Software & Societal Systems Department (S3D) School of Computer Science Carnegie Mellon University

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Bogdan Vasilescu

Curriculum Vitae February 12, 2023

Research Profile

Associate Professor in the Software and Societal Systems Department part of the School of Computer Science at Carnegie Mellon University, and director of the STRUDEL (Socio-Technical Research Using Data Excavation Lab) research group. Interested in *improving the sustainability of open-source software*. Carrying out fundamental empirical research to increase our understanding of today's open-source development, such that we can design, based on strong empirical evidence and theory, the online collaboration environments, online communities, quality assurance tools, and project and community management practices for sustainable open-source development of tomorrow.

Academic Positions

Since Jul 2022	Associate Professor. Carnegie Mellon University
Oct 2016–Jun 2022	Assistant Professor. Carnegie Mellon University
Nov 2014–Sep 2016	Postdoctoral Researcher . DECAL Lab w/ Prof. Vladimir Filkov and Prof. Prem Devanbu University of California, Davis
Oct 2011–Oct 2014	PhD Candidate. w/ Prof. Alexander Serebrenik and Prof. Mark van den Brand Eindhoven University of Technology, The Netherlands
	Education

- 2011–2014 PhD in Computer Science (cum laude).
 Thesis: "Social Aspects of Collaboration in Online Software Communities" Advisors: Prof. Alexander Serebrenik and Prof. Mark van den Brand Eindhoven University of Technology, The Netherlands
- 2009–2011 **MSc in Computer Science and Engineering** (*cum laude; honors program*). Thesis: "Analysis of Advanced Aggregation Techniques for Software Metrics" Advisor: Prof. Alexander Serebrenik Eindhoven University of Technology, The Netherlands
- 2004–2009 **Dipl. Ing. in Systems and Computer Science** (*valedictorian*). Petroleum-Gas University of Ploiesti, Romania

Honors

- 2022 **Distinguished Paper Award**, for "Augmenting decompiler output with learned variable names and types", at the USENIX Security Conference.
- 2022 ACM SIGSOFT Distinguished Paper Award, for "'This is damn slick!' Estimating the impact of tweets on open source project popularity and new contributors", at the International Conference on Software Engineering (ICSE).
- 2022 ACM SIGSOFT Distinguished Paper Award, for "Did you miss my comment or what?' Understanding toxicity in open source discussions", at the International Conference on Software Engineering (ICSE).
- 2021 **Ric Holt Early Career Achievement Award**, from the International Conference on Mining Software Repositories (MSR).
- 2021 **Distinguished Reviewer Award**, at the ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (ESEC/FSE).
- 2019 ACM SIGSOFT Distinguished Paper Award, for "Going farther together: The impact of social capital on sustained participation in open source", at the International Conference on Software Engineering (ICSE).
- 2018 **Distinguished Reviewer Award**, at the International Conference on Automated Software Engineering (ASE).
- 2015 **Best PhD Dissertation**, from the Institute for Programming Research and Algorithmics, The Netherlands.
- 2014 Cum laude, PhD thesis, from Eindhoven University of Technology, The Netherlands.
- 2011 *Cum laude*, MSc thesis, from Eindhoven University of Technology, The Netherlands.

Online Media Coverage (selected)

- Jun 2022–Jan 2023 Blog posts and articles on "'Did You Miss My Comment or What?' Understanding Toxicity in Open Source Discussions", including blog posts by Wikimedia Foundation Engineering Manager Tyler Cipriani [link] and blogger Ben Tasker [link], Hacker News coverage [link], and pieces in The Register by Thomas Claburn [link], TechXplore by Aaron Aupperlee [link], FOSSlife [link], and News8plus.com [link].
 - Sep 2022 Sustain Podcast, STRUDEL PhD students Courtney Miller and Hongbo Fang interviewed on Episode 140: "Toxicity and Information Flow in Open Source Communities" [link].
 - Apr-Aug 2022 Social media coverage of "Augmenting Decompiler Output with Learned Variable Names and Types", by prominent security (e.g., Thomas Ptacek, 31K+ followers [link]) and programming languages practitioners (e.g., Patrick Walton, 17K+ followers [link]), as well as Hacker News [link] and Reddit [link].

