

Conference Publications (peer-reviewed)

Mohsen Moradi Moghadam, Mehdi Bagherzadeh, **Raffi Khatchadourian**, and Hua Ming. What do real-world ML developers test for? A large-scale study on GitHub. In *submission to the International Conference on Mining Software Repositories*, MSR '26. ACM, ACM, April 2026.

Nan Jia, Anita Raja, and **Raffi Khatchadourian**. An empirical framework for evaluating semantic preservation using Hugging Face. In *Hawaii International Conference on System Sciences*, HICSS '26, January 2026. To appear.

Raffi Khatchadourian, Tatiana Castro Vélez, Mehdi Bagherzadeh, Nan Jia, and Anita Raja. Speculative automated refactoring of imperative Deep Learning programs to graph execution. In *International Conference on Automated Software Engineering*, ASE '25, pages 752–764. IEEE/ACM, IEEE, November 2025. (245/1190; 20.6% acceptance rate).

Mohsen Moradi Moghadam, Mehdi Bagherzadeh, **Raffi Khatchadourian**, and Hamid Bagheri. μ Akka: Mutation testing for actor concurrency in Akka using real-world bugs. In *Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering*, ESEC/FSE '23, pages 262–274, New York, NY, USA, November 2023. ACM, ACM. (127/473; 26.8% acceptance rate).

Raffi Khatchadourian, Tatiana Castro Vélez, Mehdi Bagherzadeh, Nan Jia, and Anita Raja. Towards safe automated refactoring of imperative Deep Learning programs to graph execution. In *International Conference on Automated Software Engineering*, ASE '23, pages 1800–1802. IEEE/ACM, IEEE, September 2023. NIER track. (25/70; 35.7% acceptance rate).

Fumi Takeuchi, Hidehiko Masuhara, **Raffi Khatchadourian**, Youyou Cong, and Keisuke Ishibashi. How many mutex bugs can a simple analysis find in Go programs? In *Annual Conference of the Japanese Society for Software Science and Technology*, JSSST '22, September 2022.

Tatiana Castro Vélez, **Raffi Khatchadourian**, Mehdi Bagherzadeh, and Anita Raja. Challenges in migrating imperative Deep Learning programs to graph execution: An empirical study. In *International Conference on Mining Software Repositories*, MSR '22, pages 469–481, New York, NY, USA, May 2022. IEEE/ACM, ACM. (45/138; 32.6% acceptance rate).

Yiming Tang, **Raffi Khatchadourian**, Mehdi Bagherzadeh, Rhia Singh, Ajani Stewart, and Anita Raja. An empirical study of refactorings and technical debt in Machine Learning systems. In *International Conference on Software Engineering*, ICSE '21, pages 238–250. IEEE/ACM, IEEE, May 2021. (138/615; 22% acceptance rate).

Mehdi Bagherzadeh, Nicholas Fireman, Anas Shawesh, and **Raffi Khatchadourian**. Actor concurrency bugs: A comprehensive study on symptoms, root causes, API usages, and differences. *Proc. ACM Program. Lang.*, 4(OOPSLA):1–32, November 2020. (109/302; 36% acceptance rate).

Raffi Khatchadourian, **Yiming Tang**, Mehdi Bagherzadeh, and Baishakhi Ray. An empirical study on the use and misuse of Java 8 streams. In Heike Wehrheim and Jordi Cabot, editors, *Fundamental Approaches to Software Engineering*, FASE '20, pages 97–118, Cham, April 2020. ETAPS, Springer International Publishing. (23/81; 28% acceptance rate). **EAPLS Best Paper Award** 🏆.

Mehdi Bagherzadeh and **Raffi Khatchadourian**. Going big: A large-scale study on what big data developers ask. In *Joint Meeting on European Software Engineering Conference and Symposium on the Foundations of Software Engineering*, ESEC/FSE '19, pages 432–442, New York, NY, USA, August 2019. ACM, ACM. (74/303; 24.4% acceptance rate).

Raffi Khatchadourian, **Yiming Tang**, Mehdi Bagherzadeh, and Syed Ahmed. Safe automated refactoring for intelligent parallelization of Java 8 streams. In *International Conference on Software Engineering*, ICSE '19, pages 619–630, Piscataway, NJ, USA, May 2019. ACM/IEEE, IEEE. (109/529; 20.6% acceptance rate).

Raffi Khatchadourian, **Yiming Tang**, Mehdi Bagherzadeh, and Syed Ahmed. A tool for optimizing Java 8 stream software via automated refactoring. In *International Working Conference on Source Code Analysis and*

Manipulation, IEEE SCAM '18, pages 34–39. IEEE, IEEE Press, September 2018. Engineering track. (9/17; 53% acceptance rate). **Distinguished Paper Award** 🏆.

Raffi Khatchadourian and Hidehiko Masuhara. Proactive empirical assessment of new language feature adoption via automated refactoring: The case of Java 8 default methods. In *International Conference on the Art, Science, and Engineering of Programming*, volume 2 of *Programming '18*, pages 6:1–6:30. AOSA, March 2018.

Raffi Khatchadourian and Hidehiko Masuhara. Automated refactoring of legacy Java software to default methods. In *International Conference on Software Engineering*, ICSE '17, pages 82–93, Piscataway, NJ, USA, May 2017. ACM/IEEE, IEEE Press. (68/398; 17% acceptance rate).

Raffi Khatchadourian, Awais Rashid, Hidehiko Masuhara, and Takuya Watanabe. Detecting broken pointcuts using structural commonality and degree of interest. In *International Conference on Automated Software Engineering*, ASE '15, pages 641–646, New York, NY, USA, November 2015. IEEE/ACM. (77/326; 23.6% acceptance rate).

Neelam Soundarajan, Derek Bronish, and **Raffi Khatchadourian**. Formalizing reusable aspect-oriented concurrency control. In *International Conference on Software Engineering & Knowledge Engineering*, SEKE '11, pages 111–114. Knowledge Systems Institute Graduate School, July 2011.

Raffi Khatchadourian, Phil Greenwood, Awais Rashid, and Guoqing Xu. Pointcut rejuvenation: Recovering pointcut expressions in evolving aspect-oriented software. In *International Conference on Automated Software Engineering*, ASE '09, pages 575–579, Washington, DC, USA, November 2009. IEEE/ACM. (71/222; 32% acceptance rate).

Neelam Soundarajan, **Raffi Khatchadourian**, and Johan Dovland. Reasoning about the behavior of aspect-oriented programs. In J. Smith, editor, *International Conference on Software Engineering and Applications*, SEA '07, pages 198–202, USA, November 2007. IASTED, ACTA Press.

Raffi Khatchadourian, Jason Sawin, and Atanas Rountev. Automated refactoring of legacy Java software to enumerated types. In *International Conference on Software Maintenance*, ICSM '07, pages 224–233. IEEE, October 2007. (46/214; 21% acceptance rate).

Journal Publications (peer-reviewed).....

Yiming Tang, **Allan Spektor**, **Raffi Khatchadourian**, and Mehdi Bagherzadeh. Automated evolution of feature logging statement levels using Git histories and degree of interest. *Science of Computer Programming*, 214(C):102724, February 2022. Presented at the IEEE International Conference on Software Analysis, Evolution and Reengineering (SANER '22) journal-first track.

Raffi Khatchadourian, **Yiming Tang**, and Mehdi Bagherzadeh. Safe automated refactoring for intelligent parallelization of Java 8 streams. *Science of Computer Programming*, 195:102476, September 2020.

Raffi Khatchadourian. Automated refactoring of legacy Java software to enumerated types. *Automated Software Engineering*, 24(4):757–787, December 2017.

Raffi Khatchadourian, Awais Rashid, Hidehiko Masuhara, and Takuya Watanabe. Detecting broken pointcuts using structural commonality and degree of interest. *Science of Computer Programming*, 150:56–74, December 2017.

