL): Invited talk, title "Applications of Deep Learning Adversarial data", 21st and 22nd October 2019, `http://crest.cs.ucl.ac.uk/cow/61/`.

- Doctoral Symposium of 12th IEEE International Conference on Software Testing, (ICST), April 24, 2019. Title "Successful' PhD Studies in Software Engineering", 24 April 2019. `http://icst2019.xjtu.edu.cn/Calls/Doctoral_Symposium.htm`

- TCS Seminar Series, Department of Theoretical Computer Science, KTH Royal Institute of Technology in Stockholm (KTH): Invited talk, title "Mutation Testing Advances", 11th December 2018, `https://www.kth.se/tcs/seminars-events/tcs-seminars`

- CREST Open Workshop (COW), Department of Computer Science, University College London (UCL): Invited talk, title "Mutation Testing and Automated Program Improvement", 26th and 27th February 2018, `http://crest.cs.ucl.ac.uk/cow/58/`.

- CREST Open Workshop (COW), Department of Computer Science, University College London (UCL): Invited talk, title "The mutant selection problem", 29th and 30th January 2018, `http://crest.cs.ucl.ac.uk/cow/57/`.

- Training And Research On Testing, Summer School on software testing (TAROT 2017). Invited talk, "Advances in Mutation Testing", June 26 -30 2017, `http://tarot2017.dieti.unina.it/index.php/preliminary-program`.

- CREST Open Workshop (COW), Department of Computer Science, University College London (UCL): Invited talk, title "Vulnerability Prediction Models", 27th and 28th March 2017, `http://crest.cs.ucl.ac.uk/cow/52/`.

- School of Computing, Korea Advanced Institute of Science and Technology (KAIST): Invited talk, title "Recent Advances in Mutation Testing", 20th, 21st March 2017.

- Computer Science department, University of Sheffield: seminar talk title "Mutation Testing and the Equivalent Mutant Problem", February 10th 2015.

- Software Systems Engineering Reading Group Talk, University College London (UCL): Invited talk, title "Bypassing the Combinatorial Explosion: Using Similarity to Generate and Prioritize T-Wise Test Configurations for Software Product Lines", 23rd July 2014, `http://sse.cs.ucl.ac.uk/reading_group/`.

- Software Engineering Seminar, George Mason University: Invited talk, talk title "Using Mutants to Detect and Locate Bugs" 23rd April 2012, `http://cs.gmu.edu/~smalek/seminar.html`.

- Research Seminar, University of Luxembourg, Interdisciplinary Centre for Security, Reliability and Trust (SnT): Invited talk, title "Automating the Generation of Mutation Tests", 4th October 2011, `http://158.64.76.45/universite/actualites/evenements/snt_research_seminar_automating_the_generation_of_mutation_tests2`

- CREST Open Workshop (COW), Department of Computer Science, University College London (UCL): Invited talk, title "Search Based Mutation Testing", 12th May 2011, `http://crest.cs.ucl.ac.uk/?id=3324`.

- CREST Open Workshop (COW), Department of Computer Science, University College London (UCL): Invited talk, title "Automating the Generation of Mutation Tests", 27th October 2010, `http://crest.cs.ucl.ac.uk/cow/8/`.

Guest Lectures

- Guest lecture at University of Namur. Title "Software Testing with Mutation Analysis", April 27th, 2022.

- Guest lecture at University of Namur. Title "Software Testing with Mutation Analysis", May 5th, 2021.

- Guest lecture at University of Namur. Title "Software Testing with Mutation Analysis", April 1st, 2020.

- Guest lecture at Technische Universität Darmstadt. Title "Catching bugs with mutation testing", June 11th, 2019.

Academic Service

Editorial boards:

- Software Testing, Validation and Verification (STVR) - journal - John Wiley & Sons, Ltd. (Since April 2016) (`http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1689`)

- e-Informatica Software Engineering Journal (`http://www.e-informatyka.pl/`)

Journal Distinguished Review Board:
- Empirical Software Engineering (EMSE) journal for the years 2017-2018. (`https://www.springer.com/computer/swe/journal/10664/PSE?detailsPage=societies`)

- ACM Transactions on Software Engineering and Methodology (TOSEM) journal. 2019. (`https://tosem.acm.org/distinguished-reviewers-board.cfm`)

- Distinguished Reviewer Board - Journal of Systems and Software – Elsevier. "Special Issue on Test Automation: Trends, Benefits, and Costs". 2020.

Guest Editor:
- Empirical Software Engineering journal (EMSE), International Conference on Software Maintenance and Evolution, Registered Reports (ICSME-RR 2022). ()

- Information and Software Technology journal (IST), Special issue of International Symposium on Search Based Software Engineering (SSBSE 2022). ()

- Applied Soft Computing journal - Elsevier, Special Issue on Soft Computing for Engineering of Data-driven and AI-enabled Software Systems. (`https://www.journals.elsevier.com/applied-soft-computing/call-for-papers/soft-computing-for-engineering-of-data-driven-and-ai-enabled-software-systems`)

- Software Testing, Validation and Verification (STVR), Special issue on Mutation Analysis 2020. (`https://mutation-workshop.github.io/2020_stvr_si/`)

- Information and Software Technology journal (IST), Special issue on Mutation Analysis 2015. (`https://sites.google.com/site/mutationworkshop2015/mutation-2015`)

- International Journal on Software and Systems Modeling (SoSyM), Special issue on Model-based Testing 2016. (`http://www.sosym.org/theme_issues/cfp/cfp-SoSyM-TI-MBT.pdf`)

General Chair:
- 37th IEEE International Conference on Software Maintenance and Evolution (ICSME 2021).

- The 18th Belgium-Netherlands Software Evolution Workshop (BENEVOL 2020).

Program Chair:
- 46th ACM/IEEE International Conference on Software Engineering (ICSE 2024) - Posters track Co-Chair.

- 16th IEEE International Conference on Software Testing, (ICST 2023) - Program Co-Chair (Research track).

- 14th Symposium on Search-Based Software Engineering (SSBSE 2022) - Program Co-Chair (Research track).

- 38th IEEE International Conference on Software Maintenance and Evolution (ICSME 2022) - Registered Reports track Co-Chair.

- 22nd IEEE International Working Conference on Source Code Analysis and Manipulation 2022 - Replication and Negative Results (RENE track) track Co-Chair.