- Dec 2021 Compiler Podcast, Interviewed on episode 10: "What's The Recipe For Burnout?" [link].
- Jun 2020 Sustain Podcast, Interviewed on episode 40: "How Open Source Maintainers Don't Get Rich" [link].
- Apr 2020 Social media coverage by Linux Foundation CTO Chris Aniszczyk (18K+ followers), of "How to Not Get Rich: An Empirical Study of Donations in Open Source" [link].
- Mar 2019 Chuniversiteit.nl piece by blogger Chun Fei Lung, on "I'm leaving you, Travis: A continuous integration breakup story" [link].
- Aug 2018 Node.js project maintainers use our research to inform decisions on badging, e.g., [link] [link].

Invited Talks

- Jan 2023 Advanced Data Analysis Techniques. At the Bellairs Symposium on Empirical Software Engineering, Barbados.
- Jan 2023 On the Naturalness of Decompiled Code. At Currents in Modern Software Engineering, in Honor of Prem Devanbu, Davis, CA.
- Aug 2021 **Panel: How to Write a Great FSE Review**. At the Foundations of Software Engineering conference. Online.
- Aug 2021 Evidence-Based Best Practices for Sustaining Open-Source Communities. At the Technology Ventures Office seminar series at MIT Lincoln Laboratory. Online.
- Jul 2021 Mining Social Coding Networks. At the NetOpen21 satellite to the Network 2021 conference. Online.
- Oct 2020 What Can Analyzing Tens of Terabytes of Public Trace Data Tell Us About Open Source Sustainability, Keynote. At VEM Workshop. 11th Brazilian Conference on Software: Theory and Practice (CBSoft). Online.

Sep 2020What Can Analyzing Tens of Terabytes of Public Trace Data Tell Us About[Video Link]Open Source Sustainability.

At State of the Source Summit. Online.

- Jun 2020 How Open Source Maintainers Don't Get Rich.
- [Audio Link] Guest on the Sustain Podcast. Online.
 - Jun 2020 Sustaining Open Source Digital Infrastructure. At the University of Vermont-Google Open-Source Ecosystems and Networks (OCEAN) working group. Online.

Nov 2019 **DevOps Bots on GitHub**. At the "BOTse: Bots in Software Engineering" Dagstuhl Seminar. Germany.

Jun 2019	Sustaining	open source	digital	infrastructure,	Kevnote.

[Video Link] At Scala Days. Lausanne, Switzerland.

USA.

- Jun 2019 Leveraging Signals to Build More Sustainable Open Source Communities, Keynote.
 At Software Developer Diversity and Inclusion (SDDI) Workshop. Google, San Francisco, CA,
- May 2019 **Data Science for Software Engineering**, *Tutorial*. At 2019 Midwest Big Data Summer School. Iowa State University, Ames, IA, USA.
- Mar 2019 Sustaining open source digital infrastructure. At University of Zurich. Switzerland.
- Aug 2018 CI / CD Pipeline Tools and Their Signals. At Continuous Deployment Workshop during the Microsoft Faculty Summit. Seattle, USA.
- Feb 2018 Signals in Social Coding Environments: What Do They Mean and How Much Can You Trust Them?, Keynote.At Dutch national software engineering symposium (SEN). Amsterdam, The Netherlands.
- Jan 2018 Collaborative and Human Aspects of Software Engineering, Tutorial. At IPA Course on Software Engineering and Technology. Eindhoven, The Netherlands.
- Jun 2017 **Research Overview**. At the NII Shonan Meeting "Towards Engineering Free/Libre Open Source Software (FLOSS) Ecosystems for Impact and Sustainability," Japan.
- May 2017 **Diversity in Open Source Software Teams: Aid or Barrier?**. At Gendered Creative Teams Workshop 2017 at CEU Budapest, Hungary.
- Nov 2016 Lessons in Social Coding: Software Analytics in the Age of GitHub. At Social Software Engineering Workshop at FSE 2016.
- Jan-Apr 2016 Lessons in Social Coding: Software Analytics in the Age of GitHub. At: Carnegie Mellon University; University of Southern California; McGill University; University of Waterloo; University of California, Davis; University of Nebraska, Lincoln; Rochester Institute of Technology; Concordia University.
 - Nov 2015 **Deciphering secrets of social coding**, *Keynote*. At IPA (Institute for Programming research and Algorithmics) Fall Days. Herten-Roermond, The Netherlands.
 - Oct 2015 Quality and productivity outcomes relating to continuous integration in GitHub. At Eindhoven University of Technology. Eindhoven, The Netherlands.