Raffi Khatchadourian, Phil Greenwood, Awais Rashid, and Guoqing Xu. Pointcut rejuvenation: Recovering pointcut expressions in evolving aspect-oriented software. *IEEE Transactions on Software Engineering*, 38(3):642–657, May 2012.

Workshop Publications (peer-reviewed)

Nan Jia, Anita Raja, and **Raffi Khatchadourian**. ReLESS: A framework for assessing safety in Deep Learning systems. In *Workshop on Artificial Intelligence Safety at the International Joint Conference on Artificial Intelligence, AISafety '24 at IJCAI '24*. IJCAI, August 2024. **Best Paper Award** 🏆 nominee.

Raffi Khatchadourian, **Olivia Moore**, and Hidehiko Masuhara. Towards improving interface modularity in legacy Java software through automated refactoring. In *Companion Proceedings of the International Conference on Modularity, MODULARITY Companion '16*, pages 104–106, New York, NY, USA, March 2016. ACM.

Neelam Soundarajan and **Raffi Khatchadourian**. Specifying reusable aspects. In *Asian Workshop on Aspect-Oriented and Modular Software Development, AOAsia '09*, November 2009.

Phil Greenwood, Awais Rashid, and **Raffi Khatchadourian**. Contributing factors to pointcut fragility. In *Workshop on Assessment of Contemporary Modularization Techniques, ACoM '09*, pages 19–24. ACM, October 2009.

Raffi Khatchadourian, Phil Greenwood, and Awais Rashid. On the assessment of pointcut design in evolving aspect-oriented software. In *Workshop on Assessment of Contemporary Modularization Techniques, ACoM '08*, pages 9–10. Lancaster University, ACM, October 2008.

Raffi Khatchadourian, Johan Dovland, and Neelam Soundarajan. Enforcing behavioral constraints in evolving aspect-oriented programs. In *Workshop on Foundations of Aspect-oriented Languages, FOAL '08*, pages 19–28, New York, NY, USA, April 2008. ACM.

Raffi Khatchadourian and Neelam Soundarajan. Rely-guarantee approach to reasoning about aspect-oriented programs. In *Workshop on Software Engineering Properties of Languages and Aspect Technologies, SPLAT '07*, pages 5–es, New York, NY, USA, March 2007. ACM.

Tool Demonstrations (peer-reviewed)

Raffi Khatchadourian, **Tatiana Castro Vélez**, Mehdi Bagherzadeh, **Nan Jia**, and Anita Raja. Hybridize Functions: A tool for automatically refactoring imperative Deep Learning programs to graph execution. In Artur Boronat and Gordon Fraser, editors, *Fundamental Approaches to Software Engineering, FASE '25*, pages 89–100, Cham, May 2025. ETAPS, Springer Nature Switzerland. (11/31; 35% acceptance rate). **EAPLS Distinguished Paper Award** 🏆.

Yiming Tang, **Allan Spektor**, **Raffi Khatchadourian**, and Mehdi Bagherzadeh. A tool for rejuvenating feature logging levels via Git histories and degree of interest. In *International Conference on Software Engineering: Companion Proceedings, ICSE-Companion '22*, pages 21–25. IEEE/ACM, IEEE, May 2022. (49/98; 50% acceptance rate).

Raffi Khatchadourian and Hidehiko Masuhara. Defaultification refactoring: A tool for automatically converting Java methods to default. In *International Conference on Automated Software Engineering, ASE '17*, pages 984–989, Piscataway, NJ, USA, October 2017. ACM/IEEE, IEEE Press. (20/32; 63% acceptance rate).

Raffi Khatchadourian, Awais Rashid, Hidehiko Masuhara, and Takuya Watanabe. Fraglight: Shedding light on broken pointcuts in evolving aspect-oriented software. In *Companion Proceedings of the International Conference on Systems, Programming, Languages and Applications: Software for Humanity, SPLASH Companion 2015*, pages 17–18, New York, NY, USA, October 2015. ACM SIGPLAN, ACM.

Raffi Khatchadourian and Benjamin Muskalla. Enumeration refactoring: A tool for automatically converting Java constants to enumerated types. In *International Conference on Automated Software Engineering, ASE '10*, pages 181–182, New York, NY, USA, September 2010. IEEE/ACM. (18/45; 40% acceptance rate).

Raffi Khatchadourian and Awais Rashid. Rejuvenate pointcut: A tool for pointcut expression recovery in evolving aspect-oriented software. In *International Working Conference on Source Code Analysis and Manipulation, IEEE SCAM '08*, pages 261–262. IEEE, September 2008.

Posters (peer-reviewed)

Fumi Takeuchi, Hidehiko Masuhara, **Raffi Khatchadourian**, and Youyou Cong. Towards an automated code rewriting tool for alleviating concurrency problems in the Go programming language. In Takeo Imai, editor, *Annual Conference of the Japanese Society for Software Science and Technology*, JSSST '21. JSSST, September 2021.

Yiming Tang, **Raffi Khatchadourian**, Mehdi Bagherzadeh, and Syed Ahmed. Towards safe refactoring for intelligent parallelization of Java 8 streams. In *International Conference on Software Engineering: Companion Proceedings*, ICSE '18, pages 206–207, New York, NY, USA, May 2018. ACM/IEEE, ACM.

Md. Arefin and **Raffi Khatchadourian**. Porting the NetBeans Java 8 enhanced for loop lambda expression refactoring to Eclipse. In *Companion Proceedings of the 2015 ACM SIGPLAN International Conference on Systems, Programming, Languages and Applications: Software for Humanity*, SPLASH Companion 2015, pages 58–59, New York, NY, USA, October 2015. ACM.

Technical Reports

Ye Paing, **Tatiana Castro Vélez**, and **Raffi Khatchadourian**. QuerTCI: A tool integrating GitHub issue querying with comment classification. Technical Report 707, City University of New York (CUNY) Hunter College, 695 Park Ave, New York, NY 10065 United States, July 2022.

Mehdi Bagherzadeh, Syed Ahmed, Srilakshmi Sripathi, and **Raffi Khatchadourian**. Interests, difficulties, sentiments, and tool usages of concurrency developers: A large-scale study on Stack Overflow, September 2021.

Raffi Khatchadourian, **Yiming Tang**, Mehdi Bagherzadeh, and Syed Ahmed. Safe automated refactoring for intelligent parallelization of Java 8 streams. Technical Report 544, City University of New York (CUNY) Hunter College, 695 Park Ave, New York, NY 10065 United States, July 2019.

Raffi Khatchadourian, Phil Greenwood, Awais Rashid, and Guoqing Xu. Pointcut rejuvenation: Recovering pointcut expressions in evolving aspect-oriented software. Technical Report COMP-001-2008, Lancaster University, Lancaster, UK, August 2008. Revised March 2009, May 2009.

Raffi Khatchadourian, Jason Sawin, and Atanas Rountev. Automated refactoring of legacy Java software to enumerated types. Technical Report OSU-CISRC-4/07-TR26, Ohio State University, April 2007.

Project Deliverables

Jean-Claude Royer, Joost Noppen, Nicolas Anquetil, Andreas Rummeler, Ralf Mitschke, André Sousa, Uira Kulesza, **Raffi Khatchadourian**, Phil Greenwood, Awais Rashid, and Ismênia Galvao. Software support for the traceability framework, including extension of current configuration management and product line evolution model. Technical Report AMPLE D4.2, Aspect-Oriented, Model-Driven Product Line Engineering, October 2008.