- 15th IEEE International Conference on Software Testing, (ICST 2022) - Poster track Co-Chair.

- 1st Greater Region Software Engineering Research Days (SOFTER 2021) - Program Chair.

- Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2021) - Tool Demo track Co-Chair.

- ACM SIGSOFT International Symposium on Software Testing and Analysis, (ISSTA 2021) - Tool Demo track Co-Chair.

- 14th IEEE International Conference on Software Testing, (ICST 2021) - Publication Chair.

- 42nd ACM/IEEE International Conference on Software Engineering (ICSE 2020) - Journal-first Co-Chair (`https://conf.researchr.org/home/icse-2020`).

- 11th Symposium on Search-Based Software Engineering (SSBSE 2019) - Challenge track Co-Chair. (`http://ssbse19.mines-albi.fr/`).

- 11th International Conference on Software Testing, (ICST 2018) - Workshop Co-Chair. (`http://www.es.mdh.se/icst2018/`).

- 12th International Workshop on Advances in Model Based Testing (A-MOST 2016) - Co-Chair. (`https://sites.google.com/site/amostw2016/`).

- 10th International Workshop on Mutation Analysis (Mutation 2015) - Co-Chair. (`https://sites.google.com/site/mutationworkshop2015/mutation-2015`).

- 11th International Workshop on Advances in Model Based Testing (A-MOST 2015) - Co-Chair. (`http://msdl.cs.mcgill.ca/conferences/amost/`)

- 9th International Workshop on Mutation Analysis (Mutation 2014) - Co-Chair. (`https://sites.google.com/site/mutationworkshop2014/`).

Steering Committee Member:
- IEEE International Conference on Software Maintenance and Evolution (ICSME). Years 2021-2024.

- IEEE International Conference on Software Testing (ICST). Years 2019-2023.

- Symposium on Search-Based Software Engineering (SSBSE). Years 2019-2022.

- International Workshop on Mutation Analysis. Years 2017-2018.

Program Committee Member:
- 46th International Conference on Software Engineering (ICSE 2024). (`https://conf.researchr.org/home/icse-2024`).

- 45th International Conference on Software Engineering (ICSE 2023). (`https://conf.researchr.org/home/icse-2023`).

- 31st ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2023). (`https://conf.researchr.org/home/fse-2023`).

- 38th Annual ACM Symposium on Applied Computing (SAC 2023). (`http://logimics.mics.centralesupelec.fr/en/SAC-SVT-2023`).

- 2nd ACM/IEEE Conference on AI Engineering - Software Engineering for AI (CAIN 2023). (`https://conf.researchr.org/home/cain-2023`)

- 39th IEEE International Conference on Software Maintenance and Evolution (ICSME 2023). (`https://conf.researchr.org/home/icsme-2023`)

- 30th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2022). (`https://2022.esec-fse.org/`).

- 1st ACM/IEEE Conference on AI Engineering - Software Engineering for AI (CAIN 2022). (`https://conf.researchr.org/track/cain-2022/`)

- 38th IEEE International Conference on Software Maintenance and Evolution (ICSME 2022). (`https://cyprusconferences.org/icsme2022/`)

- 33rd IEEE International Symposium on Software Reliability Engineering (ISSRE 2022). (`https://2022.issre.net/`)

- 37th IEEE/ACM International Conference on Automated Software Engineering, New Ideas and Emerging Results rack (ASE-NIER 2022) (`https://conf.researchr.org/track/ase-2022/ase-2022-nier-track`)

- 34th IFIP International Conference on Testing Software and Systems (ICTSS 2022). (`http://indalog.ual.es/ICTSS2022/`)

- 37th Annual ACM Symposium on Applied Computing (SAC 2022). (`http://logimics.mics.centralesupelec.fr/en/SAC-SVT-2022/`)

- 17th International Workshop on Mutation Analysis (Mutation 2022). (`https://mutation-workshop.github.io/2022`).

- 22nd IEEE International Conference on Software Quality, Reliability and Security (QRS 2022). (`https://qrs22.techconf.org/`).

- 30th International Symposium on Software Testing and Analysis (ISSTA 2021). (`https://conf.researchr.org/track/issta-2021/issta-2021-technical-papers`).

- 14th International Conference on Software Testing, (ICST 2021). (`https://icst2021.icmc.usp.br/`).

- 43rd International Conference on Software Engineering (ICSE 2021), Posters Track. (`https://conf.researchr.org/home/icse-2021`).

- 13th Symposium on Search-Based Software Engineering (SSBSE 2021). (`https://conf.researchr.org/home/ssbse-2021`).

- 21st IEEE International Conference on Software Quality, Reliability and Security (QRS 2021). (`https://qrs21.techconf.org/`).

- 33rd IFIP International Conference on Testing Software and Systems. (ICTSS 2021). (`http://ictss2021.cs.ucl.ac.uk/`).

- 36th Annual ACM Symposium on Applied Computing (SAC 2021). (`https://sites.google.com/view/svt2021/`)

- IEEE/ACM International Conference on Program Comprehension (ICPC 2021). (`https://conf.researchr.org/committee/icpc-2021/icpc-2021-research-program-committee`).

- 16th International Workshop on Mutation Analysis (Mutation 2021). (`https://mutation-workshop.github.io/2021/`).

- 35th Brazilian Symposium on Software Engineering (SBES 2021). (`http://cbsoft2021.joinville.udesc.br/sbes.php`).

- 20th Belgium-Netherlands Software Evolution Workshop (BENEVOL 2021). (`https://benevol2021.github.io/`)

- 42nd International Conference on Software Engineering (ICSE 2020). (`https://conf.researchr.org/home/icse-2020`).

- 28th ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2020). (`https://2020.esec-fse.org/`)

- 13th International Conference on Software Testing, (ICST 2020). (`http://www.icst2020.info/`).

- 35th ACM/SIGAPP Symposium on Applied Computing (Software Verification and Testing track, SVT-SAC 2020). (`http://guedemann.org/svt2020/`)

- 15th International Workshop on Mutation Analysis (Mutation 2020). (`https://mutation-workshop.github.io/2020/`).

- IEEE/ACM International Conference on Program Comprehension (ICPC 2020). (`https://conf.researchr.org/track/icpc-2020/icpc-2020-research`).

- 12th Symposium on Search-Based Software Engineering (SSBSE 2020). (`http://ssbse2020.di.uniba.it/`).