Jun 2015 Of teams and automation: Lessons in social coding from GitHub.

[Video Link] At Microsoft Research. Redmond, WA, USA.

Sponsored Projects

- 2022 PI, Understanding Open Source Contributor Dynamics at Ecosystem Scale, Google Gift (\$225,000 CMU).
- 2022 PI, Understanding the Relationship Between Team Diversity and Innovation in Open Source, Google Award for Inclusion Research (\$60,000 CMU).
- 2021 Co-PI, HCC: Medium: Designing Human-Centered Environments for Enhancing Diversity in Open Source, National Science Foundation, Joint with Laura Dabbish and Jim Herbsleb (\$800,000 CMU).
- 2021 Co-PI, Collaborative Research: CCRI: New: World Of Code (WoC): The Development of Curated Code Resource to Support Research in Software Engineering, National Science Foundation, Joint with Jim Herbsleb (CMU), Jian Huang (UTK), Audris Mockus (UTK) (\$208,000 CMU; \$750,000 total).
- 2020 **Co-PI, Enhancing Diversity and Inclusion in Digital Infrastructure Projects**, *Alfred P. Sloan Foundation*, Joint with Laura Dabbish and Jim Herbsleb (\$450,000 CMU).
- 2020 Co-PI, SHF:Small: Personalizing API Documentation, National Science Foundation, Joint with Brad Myers (\$500,000 CMU).
- 2020 PI, Understanding (Un)Healthy Interactions in Open-Source, Google Faculty Research Award, Joint with Christian Kästner (\$80,000 CMU).
- 2019 Co-PI, CHS: Medium: Collaborative Research: SDI-CPR: Sustaining Digital Infrastructure as a Common Pool Resource, National Science Foundation, Joint with Jim Herbsleb (CMU) and Audris Mockus (UTK) (\$799,218 CMU; \$1,200,000 total).
- 2019 Co-PI, Improving the Usability of Google's APIs and Tools, *Google Faculty Research Award*, Joint with Brad Myers (\$81,000 CMU).
- 2019 **Co-PI, Enhancing Diversity and Inclusion in Digital Infrastructure Projects**, *Alfred P. Sloan Foundation*, Joint with Laura Dabbish and Jim Herbsleb (\$250,000 CMU).
- 2018 Co-PI, SHF:Small:Open-domain, Data-driven Code Synthesis from Natural Language, National Science Foundation, Joint with Graham Neubig (\$500,000 CMU).
- 2018–present **PI, Advancing Assistance Capabilities for Program Analysts**, Software Engineering Institute, LINE projects, (\$200,000/year CMU).
 - 2017 PI, SHF:Small:Collaborative Research:Discerning and Recommending Context-Specific Best Practices in DevOps-Oriented Software Development, National Science Foundation, Joint with Vladimir Filkov (UCD) (\$310,000 CMU; \$500,000 total).

2016 Co-PI, CI-New: BugSwarm: A Large-Scale Repository of Replicable Defects, Tests, and Patches to Support the Software Engineering Research Community, National Science Foundation, Joint with Cindy Rubio-Gonzalez (UCD) and Prem Devanbu (UCD) (\$1,048,655 total).