Raffi Khatchadourian, Ruzanna Chitchyan, Phil Greenwood, Awais Rashid, Juan A. Valenzuela, Luis M. Fernández, Mónica Pinto, Lidia Fuentes, Andrew Jackson, and Siobhán Clarke. Overall aspect-oriented analysis and design approach. Technical Report AOSD-Europe Deliverable D132, AOSD-Europe-ULANC-49, European Network of Excellence on Aspect-Oriented Software Development, September 2008.

Mónica Pinto, Lidia Fuentes, Ruzanna Chitchyan, Awais Rashid, Andrew Jackson, Siobhán Clarke, Boris Shishkov, Bedir Tekinerdogan, Mehmet Aksit, Phil Greenwood, and **Raffi Khatchadourian**. Traceability framework: From requirements through architecture and design. Technical Report AOSD-Europe Deliverable D126, AOSD-Europe-ULANC-43, European Network of Excellence on Aspect-Oriented Software Development, July 2008.

Safoora Omer Rashid, Ruzanna Chitchyan, Awais Rashid, **Raffi Khatchadourian**, and Phil Greenwood. Approach for change impact analysis of aspectual requirements. Technical Report AOSD-Europe Deliverable D110, AOSD-Europe-ULANC-40, European Network of Excellence on Aspect-Oriented Software Development, January 2008.

Theses.....

Tatiana Castro Vélez. *Towards Automated Evolution of Imperative Deep Learning Programs.* PhD thesis, City University of New York (CUNY) Graduate Center, 365 5th Ave, New York, NY 10016, September 2025.

Manal Zneit. A tool-supported metamodel for program bug fix analysis in empirical software engineering. Master's thesis, City University of New York (CUNY) Hunter College, 695 Park Avenue, New York, NY 10065, August 2022.

Yiming Tang. *Towards Automated Software Evolution of Data-intensive Applications.* PhD thesis, City University of New York (CUNY) Graduate Center, 365 5th Ave, New York, NY 10016, June 2021.

Allan Spektor. Two techniques for automated logging statement evolution. Master's thesis, City University of New York (CUNY) Hunter College, 695 Park Avenue, New York, NY 10065, July 2020.

Raffi Khatchadourian. *Techniques for Automated Software Evolution.* PhD thesis, Ohio State University, 247 University Hall, 230 North Oval Mall, Columbus, OH, USA 43210, April 2011.

Patents.....

Gianpaolo Fasoli, Augustin Farrugia, Apoorva Govind, and **Raffi Khatchadourian.** Controlling use of shared content items based on client device, January 2016. US Patent 20,160,019,375; US Patent App. 14/634,405.

Other Publications.....

Raffi Khatchadourian. Creating faculty portfolio sites on the Commons. <http://news.common.gc.cuny.edu/2018/01/04/creating-faculty-portfolio-sites-on-the-commons>, January 2018. Invited blog post.

Awards

Research.....

International Conference on Fundamental Approaches to Software Engineering **Hamilton, Canada**
EAPLS Distinguished Paper 2025

"Hybridize Functions: A Tool for Automatically Refactoring Imperative Deep Learning Programs to Graph Execution."

IJCAI Workshop on Artificial Intelligence Safety **Jeju, South Korea**
Best Paper Award Nomination 2024

"ReLESS: A Framework for Assessing Safety in Deep Learning Systems."

International Conference on Fundamental Approaches to Software Engineering **Dublin, Ireland**
EAPLS Best Paper Award 2020

"An Empirical Study on the Use and Misuse of Java 8 Streams."

Japan Society for the Promotion of Science (JSPS) **Japan**
BRIDGE Fellowship 2020

~\$3,627 (¥395,000). Award #BR200404. ~45 given each year worldwide. See bit.ly/jspbridge2020

IEEE International Working Conference on Source Code Analysis & Manipulation **Madrid, Spain**
Distinguished Paper Award 2018

"A Tool for Optimizing Java 8 Stream Software via Automated Refactoring."

Tokyo Institute of Technology **Tokyo, Japan**
Invitational Program for the Promotion of International Joint Research Award 2015

\$3,052.86 (¥328,480).

Japan Society for the Promotion of Science (JSPS) **Japan**
Summer Program Fellowship 2010

\$6,436.53 (¥692,500). Award #SP10024. See bit.ly/2s6pWiG

Computing, Lancaster University **Lancaster, UK**
Visiting Studentship in Aspect-Oriented Software Analysis and Design 2007

\$9,983.52 (£8,000).

Teaching

Computer Science & Engineering, Ohio State University **Columbus, OH**
Graduate Teaching (Eleanor Quinlan Memorial) Award 2010
\$500.

Service

ACM SIGPLAN International Conference on Generative Programming . . . **Chicago, IL**
Distinguished Reviewer Award, GPCE '21 2021

IEEE International Working Conference on Source Code Analysis & Manipulation **Luxembourg**
Distinguished Reviewer Award, IEEE SCAM '21 2021
Research Track

Studential

Monmouth University **West Long Branch, NJ**
Outstanding Undergraduate Computer Science Student Award 2004

Grants

External

Google Cloud *See cloud.google.com/edu/researchers*
Cloud Credits for Research Program, PI 2025
\$5,000. *Static Tensor Shape Inference for Enhanced Run-time Performance of Imperative Deep Learning Programs.*

National Science Foundation (NSF) *See nsf.gov/awardsearch/showAward?AWD_ID=2343750*
Software & Hardware Foundation (SHF), PI 2024–2027
\$597,292. Award no. 2343750. *Knowledge, Methodologies, and Tool-support for Combating Technical Debt in Machine Learning Systems.*

National Science Foundation (NSF) *See nsf.gov/awardsearch/showAward?AWD_ID=2200343*
Software & Hardware Foundation (SHF), PI 2022–2026
\$599,974. Award no. 2200343. *Practical Analyses and Safe Transformations for Imperative Deep Learning Programs.*

Amazon Web Services (AWS) *See aws.amazon.com/research-credits*
Cloud Credits for Research Program, PI 2020
\$1,500. *Mining for Evolutionary Changes of Non-functional Features in Machine Learning Systems.*

Amazon Web Services (AWS) *See aws.amazon.com/research-credits*
Cloud Credits for Research Program, PI 2018
\$800. *Analyses and Automated Refactorings for Imperative Programs that Use Functional Features.*

Japan Society for the Promotion of Science (JSPS) *See bit.ly/jspss-sem*
US Alumni Association (AA) Seminar Program, PI 2018
\$3,839.50. *New York Seminar on Programming Languages and Software Engineering (NYPLSE '19).*

Women in Technology and Entrepreneurship in New York (WiTNY) *See tech.cornell.edu/impact/witny*
Verizon Foundation, Co-PI 2017–2018
\$25,000. *Project Khaleesi—Mentoring Tomorrow's Cybersecurity Queen of Dragons.*

Japan Society for the Promotion of Science (JSPS) *See kaken.nii.ac.jp/grant/KAKENHI-PROJECT-26330078*
Grant-in-Aid for Scientific Research, Research Collaborator 2014–2018
~\$41,035 (¥4,680,000). *Code Recommendation System With Developer's Background Information.*

National Science Foundation (NSF) *See bit.ly/2rBuOc3*
East Asia and Pacific Summer Institutes for U.S. Graduate Students (EAPSI), PI 2010
\$5,617. Award no. OISE-1015773. *Automated Refactoring of Legacy Java Frameworks to Annotation Types.*

Internal

PSC-CUNY
Research Grant, PI 2020
\$11,999.99. ENHC-51-88. *Safe and Efficient Parallelism via Collection API Ordering Inference.*