- 20th IEEE International Conference on Software Quality, Reliability and Security (QRS 2020). (`https://qrs20.techconf.org/`).

- 36th IEEE International Conference on Software Maintenance and Evolution (ICSME 2020). (`https://icsme2020.github.io/`).

- 32nd IFIP International Conference on Testing Software and Systems (ICTSS 2020). (`http://home.ing.unisannio.it/ictss2020/`).

- 34th Brazilian Symposium on Software Engineering (SBES 2020). (`http://cbsoft2020.imd.ufrn.br/sbes-pesquisa.php`).

- 20th IEEE International Working Conference on Source Code Analysis and Manipulation, New Ideas and Emerging Results (NIER SCAM 2020). (`http://www.ieee-scam.org/2020/`).

- Student Research Competition track of the 35th IEEE/ACM International Conference on Automated Software Engineering (ASE SRC 2020). (`https://conf.researchr.org/track/ase-2020/ase-2020-student-research-competition`).

- 12th International Conference on Software Testing, (ICST 2019). (`http://icst2019.xjtu.edu.cn/`).

- 35th IEEE International Conference on Software Maintenance and Evolution (ICSME 2019). (`https://icsme2019.github.io/`).

- 34th ACM/SIGAPP Symposium on Applied Computing (Software Verification and Testing track, SVT-SAC 2019). (`https://sites.google.com/site/sacsvt2019/`)

- 11th Symposium on Search-Based Software Engineering (SSBSE 2019). (`http://ssbse19.mines-albi.fr/tracks.html`).

- 19th IEEE International Conference on Software Quality, Reliability and Security (QRS 2019). (`https://qrs19.techconf.org/`).

- IEEE/ACM International Conference on Program Comprehension (ICPC 2019). (`https://conf.researchr.org/home/icpc-2019/`).

- 31st IFIP International Conference on Testing Software and Systems (ICTSS 2019). (`http://ictss2019.centralesupelec.fr`).

- 18th Belgium-Netherlands Software Evolution Workshop (BENEVOL 2019). (`http://soft.vub.ac.be/benevol2019/`)

- 34rd IEEE/ACM International Conference on Automated Software Engineering. Student Research Competition (ASE19-SRC).
(`https://2019.ase-conferences.org/track/ase-2019-Student-Research-Competition`)

- 14th International Workshop on Mutation Analysis (Mutation 2019).
(`https://mutation-workshop.github.io/2019/`).

- 33rd Brazilian Symposium on Software Engineering (SBES 2019). (`http://cbsoft2019.ufba.br/#/sbesresearchtrack`).

- 15th International Workshop on Advances in Model Based Testing (A-MOST 2019). (`https://amost2019.github.io/`).

- 40th ACM/IEEE International Conference on Software Engineering (ICSE 2018). (`http://conf.researchr.org/home/icse-2018`).

- 11th International Conference on Software Testing, (ICST 2018). (`http://www.es.mdh.se/icst2018/`).

- ACM/SIGEVO Genetic and Evolutionary Computation Conference (GECCO 2018) - Search-Based Software Engineering Track (SSBSE). (`http://gecco-2018.sigevo.org/`).

- 18th IEEE International Conference on Software Quality, Reliability and Security (QRS 2018). (`http://paris.utdallas.edu/qrs18/`).

- 33rd ACM/SIGAPP Symposium on Applied Computing (Software Verification and Testing track, SVT-SAC 2018). (`http://sac-svt-2018.imag.fr/`).

- 30th IFIP International Conference on Testing Software and Systems (ICTSS 2018). (`https://ictss2018.uca.es/`).

- 13th International Workshop on Mutation Analysis (Mutation 2018). (`https://mutation-workshop.github.io/2018/`).

- 32nd Brazilian Symposium on Software Engineering (SBES 2018). (`http://cbsoft2018.icmc.usp.br/#/sbes`).

- 14th International Workshop on Advances in Model Based Testing (A-MOST 2018). (`https://amost2018.wordpress.com`).

- 10th International Conference on Software Testing, (ICST 2017). (`http://aster.or.jp/conference/icst2017/`).

- 17th IEEE International Conference on Software Quality, Reliability and Security (QRS 2017). (`http://paris.utdallas.edu/qrs17/`).

- 32nd ACM/SIGAPP Symposium on Applied Computing (Software Verification and Testing track, SVT-SAC 2017). (`http://antares.sip.ucm.es/svt2017/`).

- 12th International Workshop on Mutation Analysis (Mutation 2017). (`https://sites.google.com/site/mutation2017/`).

- 31st Brazilian Symposium on Software Engineering (SBES 2017). (`http://www.lia.ufc.br/~cbsoft2017/`).

- 2nd Brazilian Symposium on Systematic and Automated Software Testing (SAST 2017). (`http://www.lia.ufc.br/~cbsoft2017/ii-sast/chamada-de-trabalhos/`).

- 13th International Workshop on Advances in Model Based Testing (A-MOST 2017). (`http://a-most17.zen-tools.com/`).

- 9th International Conference on Software Testing, (ICST 2016). (`http://www.cs.uic.edu/~icst2016/`).

- 16th IEEE International Conference on Software Quality, Reliability and Security (QRS 2016). (`http://paris.utdallas.edu/qrs16/`).

- 11th International Workshop on Mutation Analysis (Mutation 2016). (`https://sites.google.com/site/mutation2016/`).

- 30th Brazilian Symposium on Software Engineering (SBES 2016). (`http://cbsoft.org/sbes2016/brazilian-software-engineering-symposium-sbes`).

- 1st Brazilian Symposium on Systematic and Automated Software Testing (SAST 2016). (`http://cbsoft.org/sast2016`).

- 5th International Workshop on Combinatorial Testing (IWCT 2016). (`http://iwct2016.unibg.it/`).

- 12th International Workshop on Advances in Model Based Testing (A-MOST 2016). (`https://sites.google.com/site/amostw2016`).

- 8th International Conference on Software Testing, testing tool track (ICST 2015) (`https://sites.google.com/site/icst2015/`).

- 10th International Workshop on Mutation Analysis (Mutation 2015). (`https://sites.google.com/site/mutationworkshop2015/mutation-2015`).

- 29th Brazilian Symposium on Software Engineering (SBES 2015). (`http://cbsoft.org/sbes2015?lang=en`).