Teaching

- Spring 2023 17-214 Principles of Software Construction: Objects, Design, and Concurrency. https://cmu-17-214.github.io/s2023/
 - Fall 2022 17-803 Empirical Methods. http://bvasiles.github.io/empirical-methods/
- Spring 2022 17-214 Principles of Software Construction: Objects, Design, and Concurrency. https://cmu-17-214.github.io/s2022/
 - Fall 2021 07-300 Research and Innovation in Computer Science.
- Spring 2021 17-803 Empirical Methods. https://bvasiles.github.io/empirical-methods/spring-2021/
- Spring 2021 07-400 Research Practicum in Computer Science.
 - Fall 2020 07-300 Research and Innovation in Computer Science.
- Spring 2020 07-400 Research Practicum in Computer Science.
 - Fall 2019 07-300 Research and Innovation in Computer Science.
- Spring 2019 17-214 Principles of Software Construction: Objects, Design, and Concurrency. https://www.cs.cmu.edu/mhilton/classes/17-214/s19/
 - Fall 2018 17-803 Empirical Methods. https://bvasiles.github.io/empirical-methods/fall-2018/
- Spring 2018 17-214 Principles of Software Construction: Objects, Design, and Concurrency. https://www.cs.cmu.edu/ charlie/courses/17-214/2018-spring/
 - Fall 2017 17-803 Empirical Methods.
- Spring 2018 17-214 Principles of Software Construction: Objects, Design, and Concurrency. https://www.cs.cmu.edu/ ckaestne/15214/s2017/
- Every Fall 2016–2022 **17-808 Software Engineering PhD immigration course**, Modules on human aspects of Software Engineering.

Mentoring

Graduate Students Formally Advised or Co-Advised at CMU

- 2021–present **Courtney Miller**, *PhD Software Engineering*. Open source sustainability
- 2020–present Luke Dramko, PhD Software Engineering. Improving decompilers
 - 2020–2022 **Qibin Chen**, Master of Language Technologies, currently Machine Learning Engineer @Apple. NLP for decompilers
 - 2019–2020 Zecong Hu, Master of Language Technologies, currently Algorithm Engineer @Hudson River Trading.
 NLP for decompilers
 - 2019–2020 Hemank Lamba, PhD Societal Computing, currently Research Scientist @Dataminr. Thesis: "Modeling User Behavior on Socio-Technical Systems: Patterns and Anomalies"
- 2019–present **Hongbo Fang**, *PhD Societal Computing*. Sustainability of open source ecosystems
 - 2019 Michelle Cao, MS Computer Science. Currently Software Engineer @Google. Open-source project abandonment
- 2018–present **Daye Nam**, *PhD Software Engineering*. API usability
 - 2017–2022 **Sophie Qiu**, *PhD Societal Computing, currently postdoc @Northwestern University*. Thesis: "Understanding and Designing Mechanisms for Attracting and Retaining Open-Source Software Contributors"
 - 2017–2021 Marat Valiev, PhD Societal Computing, currently Senior Software Engineer @Google. Thesis: "External Factors in Sustainability of Open Source Software"
- 2017–present Jeremy Lacomis, PhD Software Engineering. Improving decompilers
 - 2017–2019 **David Widder**, *PhD Software Engineering*. DevOps best practices

Undergraduate Students Formally Advised or Co-Advised at CMU

- Summer 2022 Anna Lieb, *REU*, Open source community health dashboard.
- Summer 2022 Jennifer Chou, REU, Open source community health dashboard.
- Summer 2022 Bianca Caproni, REU, Innovation in open source.
- Summer 2022 Caroline Gihlstorf, REU, Language models for code.

