

Ismail Kuru, Ph.D.

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Employment History

- 2024(September) – **Research Fellow** Drexel University, College of Computing & Informatics.
- 2019(July) – 2024(September) **Doctoral Research Assistant.** Drexel University, College of Computing & Informatics.
- 2019(Apr) – 2019(June) **Research Intern.** BedRock Systems.
- 2016(Sep) – 2019(March) **Master's Degree Research Assistant.** Drexel University, College of Computing & Informatics.
- 2016(Jan) – 2016(Sep) **Senior Software Engineer.** Crytek GmbH.
- 2014(Sep) – 2015(Feb) **Research Assistant.** Koc University. Advisor: Dr. Serdar Tasiran.
- 2014(Apr) – 2014(Aug) **Research Intern.** Microsoft Research. Advisors: Dr. Matthew J. Parkinson, Ben Hall and Serdar Tasiran.
- 2013(Sep) – 2014(Mar) **Visiting Research Student.** University of Washington. Advisor: Dr. Dan Grossman.
- 2012(Sep) – 2013(Sep) **Research Assistant.** Koc University.
- 2012(Mar) – 2012(Sep) **Software Developer.** GNU Compiler Collection, Google Summer of Code 2011. Advisor: Dr. Albert Cohen.

Education

- 2018 – 2025 **Ph.D., Drexel University, U.S.A** in Software Reliability.
Thesis: *Modal Abstractions of Systems Concepts for OS Kernel Verification*
Advisor: Dr. Colin S. Gordon
Funding: NSF Career Project ([link](#))
- 2016 – 2018 **M.Sc. Computer Science, Drexel University, U.S.A.**
Internships: BedRock Systems
Coursework Completed
- 2015 **M.Sc. Computer Science, Koc University, Turkey** in Software Verification.
Thesis title: *Static Methods for Checking Correctness of Programs on Relaxed Memory Systems.*
Advisor: Dr. Serdar Tasiran
Scholarship: 1 of 18 Microsoft Research Europe PhD Scholarships ([link](#))
Internships: University of Washington Visit and MSR Cambridge
Coursework Completed in Technical University of Munich, Germany.

Skills

- Languages **Strong** reading, writing and speaking in English and Turkish. Intermediate German.
- SMT Based Verification **VCC**, Boogie, QED.
- Model Checking **NuSMV.**
- Type Theory Based Verification **Coq.**

Miscellaneous Experience







Awards and Achievements

- 2018  **Scholarship.** DeepSpec Summer School Scholarship Princeton U.S.A, 2018.
- 2017  **Scholarship.** PLMW Scholarship for ICFP'17 Oxford U.K, 2017.
- 2014  **Travel Grant.** Microsoft Research Visitor Grants(Multiple) Hosted by Dr. Matthew Parkinson, 2014.
- 2011–2014  **Graduate School Scholarship.** Received one of 18 Microsoft Research Europe PhD Scholarship awards, 2011-2014.
- 2012  **Travel Grant.** from Koc University for VCLA Winter School Vienna, 2012.
- 2011  **Travel Grant.** Inria-Paris Visitor Grants(Multiple) Hosted by Dr. Albert Cohen, 2011.

Summer/Winter Schools

- 2018  DeepSpec Summer School Princeton U.S.A, 2018.
- 2017  PLMW for ICFP'17 Oxford U.K, 2017.
-  OPLSS Summer School Oregon U.S.A, 2017.
- 2012  ACACES Sixth International Summer School Italy, 2012.
-  Microsoft Research Ph.D. Summer School Cambridge U.K, 2012.
-  Vienna Center for Logic and Algorithms Winter School on Verification Wien Austria, 2012.
- 2010  ACACES Sixth International Summer School Barcelona Spain, 2010.

Service and Volunteering

- 2021  SIGPLAN-M Long Term Mentor ([link](#))
- 2020  POPL'20 Artifact Evaluation Committee.
- 2018  PLDI'18 Student Volunteer.
- 2013  SEFM'13 Subreviewer.
-  SAS'13 Subreviewer.
- 2012  RV'12 Subreviewer.

Research Publications

Conference Proceedings

- 1 Kuru, I. & Gordon, C. S. (2019). Safe deferred memory reclamation with types. (Vol. abs/1811.11853). 28th European Symposium on Programming, ESOP.
- 2 Kuru, I., Matar, H. S., Cristal, A., Kestor, G., & Unsal, O. (2013). Parv: parallelizing runtime detection and prevention of concurrency errors. In S. Qadeer & S. Tasiran (Eds.), *Runtime verification* (pp. 42–47). Berlin, Heidelberg: Springer Berlin Heidelberg.



Books and Chapters

- 1 Cristal, A., Ozkan, B. K., Cohen, E., Kestor, G., Kuru, I., Unsal, O., ... Elmas, T. (2015). *Verification tools for transactional programs* (R. Guerraoui & P. Romano, Eds.). Cham: Springer International Publishing. doi:10.1007/978-3-319-14720-8_14

Workshop

- 1 Kuru, I., Kulahcioglu Ozkan, B., Mutluergil, S. O., Tasiran, S., Elmas, T., & Cohen, E. (2014). *Verifying programs under snapshot isolation and similar relaxed consistency models*.
- 2 Matar, H. S., Kuru, I., Tasiran, S., & Dementiev, R. (2014). *Accelerating precise race detection using commercially-available hardware transactional memory support*.

Tech Report

- 1 Kuru, I. & Gordon, C. S. (2025). Modal verification patterns for systems. arXiv: 2506.01719 [cs.LO].  <https://arxiv.org/abs/2506.01719>
- 2 Kuru, I. & Gordon, C. S. (2024). Modal abstractions for virtualizing memory addresses. arXiv: 2307.14471 [cs.PL].  <https://arxiv.org/abs/2307.14471>

References

Available on Request