- 4th International Workshop on Combinatorial Testing (IWCT 2015). (`http://iwct2015.unibg.it/`).

- 11th International Workshop on Advances in Model Based Testing (A-MOST 2015). (`http://msdl.cs.mcgill.ca/conferences/amost/`).

- 9th International Workshop on Mutation Analysis (Mutation 2014). (`https://sites.google.com/site/mutationworkshop2014/`).

- 28th Brazilian Symposium on Software Engineering (SBES 2014). (`http://www.ic.ufal.br/evento/cbsoft2014/sbes.html`).

- 10th International Workshop on Advances in Model Based Testing (A-MOST 2014). (`http://msdl.cs.mcgill.ca/conferences/amost/`).

- 8th International Workshop on Mutation Analysis (Mutation 2013). (`http://sites.brunel.ac.uk/mutation2013`).

- 9th International Workshop on Advances in Model Based Testing (A-MOST 2013). (`https://sites.google.com/site/amost2013/`).

Organizing Committee Member:

- 46th ACM/IEEE International Conference on Software Engineering (ICSE 2024)

- 16th IEEE International Conference on Software Testing, (ICST 2023).

- 38th IEEE International Conference on Software Maintenance and Evolution (ICSME 2022).

- 22nd IEEE International Working Conference on Source Code Analysis and Manipulation (SCAM 2022).

- 15th IEEE International Conference on Software Testing, (ICST 2022).

- Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE 2021).

- International Symposium on Software Testing and Analysis, (ISSTA 2021).

- 37th IEEE International Conference on Software Maintenance and Evolution (ICSME 2021).

- Publication Co-Chair in the 14th International Conference on Software Testing, (ICST 2021).

- Journal-first Co-Chair in the 42nd International Conference on Software Engineering (ICSE 2020).

- Challenge Track Co-Chair in the 11th Symposium on Search-Based Software Engineering, (SS-BSE 2019).

- Workshop Co-Chair in the 11th International Conference on Software Testing, (ICST 2018). (`http://www.es.mdh.se/icst2018/`).

Reviewer:

- IEEE Transactions on Software Engineering journal - IEEE. (`http://www.computer.org/web/tse`)

- IEEE Transactions on Reliability - IEEE. (`http://rs.ieee.org/transactions-on-reliability.html`)

- ACM Transactions on Software Engineering and Methodology (`http://tosem.acm.org/`)

- Empirical Software Engineering - Springer (`https://link.springer.com/journal/10664`)

- Springer Nature Journal - Springer (`https://www.springernature.com/de/advancing-discovery?sap-outbound-id=655A25E14160BA2DF1AA7B9149BFAD6875AF9D75`)

- Information and Software Technology journal - Elsevier. (`http://www.journals.elsevier.com/information-and-software-technology/`)

- Journal of Systems and Software journal - Elsevier. (`http://www.journals.elsevier.com/journal-of-systems-and-software/`)

- Science of Computer Programming journal - Elsevier. (`http://www.journals.elsevier.com/science-of-computer-programming/`)

- Applied Soft Computing journal - Elsevier. (`https://www.journals.elsevier.com/applied-soft-computing/`)

- Software Testing, Verification and Reliability journal - John Wiley & Sons, Ltd. (`http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1099-1689`)

- Journal of Software Maintenance and Evolution: Research and Practice journal - John Wiley & Sons, Ltd. (`http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)2047-7481`)

- Journal of Software: practice and experience journal - John Wiley & Sons, Ltd. (`http://onlinelibrary.wiley.com/journal/10.1002/(ISSN)1097-024X`)

- Journal of Computer Science and Technology - Oxford University Press (`http://link.springer.com/journal/11390`)

- Software Quality Journal (`http://link.springer.com/journal/11219`)

- Journal of Computer Science and Technology journal - Springer (`http://link.springer.com/journal/11390`)

- Journal of Heuristics-Springer (`https://link.springer.com/journal/10732`)

- IET Software (`http://digital-library.theiet.org/content/journals/iet-sen`)

- Journal of Software Engineering Research and Development - Springer (`https://jserd.springeropen.com/`)

- Scientific Research and Essays Journal - Academic Journals (`www.academicjournals.org/SRE`)

Teaching & Seminars

Teaching

- 2022-2023 Independent teaching. Course (University of Luxembourg) for "Software Testing" (Undergraduate - BPINFOR_FCE-13).

- 2022-2023 Independent teaching. Course (University of Luxembourg) for "Testing and Validation" (Graduate - MICS-43).

- 2022-2023 Independent teaching. Course (University of Luxembourg) for "Machine learning" (Graduate - Space master)

- 2022-2023 Independent teaching. Course (University of Luxembourg) for "Advanced topics in applied Machine Learning" (Graduate - Master of Data Science)

- 2021-2022 Independent teaching. Course (University of Luxembourg) for "Software Testing" (Undergraduate - BPINFOR_FCE-13).

- 2021-2022 Independent teaching. Course (University of Luxembourg) for "Testing and Validation" (Graduate - MICS-43).

- 2020-2021 Independent teaching. Course (University of Luxembourg) for "Software Testing" (Undergraduate - BPINFOR_FCE-13).

- 2020-2021 Independent teaching. Course (University of Luxembourg) for "Testing and Validation" (Graduate - MICS-43).

- 2019-2020 Independent teaching. Course (University of Luxembourg) for "Software Testing" (Undergraduate - BPINFOR_FCE-13).

- 2018-2019 Independent teaching. Course (University of Luxembourg) for "Software Testing" (Undergraduate - BPINFOR_FCE-13).

- 2017-2018 Independent teaching. Course (University of Luxembourg) for "Software Testing" (Undergraduate - BPINFOR_FCE-13).

- 2017-2018 Independent teaching. Course (University of Luxembourg) for "Software Testing and Validation" (Undergraduate - BPINFOR-35).

- 2017-2018 Independent teaching. Course (University of Luxembourg) for "Testing and Validation" (Graduate - MICS-43).

- 2016-2017 Independent teaching. Course (University of Luxembourg) for "Programming 3" (Undergraduate - BPINFOR-85).

- 2014-2015, 2013-2014, 2012-2013 Partial teaching (2 lectures), course (University of Luxembourg) for "Testing and Validation" (Graduate).