- Summer 2022 Emily Nguyen, REU, Open source sustainability.
- Summer 2022 Kavan Mehrizi, REU, Open source sustainability.
- Summer 2021 Megan Carneal, REU, Open source community health dashboard.
- Summer 2021 Zihe Zhao, REU, Open source census.
- Summer 2021 Theresa Lim, REU, Understanding corporate sponsorship in open source.
- Summer 2021 Philip Gray, REU, Analysis of open source disengagement grey literature.
- Summer 2021 Kimberly Truong, REU, Analysis of open source disengagement grey literature.
- Summer 2020 **Sophie Cohen**, *REU*, currently Application Developer @Cigna, Understanding sources of toxic language in open source.
- Summer 2020 Hannah Hartnett, *REU*, currently Product Manager @IDEXX, The impact of COVID-19 on open source activity.
- Spring 2020 Shruti Chidambaram, *REU*, currently Software Engineer @Microsoft, Understanding sources of toxic language in open source.
- Summer 2019 Cassandra Overney, *REU*, currently master's student @MIT Media Lab, Funding models for open source.
- Summer 2019 Naveen Raman, *REU*, currently *MPhil* @University of Cambridge, Understanding healthy and unhealthy interactions in open source.
 - 2019 Adithya Raghuraman, undergraduate independent study, currently AI Engineer @Boston Consulting Group, UML modeling in open-source.
 - 2018–2019 Lily Li, undergraduate independent study, currently PhD @New York University, Signaling in open-source.
- Summer 2018 Courtney Miller, REU, currently PhD @CMU, Open-source disengagement risk factors.
- Summer 2018 Sophia Rosas-Smith, REU, Developer turnover in open-source teams.
- Summer 2017 Asher Trockman, REU, currently PhD @CMU, Signaling in open source.
 - 2017–2018 Alan Jaffe, undergraduate independent study, currently Software Engineer @Jump Trading LLC, Statistical machine translation.
 - 2017 **Raunak Agnihotri**, undergraduate independent study, currently Software Engineer @Meta, Mining source code comments.
- Summer 2017 Anita Brown, REU, currently @UC Berkeley Library, Social capital in open-source teams.
- Summer 2017 Jacob Hoffman, REU, Bugs and fixes in open source.

Other Students Where I Had Significant Involvement (excerpt)

- 2017–2020 Shurui Zhou, PhD Software Engineering @CMU, currently Assistant Professor @University of Toronto. Forking in open source
- 2019–2021 Frank Xu, PhD Language and Information Technology @CMU. Code generation using natural language
 - 2016 Yangyang Zhao, UC Davis visitor, currently @Zhejiang Sci-Tech University. Continuous integration on GitHub
- 2014–2018 **Casey Casalnuovo**, *PhD CS @UC Davis*, *currently @Sandia National Lab*. Developer migration in the GitHub ecosystem. Multitasking on GitHub projects. Statistical machine translation
- 2014–2015 **Yue Yu**, UC Davis visitor, currently Associate Professor @NUDT China. Continuous integration on GitHub
- 2013–2014 **Mohammad Gharehyazie**, *PhD CS* @*UC Davis*. Developer initiation and social interactions in the Apache Software Foundation
- 2013–2014 Erik Kouters, master CS @TUe, currently Design Engineer @ASML. Identity matching and geographical movement of open-source software mailing list participants

Professional Service

Funding Agencies

- NSF 2022 Software and Hardware Foundations, panelist
- SNSF 2022 Swiss National Science Foundation, reviewer
- NSERC 2019 Natural Sciences and Engineering Research Council of Canada, reviewer
 - NWO 2018 Dutch National Science Foundation, reviewer
 - NSF 2017 Software and Hardware Foundations, panelist

Editorial Boards

TOSEM **ACM Transactions on Software Engineering and Methodology** Associate Editor since 2020

Organizing Committees

- MSR 2023 International Conference on Mining Software Repositories Program Committee Co-Chair
- MSR 2022 International Conference on Mining Software Repositories Local Arrangements Chair

- ASE 2022 International Conference on Automated Software Engineering Workshops Co-Chair
- MSR 2020 International Conference on Mining Software Repositories Data Showcase Track Program Committee Co-Chair
- SIGSOFT 2020 Initiative on Data-driven Introspection Co-Chair
- SATTOSE 2015 Seminar Series Advanced Techniques & Tools for Software Evolution Hackathon Chair
- WCRE-CSMR 2014 Joint Working Conference on Reverse Engineering & European Conference on Software Maintenance and Reengineering Publicity & Social Media Chair
 - ICSME 2013 International Conference on Software Maintenance and Evolution Proceedings Chair
 - CPSM 2013 International Workshop on Communicating Business Process & Software Models Proceedings Chair
 - MESOCA 2013 International Symposium on the Maintenance and Evolution of Service-Oriented and Cloud-Based Systems Proceedings Chair

Program Committees

- ESEC/FSE 2023 Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering PC member
 - ICSE 2023 International Conference on Software Engineering PC member
 - MSR 2022 International Conference on Mining Software Repositories PC member, Shadow PC mentor, FOSS Award committee member
 - ICSE 2022 International Conference on Software Engineering PC member Software Engineering in Society
 - SANER 2022 International Conference on Software Analysis, Evolution, and Reengineering PC member
 - BotSE 2022 International Workshop on Bots in Software Engineering PC member
- ESEC/FSE 2021 Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering PC member