PSC-CUNY	
<i>Research Grant, PI</i>	2018
\$12,000. ENHC-49-126. <i>Analyses and Automated Refactorings for Imperative Programs that Use Functional Features.</i>	
PSC-CUNY	
<i>Research Grant, PI</i>	2017
\$3,499.50. TRADA-48-502. <i>Analyses and Transformations for Concurrent Imperative Programs using MapReduce.</i>	
PSC-CUNY	
<i>Research Grant, PI</i>	2016
\$3,499.02. TRADA-47-255. <i>Automatic Migration of Legacy Java Method Implementations to Interfaces.</i>	
CUNY Diversity Projects Development Fund (DPDF)	
<i>Grant, PI</i>	2015
\$5,000. <i>Design for a Cloud-based Java IDE for Teaching Minorities.</i>	
CUNY New York City College of Technology	
<i>OER Initiative Fellowship</i>	2015
23 hours at the 60% non-teaching adjunct faculty rate.	
Travel	
<i>External</i>	
Computing Research Association (CRA)	
<i>CRA Summit on AI Undergraduate Education Travel Award</i>	2025
\$1,550.	
ACM SIGSOFT	
<i>CAPS Program Travel Grant</i>	2009–2019 (3)
\$2,800.	
National Science Foundation (NSF)	
<i>International Conference on Software Engineering (ICSE) Travel Award</i>	2016–2018 (2)
\$3,276.	
ACM SIGPLAN	
<i>Professional Activities Committee (PAC) Travel Grant</i>	2007–2015 (5)
\$2,021.	
European Network of Excellence on Aspect-Oriented Software Development	
<i>Student Grant</i>	2008
\$333.97 (€300).	
<i>Internal</i>	
CUNY Academy for the Humanities and Sciences	New York, NY
<i>Stewart Travel Award for Assistant Professors</i>	2019
\$300. See bit.ly/stewart19	
CUNY Research Foundation (RF)	New York, NY
<i>Faculty Research Travel Program</i>	2017
\$750.	
CUNY Office of the Vice Chancellor for Research	New York, NY
<i>Travel Funds Program</i>	2016
\$895.	
CUNY New York City College of Technology	Brooklyn, NY
<i>Professional Development Advisory Council (PDAC) Travel Award</i>	2015 (2)
\$2,150.	
Lancaster University	Lancaster, UK
<i>Faculty of Science & Technology Travel Grant</i>	2008–2009 (2)
\$374.37 (£300).	

Open-source Software

algorithms: A collection of \LaTeX macros for typesetting algorithms in a consistent style. Package maintainer. See ctan.org/tex-archive/macros/latex/contrib/algorithms.

Hybridize Functions: Refactorings for optimizing imperative TensorFlow clients for greater efficiency. See github.com/ponder-lab/Hybridize-Functions-Refactoring.

WALA Ariadne: Machine Learning static code analysis with the T.J. Watson Libraries for Analysis (WALA). Regular contributor with write access. See github.com/wala/ML.

Rejuvenate Log Levels: Java source code transformation plug-in for Eclipse. Automatically adjusts logging statement levels based on degree of interest. See git.io/fjITY.

Optimize Java 8 Streams: Java source code refactoring plug-in for Eclipse. Optimizes Java 8 stream clients for increased efficiency and parallelism through refactoring. See git.io/vpTLk.

Migrate Skeletal Implementation to Interface: Java source code refactoring plug-in for the Eclipse open-source Integrated Development Environment. Migrates legacy Java skeletal implementations to Java 8 enhanced interfaces. See git.io/vwpaK.

fraglight: AspectJ source code inferencing plug-in for the Eclipse open-source Integrated Development Environment, providing tool support for early detection of broken pointcuts in evolving Aspect-Oriented software. Integrated with the Mylyn task focusing plug-in for Eclipse. See git.io/JextF.

Rejuvenate Pointcut: AspectJ source code inferencing plug-in for the Eclipse open-source Integrated Development Environment, providing tool support for pointcut expression recovery in evolving Aspect-Oriented software. See code.google.com/p/rejuvenate-pc.

Convert Constants to Enum: Java source code refactoring plug-in for the Eclipse open-source Integrated Development Environment. Planned for release in the standard distribution of Eclipse. See code.google.com/p/constants-to-enum-eclipse-plugin.

Students Advised

Past Research Students

Ph.D.

Tatiana Castro Vélez, Ph.D. 2025 *CUNY Fellow, now tenure-track Assistant Professor at University of Puerto Rico*

Yiming Tang, Ph.D. 2021 *CUNY GC Full Science Fellow, now tenure-track Assistant Professor at RIT*

Masters

Manal Zneit, M.A. 2022 *Now Ph.D. student at CUNY Graduate Center*

Ye Paing, M.A. 2021 *Now Software Engineer at Squarespace*

Allan Spektor, M.A. 2020 *Now Software Engineer at Kooick Inc.*

Oren Friedman, M.A. 2019 *Google Summer of Code participant, now Software Engineer at Xandr*

Undergraduate

Zhongwei Li, B.A. 2022

Walee Ahmed, B.A. 2019

David Morant, B.A. 2017 *UG Research Initiative Fellow, now Software Engineer at NYT*

Walter Rada, B.Tech. 2015 *Now Network Engineer at TD Ameritrade*

Olivia Moore, B.Tech. 2016 *NSF LSAMP scholar, now Engineer at New York Foundling*

Md. Arefin, B.Tech. 2016 *GSoC, Emerging Scholar, Valedictorian, now Software Engineer at Chase*

Egor Kozitski, B.Tech. 2015 *Emerging Scholar, now Software Engineer at AD/FIN*

High School

Ayla Zhang, Thomas Jefferson High School for Science and Technology, VA 2026 *NYU GSTEM participant*

Ifra Ishaq , Stony Brook School, NY 2024	NYU GSTEM participant, now student at NYU
Stephanie Yeh , Roslyn High School, NY 2024	NYU GSTEM participant, now student at Stony Brook University
Medha Belwadi , Lynbrook High School, CA 2023	NYU GSTEM participant, now student at Purdue University
Pranavi Gollanapalli , Dublin High School, CA 2023	NYU GSTEM participant, now student at UC Irvine
Annie Wang , Hunter High School 2020	NYU GSTEM participant, now student at Harvard University
Krishna Desai , Nutley High School 2020	NYU GSTEM participant, now student at Rutgers University

Presentations

Invited Talks.....

Computing, Tokyo Institute of Technology	Tokyo, Japan
<i>Towards Automated Migration of Imperative Deep Learning Programs to Graph Execution</i>	2022
August 2022. Programming Research Group, Mathematical & Computing Sciences. See bit.ly/3CnWSbc .	
Information Science & Technology, University of Tokyo	Tokyo, Japan
<i>Towards Automated Migration of Imperative Deep Learning Programs to Graph Execution</i>	2022
August 2022. Core Software Group, Creative Informatics. See bit.ly/todai22 .	
Computer Science, Stevens Institute of Technology	Hoboken, NJ
<i>Challenges in Migrating Imperative Deep Learning Programs to Graph Execution ...</i>	2022
March 2022.	
Computer Science, University of Bristol	Bristol, UK
<i>Automated Evolution of Feature Logging Statement Levels Using Git Histories ...</i>	2020
July 2020. See bit.ly/2Jzb47W .	
Computer Science, New Jersey Institute of Technology	Newark, NJ
<i>An Empirical Study on the Use and Misuse of Java 8 Streams</i>	2019
October 2019. See bit.ly/njit2020 .	
Computer Science, SUNY Binghamton	Vestal, NY
<i>An Empirical Study on the Use and Misuse of Java 8 Streams</i>	2019
October 2019. See bit.ly/suny2019 .	
Computer Science, Columbia University	New York, NY
<i>Safe Automated Refactoring for Intelligent Parallelization of Java 8 Streams</i>	2019
April 2019. See bit.ly/columbiastreams .	
Computer Science, George Mason University	Fairfax, VA
<i>Automated Refactoring of Legacy Java Software to Default Methods</i>	2017
May 2017. See bit.ly/gmurefact .	
Information Science & Technology, University of Tokyo	Tokyo, Japan
<i>Open Problems in Automatically Refactoring Legacy Java Software to New Features in Java 8</i>	2015
June 2015. Core Software Group, Creative Informatics. See bit.ly/3wfJ7HE .	
Information Science & Engineering, Tokyo Institute of Technology	Tokyo, Japan
<i>Open Problems in Automatically Refactoring Legacy Java Software to New Features in Java 8</i>	2015
June 2015. Programming Research Group, Mathematical & Computing Sciences. See bit.ly/3QIN5k7 .	
Information Science & Engineering, Tokyo Institute of Technology	Tokyo, Japan
<i>Future Endeavors in Automated Refactoring of Legacy Java Software to Enumerated Types</i>	2010
August 2010. Chiba Shigeru Programming Languages & Operating Systems Research Group, Mathematical & Computing Sciences. See slidesha.re/enum-future .	
Kyushu University	Fukuoka City, Japan
<i>Fraglight: Shedding Light on Broken Pointcuts in Aspect-Oriented Software</i>	2010
July 2010. Principles of Software Languages (POSL) Research Group.	