- 2016-2017, 2014-2015, 2013-2014, 2012-2013 Partial teaching (2 lectures), course (University of Luxembourg) for "Empirical Software Engineering" (Graduate).

- 2010-2011, 2009-2010, 2008-2009, 2007-2008, 2006-2007 Teaching assistant, (department of informatics at the Athens University of Economics and Business) for "Software Engineering" (1 undergraduate course and 1 graduate course). Assisting with the course projects and lessons.

- 2010-2011, 2009-2010, 2008-2009, 2007-2008, 2006-2007 Teaching assistant, (department of informatics at the Athens University of Economics and Business) for "Software Testing Verification and Reliability" (1 undergraduate course and 1 graduate course). Assisting with the course projects and lessons.

Seminar

- 2022-2023 Serval Reading Group in Software Engineering, Weakly Graduate seminar (University of Luxembourg).

- Academic Career Progression - 1st Greater Region Software Engineering Research Days (SOFTER 2021), November 9, 2021.

- 2021-2022 Serval Reading Group in Software Engineering, Weakly Graduate seminar (University of Luxembourg).

- 2020-2021 Serval Reading Group in Software Engineering, Weakly Graduate seminar (University of Luxembourg).

- 2019-2020 Serval Reading Group in Software Engineering, Weakly Graduate seminar (University of Luxembourg).

Publications (last updated, January 2023)

Journal Papers Published - Peer Reviewed (26)

Ahmed Khanfir, Anil Koyuncu, Mike Papadakis, Maxime Cordy, Tegawende F. Bissyande, Jacques Klein and Yves Le Traon. **"IBIR: Bug Report driven Fault Injection"**, in ACM Transactions on Software Engineering and Methodology Journal (TOSEM). To appear.

Milos Ojdanic, Ezekiel Soremekun, Renzo Degiovanni, Mike Papadakis and Yves Le Traon. **"Mutation Testing in Evolving Systems: Studying the relevance of mutants to code evolution"**, in ACM Transactions on Software Engineering and Methodology Journal (TOSEM). To appear.

Aayush Garg, Milos Ojdanic, Renzo Degiovanni, Thierry Titcheu Chekam, Mike Papadakis, Yves Le Traon. **"Cerebro: Static Subsuming Mutant Selection"**, in IEEE Transactions on Software Engineering Journal (TSE). To appear.

Renaud Rwemalika, Sarra Habchi, Mike Papadakis, Yves Le Traon, Marie-Claude Brasseur. **"Smells in System User Interactive Tests"**, in Empirical Software Engineering Journal (EMSE). To appear.

Yuejun Guo, Qiang Hu, Maxime Cordy, Mike Papadakis, Yves Le Traon. **"DRE: density-based data selection with entropy for adversarial-robust deep learning models"**, in Neural Computing and Applications (2022). To appear.

Qiang Hu, Yuejun Guo, Maxime Cordy, Xiaofei Xie, Lei Ma, Mike Papadakis, Yves Le Traon. **"An Empirical Study on Data Distribution-Aware Test Selection for Deep Learning Enhancement"**, in ACM Transactions on Software Engineering and Methodology Journal (TOSEM), vol 31(4), 2022, pp. 78:1-78:30.

Aayush Garg, Renzo Degiovanni, Matthieu Jimenez, Maxime Cordy, Mike Papadakis, Yves Le Traon. **"Learning from What We Know: How to Perform Vulnerability Prediction using Noisy Historical Data"**, in Empirical Software Engineering Journal (EMSE), vol 27(7):169, 2022.

Milos Ojdanic, Wei Ma, Thomas Laurent, Thierry Titcheu Chekam, Anthony Ventresque, Mike Papadakis. **"On the Use of Commit-Relevant Mutants"**, in Empirical Software Engineering Journal (EMSE), vol (27)(5):114, 2022.

Thierry Titcheu Chekam, Mike Papadakis, Maxime Cordy, Yves Le Traon. **"Killing Stubborn Mutants with Symbolic Execution"**, in ACM Transactions on Software Engineering and Methodology Journal (TOSEM), vol 30(2), 2021, pp. 19:1-19:23.

Wei Ma, Mike Papadakis, Anestis Tsakmalis, Maxime Cordy, Yves Le Traon. **"Test Selection for Deep Learning Systems"**, in ACM Transactions on Software Engineering and Methodology Journal (TOSEM), vol 30(2), 2021, pp. 13:1-13:22.

Maxime Cordy, Sami Lazreg, Mike Papadakis, Axel Legay. **"Statistical model checking for variability-intensive systems: applications to bug detection and minimization"**, in Formal Aspects of Computing, vol 33(6), 2021, pp. 1147-1172.

Thierry Titcheu Chekam, Mike Papadakis, Tegawende Bissyande, Yves Le Traon and Koushik Sen. **"Selecting Fault Revealing Mutants"**, in Empirical Software Engineering Journal (EMSE), vol. 25(1), 2020, pp. 434-487.

Donghwan Shin, Shin Yoo, Mike Papadakis, Doo-Hwan Bae. **"Empirical Evaluation of Mutation-based Test Case Prioritization Techniques"**, in Software Testing, Verification and Reliability Journal (STVR), vol. 29, 2019, pp. e1695.

Marinos Kintis, Mike Papadakis, Yue Jia, Nicos Malevris, Yves Le Traon, and Mark Harman, **"Detecting Trivial Mutant Equivalences via Compiler Optimisations"**, in IEEE Transactions on Software Engineering Journal (TSE), vol. 44, no. 4, 2018, pp. 308-333.

Marinos Kintis, Mike Papadakis, Andreas Papadopoulos, Evangelos Valvis, Nicos Malevris and Yves Le Traon. **"How Effective Mutation Testing Tools Are? An Empirical Analysis of Java Mutation Testing Tools with Manual Analysis and Real Faults"**, in Empirical Software Engineering Journal (EMSE), vol. 23, no. 4, 2018, pp. 2426-2463.

Xavier Devroey, Gilles Perrouin, Mike Papadakis, Axel Legay, Pierre-Yves Schobbens and Patrick Heymans. **"Model-based mutant equivalence detection using automata language equivalence and simulations"**, in Journal of Systems and Software (JSS), vol. 141, 2018, pp. 1-15.

Jabier Martinez, Tewfik Ziadi, Mike Papadakis, Tegawende F. Bissyande, Jacques Klein, Yves le Traon, **"Benchmark for feature location techniques using Eclipse variants"**, in Information & software Technology Journal (IST), vol. 104, 2018, pp. 46-59.