- MSR 2021 International Conference on Mining Software Repositories PC member, Shadow PC mentor
- ICSE 2021 International Conference on Software Engineering PC member New Ideas and Emerging Results
- ICPC 2021 International Conference on Program Comprehension PC member Tool Demos
- BotSE 2021 International Workshop on Bots in Software Engineering PC member
- ESEC/FSE 2020 Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering PC member Visions & Reflections
 - SoHeal 2020 International Workshop on Software Health PC member
 - ICSE 2019 International Conference on Software Engineering PC member New Ideas and Emerging Results
 - ICSE 2019 International Conference on Software Engineering PC member
 - ASE 2019 International Conference on Automated Software Engineering PC member
- ESEC/FSE 2019 Joint Meeting of the European Software Engineering Conference and the ACM SIGSOFT Symposium on the Foundations of Software Engineering PC member
 - SoHeal 2019 International Workshop on Software Health PC member
 - MSR 2018 International Conference on Mining Software Repositories PC member
 - ICSE 2018 International Conference on Software Engineering PC member ACM Student Research Competition
 - NL4SE 2018 ESEC/FSE Workshop on NLP for Software Engineering PC member
 - ICSME 2018 International Conference on Software Maintenance and Evolution PC member New Ideas and Emerging Results
 - ICPC 2018 International Conference on Program Comprehension PC member Early Research Achievements
 - ASE 2018 International Conference on Automated Software Engineering PC member

- MSR 2017 International Conference on Mining Software Repositories PC member
- MSR 2016 International Conference on Mining Software Repositories PC member
- SANER 2015 International Conference on Software Analysis, Evolution, and Reengineering PC member
 - ICPC 2015 International Conference on Program Comprehension PC member

Reviewing

- EMSE 2023 Empirical Software Engineering
 - CHI 2021 ACM CHI Conference on Human Factors in Computing Systems
 - TSE 2020 IEEE Transactions on Software Engineering
- CSCW 2020 ACM Conference on Computer Supported Cooperative Work and Social Computing
- TOSEM 2019 ACM Transactions on Software Engineering and Methodology
 - TSE 2019 IEEE Transactions on Software Engineering
 - EMSE 2019 Empirical Software Engineering
 - JSS 2019 Journal of Systems and Software
- TOSEM 2018 ACM Transactions on Software Engineering and Methodology
 - TSE 2018 IEEE Transactions on Software Engineering
 - CHI 2018 ACM CHI Conference on Human Factors in Computing Systems
 - EMSE 2018 Empirical Software Engineering
 - TSE 2017 IEEE Transactions on Software Engineering
 - CHI 2017 ACM CHI Conference on Human Factors in Computing Systems
- CSCW 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing
- EMSE 2017 Empirical Software Engineering
 - TSE 2016 IEEE Transactions on Software Engineering
 - CHI 2016 ACM CHI Conference on Human Factors in Computing Systems

- CSCW 2016 ACM Conference on Computer Supported Cooperative Work and Social Computing
- EMSE 2016 Empirical Software Engineering
- TSE 2015 IEEE Transactions on Software Engineering
- EMSE 2015 Empirical Software Engineering
- PNAS 2015 Proceedings of the National Academy of Science
 - ToE 2015 IEEE Transactions on Education
 - HCI 2015 Human–Computer Interaction
 - JSS 2015 Journal of Systems and Software
- SCICO 2015 Science of Computer Programming
- SCICO 2014 Science of Computer Programming
 - BIT 2014 Behaviour & Information Technology
- EASE 2014 International Conference on Evaluation and Assessment in Software Engineering

Artifacts, Lecture Notes, Video, and Other Media

(See also previous sections on Invited Talks and Online Media Coverage for links to audio/video recordings of various technical talks and interviews)