Graphics & Computer Science, University of Tokyo Tokyo, Japan
Pointcut Rejuvenation: Recovering Pointcut Expressions in Evolving Aspect-Oriented Software 2010
July 2010. Computing System Research Group. See slidesha.re/rejuvpc.

Computing, Lancaster University Lancaster, UK
Rely, Guarantee, Enrich: An Approach to Modular Reasoning About Aspect-Oriented Programs 2008
March 2008. Computing's Advanced Knowledge Extension Seminar (CAKES). Presentation.

Conference Activities & Participation.....

IEEE/ACM International Conference on Automated Software Engineering Seoul, South Korea
Speculative Automated Refactoring of Imperative Deep Learning Programs to Graph Execution 2025
November 2025. ASE '25. Presentation. See bit.ly/44pTv0F.

International Conference on Fundamental Approaches to Software Engineering Hamilton, Canada
HYBRIDIZE FUNCTIONS: A Tool for Automatically Refactoring Imperative DL ... 2025
May 2025. FASE '25. Presentation.

IEEE/ACM International Conference on Automated Software Engineering Luxembourg
Towards Safe Automated Refactoring of Imperative Deep Learning Programs to Graph Execution 2023
September 2023. ASE '23. Presentation. See bit.ly/ase23dl.

International Conference on Software Engineering Pittsburgh, PA, US
A Tool for Rejuvenating Feature Logging Levels via Git Histories and Degree of Interest 2022
May 2022. ICSE '22. Tool demonstration. See bit.ly/icse22.

IEEE International Conference on Software Analysis, Evolution and Re-engineering Hawaii, US
Automated Evolution of Feature Logging Statement Levels Using Git Histories and Degree of ... 2022
March 2022. SANER '22. Presentation. Held remotely. See youtu.be/9tN5nOPqCds.

ACM SIGPLAN Conference on Systems, Programming, and Applications: Software ... Chicago, IL
Actor Concurrency Bugs: A Comprehensive Study on Symptoms, Root Causes, API Usages, and ... 2021
October 2021. SPLASH '21. Presentation. See bit.ly/splash21actors.

International Conference on Software Engineering Madrid, Spain
An Empirical Study of Refactorings and Technical Debt in Machine Learning Systems 2021
May 2021. ICSE '21. Presentation. Held remotely. See bit.ly/icse21ml.

International Conference on Fundamental Approaches to Software Engineering Dublin, Ireland
An Empirical Study on the Use and Misuse of Java 8 Streams 2020
July 2020. FASE '20. Presentation. Held remotely.

IEEE International Working Conference on Source Code Analysis & Manipulation Madrid, Spain
A Tool for Optimizing Java 8 Stream Software via Automated Refactoring 2018
September 2018. IEEE SCAM '18. Presentation. See bit.ly/scam18streams.

International Conference on Software Engineering Gothenburg, Sweden
Towards Safe Refactoring for Intelligent Parallelization of Java 8 Streams 2018
May 2018. ICSE '18. Poster. See bit.ly/icse18streams.

International Conference on the Art, Science, and Engineering of Programming Nice, France
Proactive Empirical Assessment of New Language Feature Adoption via Automated Refactoring 2018
April 2018. Programming '18. Presentation. See bit.ly/programming2018.

IEEE/ACM International Conference on Automated Software Engineering Urbana-Champaign, IL
Defaultification Refactoring: A Tool for Automatically Converting Java Methods ... 2017
November 2017. ASE '17. Tool demonstration, presentation, and poster. See bit.ly/ase2017.

International Conference on Software Engineering Buenos Aires, Argentina
Automated Refactoring of Legacy Java Software to Default Methods 2017
May 2017. ICSE '17. Presentation and poster. See bit.ly/icse17default.

IEEE/ACM International Conference on Automated Software Engineering Lincoln, NE
Detecting Broken Pointcuts using Structural Commonality and Degree of Interest 2015
November 2015. ASE '15. Presentation. See bit.ly/ase15frag.

- ACM SIGPLAN Conference on Systems, Programming, and Applications: Software ... Pittsburgh, PA**
Fraglight: Shedding Light on Broken Pointcuts in Evolving Aspect-Oriented Software 2015
 October 2015. SPLASH '15. Demonstration. See bit.ly/splash15demo.
- IEEE/ACM International Conference on Automated Software Engineering Antwerp, Belgium**
Enumeration Refactoring: A Tool for Automatically Converting Java Constants ... 2010
 September 2010. ASE '10. Tool demonstration, presentation, and poster. See slidesha.re/enum-tool.
- IEEE/ACM International Conference on Automated Software Engineering Auckland, New Zealand**
Pointcut Rejuvenation: Recovering Pointcut Expressions in Evolving Aspect[s] ... 2009
 November 2009. ASE '09. Poster.
- International Conference on Aspect-Oriented Software Development Charlottesville, VA**
Rejuvenate Pointcut: A Tool for Pointcut Expression Recovery in Evolving Aspect[s] ... 2009
 March 2009. AOSD '09. Invited tool demonstration. See slidesha.re/aosd09.
- International Conference on Aspect-Oriented Software Development Charlottesville, VA**
Enforcing Behavioral Constraints in Evolving Aspect-Oriented Programs 2009
 March 2009. AOSD '09. Poster.
- IEEE International Working Conference on Source Code Analysis and Manipulation Beijing, China**
Rejuvenate Pointcut: A Tool for Pointcut Expression Recovery in Evolving Aspect[s] ... 2008
 September 2008. IEEE SCAM '08. Tool demonstration. See slidesha.re/rejvupc-tool.
- International Conference on Aspect-Oriented Software Development Brussels, Belgium**
Pointcut Rejuvenation: Recovering Pointcut Expressions in Evolving Aspect[s] ... 2008
 April 2008. AOSD '08. Poster.
- IEEE International Conference on Software Maintenance Paris, France**
Automated Refactoring of Legacy Java Software to Enumerated Types 2007
 October 2007. ICSM '07. Presentation. See slidesha.re/enum-refact.
- Workshop Activities & Participation.....**
- Language Modularity À La Mode at MODULARITY '16 Málaga, Spain**
Towards Improving Interface Modularity in Legacy Java Software through Automated Refactoring 2016
 March 2016. LaMOD '16. Presentation. See bit.ly/lamod16.
- Asian Workshop on Aspect-Oriented and Modular Software at ASE '09 Auckland, New Zealand**
Specifying Reusable Aspects 2009
 November 2009. AOAsia '09. Presentation. See slidesha.re/reuse-aop.
- Assessment of Contemporary Modularization Techniques at OOPSLA '08 Nashville, Tennessee**
On the Assessment of Pointcut Design in Evolving Aspect-Oriented Software 2008
 October 2008. ACoM '08. Presentation. See slidesha.re/pc-des.
- Foundations of Aspect-Oriented Languages at AOSD '08 Brussels, Belgium**
Enforcing Behavioral Constraints in Evolving Aspect-Oriented Programs 2008
 April 2008. FOAL '08. Presentation. See slidesha.re/aop-beh.
- Software Engineering Properties of Languages and Aspect Technologies at AOSD '07 Vancouver, BC**
Rely-Guarantee Approach to Reasoning about Aspect-Oriented Programs 2007
 March 2007. SPLAT '07. Presentation. See slidesha.re/rg-aop.
- Seminar Activities & Participation.....**
- New England Programming Languages and Systems Symposium Cambridge, MA**
Towards Automated Migration of Imperative Deep Learning Programs to Graph Execution 2022
 October 2022. NEPLS '22. Harvard University. Presentation. See bit.ly/nepls22.
- IBM Programming Languages Day Yorktown Heights, NY**
Proactive Empirical Assessment of New Language Feature Adoption via Automated ... 2017
 December 2017. PL Day '17. IBM T.J. Watson Research Center. Presentation. See bit.ly/ibmpl17.
- New Jersey Programming Languages and Systems Seminar Princeton, NJ**
Automated Refactoring of Legacy Java Software to Default Methods 2017
 November 2017. NJPLS '17. Princeton University. Presentation. See bit.ly/njpls17.