Li Li, Tegawende F. Bissyande, Mike Papadakis, Siegfried Rasthofer, Alexandre Bartel, Damien Octeau, Jacques Klein, and Yves Le Traon, **"Static Analysis of Android Apps: A Systematic Literature Review"**, in Information & Software Technology journal (IST), vol. 88, 2017 pp. 67-95.

Marinos Kintis, Mike Papadakis, and Nicos Malevris, **"Employing Second Order Mutation for Isolating First Order Equivalent Mutants"**, in Software Testing, Verification and Reliability Journal (STVR), vol. 25, no. 5-7, 2015, pp. 508-535.

Mike Papadakis and Yves Le Traon, **"Metallaxis-FL: Mutation-based Fault Localization"**, in Software Testing, Verification and Reliability Journal (STVR), vol. 25, no. 5-7, 2015, pp. 605-628.

Antonia Bertolino, Said Daoudagh, Donia El Kateb, Christopher Henard, Yves Le Traon, Francesca Lonetti, Eda Marchetti, Tejeddine Mouelhi, and Mike Papadakis, **"Similarity Testing for Access-Control"**, in Information & Software Technology journal (IST), vol. 58, 2015, pp. 355–372.

Christopher Henard, Mike Papadakis, Gilles Perrouin, Jacques Klein, Patrick Heymans and Yves Le Traon, **"Bypassing the Combinatorial Explosion: Using Similarity to Generate and Prioritize T-wise Test Configurations for Software Product Lines"**, in IEEE Transactions on Software Engineering Journal (TSE), vol. 40, no. 7, 2014, pp. 650-670.

Mike Papadakis, Marcio Delamaro and Yves Le Traon, **"Mitigating the Effects of Equivalent Mutants with Mutant Classification Strategies"**, in Science of Computer Programming Journal (SCP), vol. 95, 2014, pp. 298-319.

Mike Papadakis and Nicos Malevris. **"Searching and generating test inputs for mutation testing"**, SpringerPlus Journal, vol. 2, 2013, pp. 121.

Mike Papadakis and Nicos Malevris, **"Mutation based test case generation via a path selection strategy"**, Information & Software Technology journal (IST), vol. 54, no. 9, 2012, pp. 915-932.

Mike Papadakis and Nicos Malevris. **"Automatically Performing Weak Mutation with the Aid of: Symbolic Execution, Concolic and Search Based Testing"**, in Software Quality Journal (SQJ), vol. 19, no. 4, 2011, pp. 691-723.

Invited Book Chapters (1)

Mike Papadakis, Marinos Kintis, Jie Zhang, Yue Jia, Yves Le Traon and Mark Harman, **"Mutation Testing Advances: An Analysis and Survey"**, in Advances in Computers, Elsevier, Vol. 112, pp. 275-378, doi https://doi.org/10.1016/bs.adcom.2018.03.015, 2019.

International Conferences & Workshops - Peer Reviewed (81)

Ezekiel Soremekun, Lukas Kirschner, Marcel Böhme, Mike Papadakis. **"Evaluating the Impact of Experimental Assumptions in Automated Fault Localization"**, in the 45th International Conference on

Software Engineering (ICSE), 2023.

Qiang Hu, Yuejun Guo, Xiaofei Xie, Maxime Cordy, Lei Ma, Mike Papadakis, Yves Le Traon. **"Aries: Efficient Testing of Deep Neural Networks via Labeling-Free Accuracy Estimation"**, in the 45th International Conference on Software Engineering (ICSE), 2023.

Zeming Dong, Qiang Hu, Yuejun Guo, Maxime Cordy, Mike Papadakis, Zhenya Zhang, Yves Le Traon, Jianjun Zhao. **"MixCode: Enhancing Code Classification by Mixup-Based Data Augmentation"**, in the 30th IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER), 2023.

Luiz Carvalho, Renzo Degiovanni, Matías Brizzio, Maxime Cordy, Nazareno Aguirre, Yves Le Traon, Mike Papadakis. **"ACoRe: Automated Goal-Conflict Resolution"**, in 26th International Conference on Fundamental Approaches to Software Engineering (FASE), 2023.

Salah Ghamizi, Maxime Cordy, Mike Papadakis and Yves Le Traon. **"On Evaluating Adversarial Robustness of Chest X-ray Classification: Pitfalls & Best Practices"**, in the AAAI's Workshop on Artificial Intelligence Safety, 2023.

Zeyu Sun, Jie Zhang, Yingfei Xiong, Mark Harman, Mike Papadakis, Lu Zhang. **"Improving Machine Translation Systems via Isotopic Replacement"**, in the 44th International Conference on Software Engineering (ICSE), 2022.

Maxime Cordy, Renaud Rwemalika, Adriano Franci, Mike Papadakis, Mark Harman. **"FlakiMe: Laboratory-Controlled Test Flakiness Impact Assessment"**, in the 44th International Conference on Software Engineering (ICSE), 2022.

Salah Ghamizi, Maxime Cordy, Mike Papadakis, Yves Le Traon. **"Adversarial Robustness in Multi-Task Learning: Promises and Illusions"**, in the 36th AAAI Conference on Artificial Intelligence (AAAI) 2022.

Martin Gubri, Maxime Cordy, Mike Papadakis, Yves Le Traon, Koushik Sen. **"Boosting Adversarial Example Transferability from Geometric Vicinity"**, in the European Conference on Computer Vision (ECCV) 2022.

Martin Gubri, Maxime Cordy, Mike Papadakis, Yves Le Traon, Koushik Sen. **"Efficient and Transferable Adversarial Examples from Bayesian Neural Networks"**, in the 38th Conference on Uncertainty in Artificial Intelligence (UAI) 2022.

Sarra Habchi, Guillaume Haben, Jeongju Sohn, Adriano Franci, Mike Papadakis, Maxime Cordy and Yves Le Traon. **"What Made This Test Flake? Pinpointing Classes Responsible for Test Flakiness"**, in 38th IEEE International Conference on Software Maintenance and Evolution (ICSME), 2022.

Sarra Habchi, Guillaume Haben, Mike Papadakis, Maxime Cordy, Yves Le Traon. **"A Qualitative Study on the Sources, Impacts, and Mitigation Strategies of Flaky Tests"**, in the 15th IEEE International Conference on Software Testing, Verification and Validation (ICST) 2022.