- Feb 2023 **Open Source Gender Census Website**, with H.S. Qiu, L. Dabbish, and collaborators. Official website: https://cmustrudel.github.io/oss-census/
- Fall 2022 Complete lecture notes and lecture recordings, Empirical Methods. YouTube playlist: https://www.youtube.com/playlist?list=PLuPUOEODcOmsS409iKohAewobtQswdI7M Other materials: https://bvasiles.github.io/empirical-methods/
- Aug 2022 The DIRTY infrastructure for augmenting decompiler output with learned variable names and types, with J. Lacomis, Q. Chen, and collaborators. GitHub: https://github.com/CMUSTRUDEL/DIRTY
- Spring 2021 **Complete lecture notes and lecture recordings**, Empirical Methods. YouTube playlist: https://www.youtube.com/playlist?list=PLuPUOEODcOmu4-QpZ511uYfmrnnaQ7B4B Other materials: https://bvasiles.github.io/empirical-methods/spring-2021/
 - Jun 2020 Infographic: Donations in Open Source, with C. Overney and C. Kästner. https://cmustrudel.github.io/donations
 - Dec 2019 The BugSwarm collection of software defects and fixes, with C. Rubio-González and P. Devanbu. Official website: http://www.bugswarm.org GitHub: https://github.com/BugSwarm/bugswarm

- May 2018 The Code/Natural Language Challenge dataset CoNaLa, with G. Neubig and collaborators. Official website: https://conala-corpus.github.io
- Mar 2018 Infographic: npn Badges, with A. Trockman and C. Kästner. https://cmustrudel.github.io/badges

Publications

PDF versions available online at https://bvasiles.github.io. For citations and other bibliometrics see Google Scholar [link] and CSRankings [link].

Refereed Conference & Journal Papers

- CHI '23 H.S. Qiu, A. Lieb, J. Chou, M. Carneal, J. Mok, E. Amspoker, B. Vasilescu, and L. Dabbish. ClimateCoach: A dashboard for open-source maintainers to overview community dynamics. In CHI Conference on Human Factors in Computing Systems, 2023.
- ICSE SEIS '23 H.S. Qiu, Z.H. Zhao, T.K. Yu, J. Wang, A. Ma, H. Fang, L. Dabbish, and B. Vasilescu. Gender representation among contributors to open-source infrastructure – An analysis of 20 package manager ecosystems. In International Conference on Software Engineering, Software Engineering in Society. IEEE, 2023.
 - ICSE '23 D. Nam, B. Myers, B. Vasilescu, and V. Hellendoorn. Improving API knowledge discovery with ML: A case study of comparable API methods. In International Conference on Software Engineering. IEEE, 2023.
 - ICSE '22 H. Fang, H. Lamba, J. Herbsleb, and B. Vasilescu. "This is damn slick!" Estimating the impact of tweets on open source project popularity and new contributors. In International Conference on Software Engineering, pp. 2116–2129. ACM, 2022.
- C. Miller, S. Cohen, D. Klug, **B. Vasilescu**, and C. Kästner. ICSE '22 "Did you miss my comment or what?" Understanding toxicity in open source discussions. In International Conference on Software Engineering, pp. 710–722. ACM, 2022.
 - ICSE '22 Q. Chen, J. Lacomis, E.J. Schwartz, G. Neubig, B. Vasilescu, and C. Le Goues. VarCLR: Variable semantic representation pre-training via contrastive learning. In International Conference on Software Engineering, pp. 2327–2339. ACM, 2022.



- USENIX Q. Chen, J. Lacomis, E.J. Schwartz, C. Le Goues, G. Neubig, and B. Vasilescu. Security Augmenting decompiler output with learned variable names and types. '22 In 31st USENIX Security Symposium, pp. 4327–4343, 2022.
- ICSE SEIS '22 H.S. Qiu, B. Vasilescu, C. Kästner, C. Egelman, C. Jaspan, and E. Murphy-Hill. Detecting interpersonal conflict in issues and code review: Cross pollinating open- and closed-source approaches. In International Conference on Software Engineering, Software Engineering in Society, pp. 41–55. ACM, 2022.