NYC Media Lab 2015 Annual Summit	New York, NY
<i>Fraglight: Shedding Light on Broken Pointcuts in Evolving Aspect-Oriented Software</i>	2015
September 2015. New York City Media Laboratory, NYU Skirball Center for the Performing Arts. Demonstration. See bit.ly/nycmedia15 .	
Razorfish Global Technology Summit	New York, NY
<i>Fraglight: Shedding Light on Broken Pointcuts in Evolving Aspect-Oriented Software</i>	2015
September 2015. Demonstration. See bit.ly/razorfish15 .	
JSPS Summer Program Research Proposal Session	Hayama, Japan
<i>Fraglight: Shedding Light on Broken Pointcuts in Evolving Aspect-Oriented Software</i>	2010
June 2010. The Graduate University for Advanced Studies (Sokendai). Poster.	
European Summer School on Aspect-Oriented Software Development	Genoa, Italy
<i>Modular Reasoning about Aspect-Oriented Programs: A Rely-Guarantee Approach</i>	2007
July 2007. Informatics and Information Science (DISI), University of Genoa. Group discussion and poster.	
Ohio Graduate Student Symposium on Computer and Information Science & Eng.	Cincinnati, OH
<i>Modular Reasoning about Aspect-Oriented Programs: A Rely-Guarantee Approach</i>	2007
April 2007. OGSS-CISE '07. University of Cincinnati. Presentation. See slidesha.re/ogss-cise .	
Campus & Departmental Talks	
Computer Science, CUNY Graduate Center	New York, NY
<i>Safe Automated Refactoring for Efficient Migration of Imperative DL Programs to Graphs</i>	2024
December 2024. AI @ CUNY CS. Presentation. See gc.cuny.edu/events/ai-cuny-cs .	
Computer Science, CUNY Graduate Center	New York, NY
<i>Analysis and Evolution of Large, Complex, and Long-lived Data-Intensive Software</i>	2024
April 2024. Presentation.	
Computer Science, CUNY Graduate Center	New York, NY
<i>An Overview of Automated Software Evolution of Big Data Systems</i>	2022
March 2022. Presentation.	
Computer Science, CUNY Graduate Center	New York, NY
<i>An Empirical Study on the Use and Misuse of Java 8 Streams</i>	2020
April 2020. Presentation. See bit.ly/cunyc20 .	
Computer Science, CUNY Graduate Center	New York, NY
<i>Safe Automated Refactoring for Intelligent Parallelization of Java 8 Streams</i>	2019
September 2019. Presentation. See bit.ly/cunycg .	
CUNY New York City College of Technology	Brooklyn, NY
<i>Towards Improving Interface Modularity in Legacy Java Software Through Automated Refactoring</i>	2016
March 2016. Presentation. See bit.ly/nycct-interface .	
Computer Science, CUNY Hunter College	New York, NY
<i>Detecting Broken Pointcuts using Structural Commonality and Degree of Interest</i>	2015
December 2015. Presentation. See bit.ly/ase15frag .	
CUNY New York City College of Technology	Brooklyn, NY
<i>Automatic Modernization of Legacy Java Software</i>	2015
November 2015. Faculty Recognition Day. Poster. See bit.ly/facday15 .	
CUNY College of Staten Island	Staten Island, NY
<i>Automatic Migration of Legacy Java Method Implementations to Interfaces</i>	2015
June 2015. NSF/DoD REU. Presentation. See www.cs.csi.cuny.edu/REU .	
Computer Systems Technology, CUNY New York City College of Technology	Brooklyn, NY
<i>Introduction to New Features in Java 8</i>	2015
March 2015. Presentation. See bit.ly/java8-intro .	
CUNY New York City College of Technology	Brooklyn, NY
<i>Fraglight: Shedding Light on Broken Pointcuts in Aspect-Oriented Software</i>	2014
November 2014. Faculty Recognition Day. Poster. See bit.ly/facday .	

Computer Systems Technology, CUNY New York City College of Technology <i>Fraglight: Shedding Light on Broken Pointcuts in Evolving Aspect-Oriented Software</i> November 2014. Presentation. See bit.ly/fraglight .	Brooklyn, NY 2014
Apple Inc. <i>Unit Testing with Xcode</i> September 2012. Presentation.	Cupertino, CA 2012
Ohio State University <i>Techniques for Automated Software Evolution</i> April 2011. PhD thesis defense.	Columbus, OH 2011
Bell Laboratories, Alcatel-Lucent <i>Overview of a Session Data Type (SDT) Framework Research Prototype</i> August 2007. Summer intern presentation.	Murray Hill, NJ 2007

Teaching

Instructional Experience.....

Graduate.....

Computer Science, CUNY Graduate Center <i>Instructor, CSc 71010: Programming Languages</i> Fall 2021, Fall 2022 (cross-listed with CSCI 77100), Spring 2025.	New York, NY 2021–2025 (3)
Computer Science, CUNY Hunter College <i>Instructor, CSCI 77100: Software Engineering</i> Fall 2018, Spring 2020, Spring 2021. Fall 2022, Summer 2023, Fall 2024. Combined with CSCI 40500 (CSc 71010 in Fall 2022).	New York, NY 2018–2024 (6)
Computer Science, CUNY Hunter College <i>Instructor, CSCI 79526: Introduction to Reactive Programming</i> Fall 2020. Combined with CSCI 49380.	New York, NY 2020
Computer Science, CUNY Hunter College <i>Instructor, CSCI 79521: Advanced Programming Languages</i> Spring 2019. Combined with CSCI 46000.	New York, NY 2019
Computer Science, CUNY Graduate Center <i>Instructor, CSc 81020: Software Analysis & Transformation</i> Spring 2018.	New York, NY 2018

Undergraduate.....