Jeongju Sohn and Mike Papadakis. **"CEMENT: On the use of Evolutionary Coupling between tests and code units. A case study on fault localization"**, in the 33rd IEEE International Symposium on Software Reliability Engineering (ISSRE) 2022.

Ahmed Khanfir, Matthieu Jimenez, Mike Papadakis, Yves Le Traon. **"CodeBERT-nt: code naturalness via CodeBERT"**, in the 22nd IEEE International Conference on Software Quality, Reliability, and Security (QRS), 2022.

Benjamin Petit, Ahmed Khanfir, Ezekiel Soremekun, Gilles Perrouin and Mike Papadakis. **'IntJect: Vulnerability Intent Bug Seeding"**, in the 22nd IEEE International Conference on Software Quality, Reliability, and Security (QRS), 2022.

Renzo Degiovanni and Mike Papadakis. **"μBERT: Mutation Testing using Pre-Trained Language Models"**, in the 17th International Workshop on Mutation Analysis (MUTATION) 2022.

Wei Ma, Mengjie Zhao, Ezekiel Soremekun, Qiang Hu, Jie Zhang, Mike Papadakis, Maxime Cordy, Xiaofei Xie, Yves Le Traon. **"GraphCode2Vec: Generic Code Embedding via Lexical and Program Dependence Analyses"**, in the 19th International Conference on Mining Software Repositories (MSR), 2022.

Yu Pei, Sarra Habchi, Renaud Rwemalika, Jeongju Sohn, Mike Papadakis. **"An empirical study of async wait flakiness in front-end testing"**, in the Belgium-Netherlands Software Evolution Workshop (BENEVOL) 2022.

Franci Adriano, Maxime Cordy, Martin Gubri, Mike Papadakis, Yves Le Traon. **"Influence-Driven Data Poisoning in Graph-Based Semi-Supervised Classifiers"**, in the 1st International Conference on AI Engineering – Software Engineering for AI (CAIN) 2022.

Wei Ma, Thierry Titcheu Chekam, Mike Papadakis, Mark Harman. **"MuDelta: Delta-Oriented Mutation Testing at Commit Time"**, in the 43rd International Conference on Software Engineering (ICSE), 2021, pp. 897-909.

Guillaume Haben, Sarra Habchi, Mike Papadakis, Maxime Cordy, Le Traon Yves. **"A Replication Study on the Usability of Code Vocabulary in Predicting Flaky Tests"**, in the 18th International Conference on Mining Software Repositories (MSR), 2021, pp. 219-229.

Qiang Hu, Yuejun Guo, Maxime Cordy, Xiaofei Xie, Wei Ma, Mike Papadakis, Yves Le Traon. **"Towards Exploring the Limitations of Active Learning: An Empirical Study"**, in the 36th IEEE/ACM International Conference on Automated Software Engineering (ASE), 2021, pp. 917-929.

Salah Ghamizi, Maxime Cordy, Mike Papadakis, Yves Le Traon. **"Evasion Attack STeganography: Turning Vulnerability Of Machine Learning ToAdversarial Attacks Into A Real-world Application"**, 2nd Workshop on Adversarial Robustness In the Real World, ICCV Workshop, 2021.

William Bonnaventure, Ahmed Khanfir, Alexandre Bartel, Mike Papadakis, Yves Le traon. **"Confuzzion: A Java Virtual Machine Fuzzer for Type Confusion Vulnerabilities"**, 21st IEEE International Conference on Software Quality, Reliability, and Security (QRS), 2021, pp. *(Best Paper Award)*.

Wei Ma, Thomas Laurent, Milos Ojdanic, Thierry Titcheu Chekam, Anthony Ventresque, Mike Papadakis. **"Commit-Aware Mutation Testing"**, in 36th IEEE International Conference on Software Maintenance and Evolution (ICSME), 2020, pp. 394-405. *(Distinguished Paper Award)*.

Salah Ghamizi, Maxime Cordy, Martin Gubri, Mike Papadakis, Andrey Boystov, Yves Le Traon, Anne Goujon. **"Search-Based Adversarial Testing and Improvement of Constrained Credit Scoring Systems"**, in the Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2020, pp. 1089-1100.

Zeyu Sun, Jie M. Zhang, Mark Harman, Mike Papadakis, Lu Zhang, **"Automatic Testing and Improvement of Machine Translation"**, in the 42nd International Conference on Software Engineering (ICSE), 2020, pp. 974-985.

Salah Ghamizi, Renaud Rwemalika, Maxime Cordy, Lisa Veiber, Tegawendé F. Bissyandé, Mike Papadakis, Jacques Klein and Yves Le Traon. **"Data-driven Simulation and Optimization for Covid-19 Exit-Strategies"**, 26th SIGKDD conference on Knowledge Discovery and Data Mining, (KDD), AI for COVID, 2020, pp. 3434-3442. *(Best Paper Award)*.

Maxime Cordy, Mike Papadakis and Axel Legay, **"Statistical Model Checking for Variability-Intensive Systems"**, in the 23rd International Conference on Fundamental Approaches to Software Engineering (FASE), 2020, pp. 294-314.

Thierry Titcheu Chekam, Mike Papadakis and Yves Le Traon, **"Muteria: An Extensible and Flexible Multi-Criteria Software Testing Framework"**, in the 1st IEEE/ACM International Conference on Automation of Software Test (AST), 2020, pp. 97-100.

Matthieu Jimenez, Renaud Rwemalika, Mike Papadakis, Federica Sarro, Yves Le Traon and Mark Harman, **"The importance of accounting for real-world labelling when predicting software vulnerabilities"**, in the Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE), 2019, pp. 695-705. *(Distinguished Paper Award)*

Renaud Rwemalika, Marinos Kintis, Mike Papadakis, Yves Le Traon and Pierre Lorrach. **"An industrial study on the differences between pre-release and post-release bugs"**, in 35th IEEE International Conference on Software Maintenance and Evolution (ICSME), 2019, pp. 92-102.

Claire Leong, Abhayendra Singh, Mike Papadakis, Yves Le Traon and John Micco. **"Assessing Transition-based Test Selection Algorithms at Google"**, in the 41st International Conference on Software Engineering (ICSE) – SEIP track, 2019, pp. 101-110.