- TOSEM '22 F.F. Xu, B. Vasilescu, and G. Neubig.
 In-IDE code generation from natural language: Promise and challenges.
 ACM Transactions on Software Engineering and Methodology, 31(2), 2022.
- TOSEM '22 L. Dramko, J. Lacomis, P. Yin, E.J. Schwartz, M. Allamanis, G. Neubig, B. Vasilescu, and C. Le Goues.
 DIRE and its data: Neural decompiled variable renamings with respect to software class.
 ACM Transactions on Software Engineering and Methodology, 2022.
- MSR Data '22 K. Truong, C. Miller, B. Vasilescu, and C. Kästner. The unsolvable problem or the unheard answer? A dataset of 24,669 open-source software conference talks. In International Conference on Mining Software Repositories, Data Showcase Track, pp. 348–352. ACM, 2022.
- ESEC/FSE '20 H. Lamba, A. Trockman, D. Armanios, C. Kästner, H. Miller, and B. Vasilescu. Heard it through the gitvine: An empirical study of tool diffusion across the npm ecosystem. In Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering, pp. 505–517. ACM, 2020.
 - ACL '20 F.F. Xu, Z. Jiang, P. Yin, B. Vasilescu, and G. Neubig. Incorporating external knowledge through pre-training for natural language to code generation. In Annual Meeting of the Association for Computational Linguistics, pp. 6045–6052. ACL, 2020.
 - MSR '20 T. Dey, S. Mousavi, E. Ponce, T. Fry, B. Vasilescu, A. Filippova, and A. Mockus.
 Detecting and characterizing bots that commit code.
 In International Conference on Mining Software Repositories, pp. 209–219. ACM, 2020.
 - MSR '20 H. Fang, D. Klug, H. Lamba, J. Herbsleb, and B. Vasilescu.
 Need for tweet: How open source developers talk about their GitHub work on Twitter.
 In International Conference on Mining Software Repositories, pp. 322–326. ACM, 2020.
 - MSR '20 J. Meinicke, J. Hoyos, B. Vasilescu, and C. Kästner.
 Capture the feature flag: Detecting feature flags in open-source.
 In International Conference on Mining Software Repositories, pp. 169–173. ACM, 2020.
 - ICSE '20 C. Overney, J. Meinicke, C. Kästner, and B. Vasilescu.
 How to not get rich: An empirical study of donations in Op€n \$our¢e.
 In International Conference on Software Engineering, pp. 1209–1221. ACM, 2020.
 - ICSE '20 S. Zhou, B. Vasilescu, and C. Kästner.How has forking changed in the last 20 years? A study of hard forks on GitHub.In International Conference on Software Engineering, pp. 445–456. ACM, 2020.
- ICSE NIER '20 N. Raman, M. Cao, Y. Tsvetkov, C. Kästner, and B. Vasilescu.
 Stress and burnout in open source: Toward finding, understanding, and mitigating unhealthy interactions.
 In International Conference on Software Engineering, New Ideas and Emerging Results, pp. 57–60. ACM, 2020.

- ICSE SEIP '20 J. Meinicke, C.P. Wong, B. Vasilescu, and C. Kästner. Exploring differences and commonalities between feature flags and configuration options. In International Conference on Software Engineering, Software Engineering in Practice, pp. 233–242. ACM, 2020.
 - SANER '20 N. Cassee, B. Vasilescu, and A. Serebrenik. The silent helper: The impact of continuous integration on code reviews. In International Conference on Software Analysis, Evolution, and Reengineering, pp. 423–434. IEEE, 2020.
 - ASE '19 D. Nam, A. Horvath, A. Macvean, B. Myers, and B. Vasilescu.
 MARBLE: Mining for boilerplate code to identify API usability problems.
 In International Conference on Automated Software Engineering, pp. 615–627. IEEE, 2019.
 - ASE '19 J. Lacomis, P. Yin, E.J. Schwartz, M. Allamanis, C. Le Goues, G. Neubig, and B. Vasilescu.
 DIRE: A neural approach to decompiled identifier naming.
 In International Conference on Automated Software Engineering, pp. 628–639. IEEE, 2019.
 - CSCW '19 H.S. Qiu, Y.L. Li, S. Padala, A. Sarma, and **B. Vasilescu**. The signals that potential contributors look for when choosing open-source projects. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW):1–29, 2019.
- ESEC/FSE '19 S. Zhou, B. Vasilescu, and C. Kästner.
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