Computer Science, CUNY Hunter College <i>Instructor, CSCI 40500: Software Engineering</i> Spring 2017, Fall 2018, Spring 2020, Spring 2021, Summer 2023, Fall 2024, Summer 2025, Fall 2025. Combined with CSCI 77100.	New York, NY 2017–2025 (8)
Computer Science, CUNY Hunter College <i>Instructor, CSCI 33500: Software Analysis and Design III</i> Spring 2022.	New York, NY 2022
Computer Science, CUNY Hunter College <i>Coordinator, CSCI 49900: Advanced Applications: A Capstone for Majors</i> Fall 2021, Spring 2022.	New York, NY 2021–2022 (2)
Computer Science, CUNY Hunter College <i>Instructor, CSCI 49380: Introduction to Reactive Programming</i> Fall 2020. Combined with CSCI 79526.	New York, NY 2020
Computer Science, CUNY Hunter College <i>Instructor, CSCI 49900: Advanced Applications: A Capstone for Majors</i> Fall 2016, Fall 2018, Spring 2019, Fall 2020.	New York, NY 2016–2020 (4)

Computer Science, CUNY Hunter College <i>Instructor, CSCI 46000: Advanced Programming Languages</i> Spring 2019. Combined with CSCI 79521.	New York, NY 2019
Computer Science, CUNY Hunter College <i>Instructor, CSCI 13500: Software Analysis and Design I</i> Spring 2017, Fall 2017.	New York, NY 2017 (2)
Computer Science, CUNY Hunter College <i>Instructor, CSCI 23300: Programming Projects Seminar for Minors</i> Fall 2016.	New York, NY 2016
Computer Systems Technology, CUNY New York City College of Technology <i>Instructor, CST 4713: Dynamic Web Development</i> Spring 2016.	Brooklyn, NY 2016
Computer Systems Technology, CUNY New York City College of Technology <i>Instructor, CST 1201: Programming Fundamentals</i> Fall 2014, Spring 2015, Fall 2015, Spring 2016.	Brooklyn, NY 2014–2016 (4)
Computer Systems Technology, CUNY New York City College of Technology <i>Instructor, CST 2301: Multimedia and Mobile Device Programming</i> Spring 2015, Fall 2015.	Brooklyn, NY 2015 (2)
Computer Systems Technology, CUNY New York City College of Technology <i>Instructor, CST 1101: Problem Solving with Computer Programming</i> Fall 2014.	Brooklyn, NY 2014
Computer Science & Engineering, Ohio State University <i>Instructor, CS&E 230: Introduction to C++ Programming</i> Au05, Wi06, Sp06, Su06, Wi07, Au07, Wi09, Sp09, Wi10, Sp10, Au10, Wi11.	Columbus, OH 2005–2011 (12)
Computer Science & Engineering, Ohio State University <i>Instructor, CS&E 202: Programming for Engineers and Scientists</i> Sp07, Au08, Au09.	Columbus, OH 2007–2009 (3)
Graduate Studies, Lancaster University <i>Invited Lecturer, Seminar on L^AT_EX Typography</i> Spring 2008.	Lancaster, UK 2008
Mathematics, Monmouth University <i>Mathematics Tutor</i> Mathematics Learning Center.	West Long Branch, NJ 2003–2004
Open Educational Resources (OERs)	
Computer Systems Technology, CUNY New York City College of Technology <i>Creator, CST 1201: Programming Fundamentals OER</i> <i>See wp.me/P7F7J0-4</i>	Brooklyn, NY 2016
Thesis & Dissertation Projects	
Computer Science, CUNY Graduate Center <i>Committee Member, Nan Jia</i> PhD candidacy exam: <i>Evaluating Trustworthy AI Systems Through the Semantics Preservation Lens: A Survey</i>	New York, NY 2025
Computer Science, CUNY Graduate Center <i>Chair, Tatiana Castro Vélez</i> PhD defense: <i>Towards Automated Software Evolution of Imperative Deep Learning Programs</i>	New York, NY 2025
Computer Science, CUNY Graduate Center <i>Chair, Tatiana Castro Vélez</i> PhD proposal: <i>Towards Automated Evolution of Imperative Deep Learning Programs</i>	New York, NY 2025
Computer Science, University of Colorado Boulder <i>Committee member, Malinda Dilhara Malwala Arachchige</i> PhD defense: <i>Code Change Patterns as Reusable Code Abstractions</i>	Boulder, CO 2024

Computer Science, CUNY Graduate Center <i>Chair, Tatiana Castro Vélez</i> PhD candidacy exam: <i>A Survey on Analyses and Transformations of Deep Learning Systems</i>	New York, NY 2023
Computer Science, CUNY Graduate Center <i>Committee member, Minh Nguyen</i> PhD defense: <i>Cost-effective and Performance-preserving Secured Application Management in Cloud Environments</i>	New York, NY 2023
Computer Science, CUNY Graduate Center <i>Committee member, Minh Nguyen</i> PhD proposal: <i>Cost-effective and Performance-preserving Secured Application Management in Cloud Environments</i>	New York, NY 2022
Computer Science, CUNY Hunter College <i>Chair, Manal Zneit</i> Master's thesis: <i>A Tool-Supported Metamodel for Program Bug Fix Analysis in Empirical Software Engineering</i>	New York, NY 2022
Computer Science, CUNY Graduate Center <i>Committee Member, Minh Nguyen</i> PhD candidacy exam: <i>Moving Target Defense against DoS Attack in Cloud Systems</i>	New York, NY 2021
Computer Science, CUNY Graduate Center <i>Chair, Yiming Tang</i> PhD defense: <i>Towards Automated Software Evolution of Data-intensive Applications</i>	New York, NY 2021
Computer Science, CUNY Graduate Center <i>Chair, Yiming Tang</i> PhD proposal: <i>Facilitating Big Data Processing for Mainstream Object-Oriented Software</i>	New York, NY 2020
Computer Science, CUNY Hunter College <i>Chair, Allan Spektor</i> Master's thesis: <i>Two Techniques for Automated Logging Statement Evolution</i>	New York, NY 2020
Computer Science, CUNY Graduate Center <i>Chair, Yiming Tang</i> PhD candidacy exam: <i>A Survey of Information Overload and Under-specification of Event Logging</i>	New York, NY 2020

Professional Service

Program Committees.....

Main Technical/Research Tracks.....

ASE '24–'26: IEEE/ACM International Conference on Automated Software Engineering.

GPCE '21–'23, '26: ACM SIGPLAN International Conference on Generative Programming: Concepts & Experiences.

SLE '26: ACM SIGPLAN International Conference on Software Language Engineering.

ICSE '24–'26: International Conference on Software Engineering (3).

Internetware '25: International Conference on Internetware.

Programming '23: International Conference on the Art, Science, and Engineering of Programming.

CoSEDS '22: Conference on Software Engineering & Data Sciences.

IEEE SCAM '21: IEEE International Working Conference on Source Code Analysis and Manipulation.

ECOOP '20: European Conference on Object-Oriented Programming.

SETA '16: Symposium on Software Engineering Technology and Applications at the IEEE Computer Society International Conference on Computers, Software & Applications (COMPSAC '16).

OGSS-CISE '07: Ohio Graduate Student Symposium on Computer and Information Science & Engineering.

Auxiliary Tracks.....

ICSME '26 RENE: IEEE International Conference on Software Maintenance and Evolution.

ICSME '26 registered reports: IEEE International Conference on Software Maintenance and Evolution.

ICSE '26 SRC: International Conference on Software Engineering.

SPLASH '19, '25 Onward!: ACM SIGPLAN conference on Systems, Programming, Languages, and Applications: Software for Humanity.

ESEC/FSE '18, '20, '22, '23 demos: ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering.

ICSME '22, '23 doctoral symposium: IEEE International Conference on Software Maintenance and Evolution.

ISEC '22, '23 SRC: ACM SIGSOFT Innovations in Software Engineering Conference.

ASE '19, '22 LBR: IEEE/ACM International Conference on Automated Software Engineering.

PLDI '22 SRC: ACM SIGPLAN Conference on Programming Language Design and Implementation.

ASE '21 artifacts: IEEE/ACM International Conference on Automated Software Engineering.

ESEC/FSE '21 artifacts: ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering.

ICSE '20 demos: International Conference on Software Engineering.

MODULARITY '16 demos & posters: International Conference on Software Modularity.

Workshops.....

VMIL '25: International Workshop on Virtual Machines and Language Implementations.