Salah Ghamizi, Maxime Cordy, Mike Papadakis and Yves Le Traon. **"Automated search for configurations of convolutional neural network architectures"**, in 23rd ACM International Conference on Software Product Lines (SPLC), 2019, pp. 21:1-21:12.

Xavier Schmitt, Sylvain Kubler, Jeremy Robert, Mike Papadakis, Yves Le Traon. **"A Replicable Comparison Study of NER Software: StanfordNLP, NLTK, OpenNLP, SpaCy, Gate"**, in Sixth International Conference on Social Networks Analysis, Management and Security (SNAMS), 2019, pp. 338-343.

Rohan Padhye, Caroline Lemieux, Koushik Sen, Mike Papadakis and Yves Le Traon. **"Semantic Fuzzing with Zest"**, in the International Symposium on Software Testing and Analysis (ISSTA), 2019, pp. 329-340. *(Distinguished Artefact Award)*.

Maxime Cordy, Steve Muller, Mike Papadakis and Yves Le Traon. **"Search-based Test and Improvement of Machine-Learning-Based Anomaly Detection Systems"**, in the International Symposium on Software Testing and Analysis (ISSTA), 2019, pp. 158-168. *(Distinguished Artefact Award)*.

Renaud Rwemalika, Marinos Kintis, Mike Papadakis, Yves Le Traon and Pierre Lorrach. **"On the Evolution of Keyword-Driven Test Suites"**, in the 12th International Conference on Software Testing (ICST), 2019, pp. 335-345.

Mike Papadakis, Donghwan Shin, Shin Yoo and Doo-Hwan Bae, **"Are Mutation Scores Correlated with Real Fault Detection? A Large Scale Empirical study on the Relationship Between Mutants and Real Faults"**, in the 40th International Conference on Software Engineering (ICSE), 2018, pp. 537-548.

Michael Marcozzi, Sebastien Bardin, Nikolai Kosmatov, Mike Papadakis, Virgile Prevosto and Loïc Correnson, **"Time to Clean your Test Objectives"**, in the 40th International Conference on Software Engineering (ICSE), 2018, pp. 456-467.

Mike Papadakis, Titcheu Chekam Thierry and Yves Le Traon, **"Mutant Quality Indicators"**, in the 13th International Workshop on Mutation Analysis (MUTATION), ICST Workshops 2018, pp. 32-39.

Matthieu Jimenez, Maxime Cordy, Yves Le Traon and Mike Papadakis. **"On the Impact of Tokenizer and Parameters on N-Gram Based Code Analysis"**, in the International Conference on Software Maintenance and Evolution (ICSME), 2018, pp. 437-448.

Matthieu Jimenez, Titcheu Chekam Thierry, Marinos Kintis, Maxime Cordy, Mike Papadakis, Yves Le Traon and Mark Harman. **"Are mutants really natural? A study on how 'naturalness' helps mutant selection"**, in the International Symposium on Empirical Software Engineering and Measurement (ESEM) 2018, pp. 3:1-3:10.

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Artifacts & Demos - Peer Reviewed (9)

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Thierry Titcheu Chekam, Mike Papadakis, and Yves Le Traon. **"Mart: A Mutant Generation Tool for LLVM"**, in the Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (FSE)-Demo, 2019, pp. 1080-1084.

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Other (Posters, New Ideas, etc.) - Peer Reviewed (8)

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Christopher Henard, Mike Papadakis, Gilles Perrouin, Jacques Klein and Yves Le Traon. **"Towards Automated Testing and Fixing of Re-engineered Feature Models"**, in 35th International Conference on Software Engineering (ICSE), New Ideas and Emerging Results track, 2013, pp. 1245-1248.

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Rahul Gopinath, Jie M. Zhang, Marinos Kintis, Mike Papadakis. **"Mutation analysis and its industrial applications"**, Softw. Test. Verification Reliab. 32(7) (2022).

Mike Papadakis, Shaukat Ali, Gilles Perrouin. **"Editorial to the theme section on model-based testing"**, Softw. Syst. Model. (SOSYM), vol 18(2), 2019, pp. 795-796.

Mike Papadakis, René Just. **"Special issue on Mutation Testing"**, Inf. Softw. Technol. (IST), vol 81, 2017, pp. 1-2.

Open Source Tools

GraphCode2Vec Generic Code Embedding via Lexical and Program Dependence Analyses: A tool that forms generic and precise code embeddings. `https://github.com/graphcode2vec/graphcode2vec`

FlakiMe: A tool simulating test flakiness; it injects test flakiness in JUnit test suites. `https://github.com/serval-uni-lu/flakime`

μBERT: A mutation testing tool that uses CodeBERT, a pre-trained language model, to generate mutants. `https://github.com/rdegiovanni/mBERT`

COVID-19 Adaptive Exit Strategies simulator: A tool that simulates the impact of different confinement measures on the spread of COVID-19 virus. `https://serval-snt.github.io/covid19/`

Mart: A mutation testing tool for LLVM. `https://github.com/thierry-tct/mart`

KLEE-SEMu: A mutation-driven test generation tool. It uses dynamic symbolic execution to analyse mutants and generates related test cases. `https://github.com/thierry-tct/KLEE-SEMu`

FeatureNET: A diversity-driven tool that generates deep learning model architectures. `https://github.com/yamizi/FeatureNet`

Ukwikora: A tool that continuous monitoring the robot framework test suites. `https://github.com/kabinja/ukwikora-inspector`

VulData7: An automated framework for collecting Security Vulnerabilities from software archives. VulData7 is automated, flexible and easily extensible. `https://github.com/electricalwind/data7`

Mutation Testing Repository: Is a comprehensive collection and analysis of Mutation Testing literature. The repository includes and categorizes more than 800 scientific papers and 100 tool papers. `https://mutationtesting.uni.lu/`

PiTest++: A Practical Mutation Testing Tool for Java (updated version that supports research operators). `https://github.com/LaurentTho3/ExtendedPitest/` (integrated on the main branch of PiTest project)

EFLBench: Eclipse Feature Location Benchmark for Software Families. `https://github.com/but4reuse/but4reuse/wiki/Benchmarks`

MutaLog: Tool for Mutating Logic Formulas. `https://research.henard.net/SPL/MutaLog/`

PLEDGE: A product line editor and test generation tool. `https://research.henard.net/SPL/PLEDGE/`