PLRP '18: IEEE International Workshop on Programming Languages Research & Practice at the IEEE Computer Society International Conference on Computers, Software & Applications (COMPSAC '18).

MASS '16: International Workshop on Modularity Across the System Stack at the International Conference on Software Modularity (MODULARITY '16).

Journal Reviewing.....

SPL: IEEE Signal Processing Letters. 2026.

TOSEM: ACM Transactions on Software Engineering and Methodology. 2022 (2), 2025 (2).

JSS: Journal of Systems and Software. 2022–2023.

TSE: IEEE Transactions on Software Engineering. 2018–2022.

IST: Information and Software Technology. 2018–2019.

SCP: Science of Computer Programming. 2019, 2023.

EMSE: Empirical Software Engineering. 2022 (2)–2023.

MDPI: Multidisciplinary Digital Publishing Institute Algorithms. 2021.

PLOS ONE: Public Library of Science One. 2018, 2020.

IJCA: International Journal of Computers and Applications. 2020.

Funding Agency Reviewing.....

JSPS: Japan Society for the Promotion of Science. 2022, 2023, 2025, 2026.

NSF: National Science Foundation. 2019–2022, 2024 (5).

SNSF: Swiss National Science Foundation. 2019.

Conference Reviewing.....

Euro-Par '21: International European Conference on Parallel and Distributed Computing.

ICCD '19: IEEE International Conference on Computer Design.

ASE: IEEE/ACM International Conference on Automated Software Engineering. 2008–2010 (3).

ECOOP: European Conference on Object-Oriented Programming. 2008–2010 (3).

AOSD: International Conference on Aspect-Oriented Software Development. 2009–2010 (2).

ACoM '08: Workshop on Assessment of Contemporary Modularization Techniques at OOPSLA.

ICSE '07: International Conference on Software Engineering.

Textbook Reviewing.....

Cengage: "Programming with C++ Brief Edition," D.S. Malik, Cengage Learning, Boston, MA. 2007.

Conference & Workshop Organization.....

SPLASH '21, '22, '23: ACM SIGPLAN conference on Systems, Programming, Languages, and Applications: Software for Humanity. Workshops co-chair.

CoSEDS '22: Conference on Software Engineering & Data Sciences. Program co-chair.

NYPLSE '19: New York Seminar on Programming Languages and Software Engineering. Sole organizer.

WAPI '18: International Workshop on API Usage and Evolution at the International Conference on Software Engineering (ICSE '18). Co-organizer.

ESEC/FSE '18: ACM Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering. Publicity chair.

LaMod '16: International Workshop on Language Modularity at the International Conference on Software Modularity (MODULARITY '16). Co-organizer.

ECOOP '11: European Conference on Object-Oriented Programming. Web chair.

Conference & Workshop Involvement.....

ASE '25: International Conference on Automated Software Engineering. Session chair.

ICSE '22: International Conference on Software Engineering. Student mentor.

ECOOP '20: European Conference on Object-Oriented Programming. Session chair.

OOPSLA '20: International Conference on Object-Oriented Programming, Systems, Languages, and Applications. Session chair.

ICSE '20: International Conference on Software Engineering. Session chair.

ESEC/FSE '18: ACM Student Research Competition (SRC). Judge.

MASS '16: Workshop on Modularity Across the System Stack at MODULARITY '16. Panelist & session chair.

SPLASH '10: ACM SIGPLAN conference on Systems, Programming, Languages, and Applications: Software for Humanity. Student volunteer.

AOSD: International Conference on Aspect-Oriented Software Development. Student volunteer. 2007, 2009.

Professional Organizations.....

SIGPLAN: ACM Special Interest Group on Programming Languages. Long-term mentor. 2021–2025. See bit.ly/sigplanm.

AOSA: Aspect-Oriented Software Development Association. Webmaster of aosd.net. 2011–2013.

Departmental/University Service

Departmental.....

Alternate: Curriculum and examination committee, Computer Science, CUNY Graduate Center. 2025–2027.

Alternate: Membership committee, Computer Science, CUNY Graduate Center. 2025–2027.

Member: Grade appeals committee, Computer Science, CUNY Hunter College. 2017, 2025.

Member: PhD admissions committee, Computer Science, CUNY Graduate Center. 2022, 2023.

, **Member:** Elections committee, Computer Science, CUNY Graduate Center. 2022–2023.

Member: Personnel & Budget committee, Computer Science, CUNY Hunter College. 2022.

Member: Cybersecurity curriculum initiative committee, Computer Science, CUNY Hunter College. 2021.

Organizer: Cybersecurity Summer Camp for female non-CS majors, CS, CUNY Hunter College. 2018.

Member: Lecturer search committee, Computer Science, CUNY Hunter College. 2018.

Member: NCWIT-sponsored Women in Computer Science at Hunter College (WICS-HC) committee. 2016–2017.

Chair: Colloquium committee, CST, CUNY New York City College of Technology. 2014–2016.
Member: Annual awards selection committee, Computer Science & Engineering, Ohio State University. 2011.

Collegiate.....

Member: Hunter College Senate, CUNY Hunter College. 2025–.
Member: Food Services & Facilities committee, CUNY Hunter College. 2020–2022.
Delegate: Faculty Delegate Assembly (FDA), CUNY Hunter College. 2019–2022.
Judge: New York City Science & Engineering Fair (NYCSEF). 2015–2020 (4).
Mentor: Louis Stokes Alliances for Minority Participation (LSAMP) Undergraduate Research program. 2015–2016.
Panelist: “Using Open Educational Resources (OER) in the Classroom,” CUNY NYCCT. 2015.
Panelist: Advancing Computer Science Careers through Enhanced Networking and Training (ASCENT). 2015.
Mentor: Emerging Scholars Undergraduate Research program. CUNY NYCCT. 2015 (2).

University.....

Member: Assistant Professor search committee, Computer Science, CUNY Queens College. 2025.
Reviewer: Research Foundation (RF) CUNY Office of Award Pre-Proposal Support (APPS). 2019–2020 (2).
Member: CUNY Academic Commons Subcommittee. 2015–2016
Alternate: Committee on Academic Technology (CAT). 2015–2016.

Professional Activities

Visiting Scholar: Mathematical & Computing Sciences, Tokyo Institute of Technology, Tokyo, Japan. 2015, 2022.
Visiting Scholar: Security Lancaster, Computing & Communications, Lancaster University, Lancaster, UK. 2015.
Participant: Spring school at AOSD. 2007–2009 (2).
Participant: European Summer School on Aspect-Oriented Software Development, Genoa, Italy. 2007.
President: ACM Student Chapter, Monmouth University. 2004.

Community Involvement, Outreach, & Volunteering

Mentor: NYU GSTEM Summer Program for High School Minorities and Females. 2019, 2022, 2023, 2025
Mentor: Google Summer of Code (GSoC), Eclipse Foundation. 2015–2018 (2).
Representative: Eclipse Foundation at the Google Summer of Code (GSoC) Mentor Summit. 2015.
Member: Worship Arts Team, Journey Church, New York, NY. 2015–2022.
Volunteer: Learning Disabilities Association, New York, NY. 2014–2015.
Volunteer: Journey Church, San Francisco, CA. 2012–2014.

Professional Affiliations

CoSSMO: Member, CUNY Institute of Computer Simulation, Stochastic Modeling and Optimization.
JSPS US: Regular Member, Japan Society for the Promotion of Science (JSPS) US Alumni Association.
ACM: Member, Association for Computing Machinery.
SIGPLAN: Member, ACM Special Interest Group for Programming Languages.
SIGSOFT: Member, ACM Special Interest Group on Software Engineering.
IEEE-CS: Member, IEEE Computer Society.
ETAPS: Member, European Joint Conferences on Theory and Practice of Software.