

Name : Chinmayi Baramashetru
Date of Birth : 12.01.1995
Citizenship : Indian
Work : PhD Research fellow, Department of Informatics (PSY) UiO
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Research Interests :

My research goal is to develop theoretical foundations and practical tools for building more reliable and usable software and increasing developer productivity. I am primarily interested in software engineering and formal methods. I particularly like investigating topics in automatic test generation, program analysis, language based security and software verification. Designing programming language with built-in security and privacy features using techniques such as information flow control, policy specification and enforcement, formal security guarantees was my main PhD results. My tools and techniques explore novel ways in writing, specifying, verifying, testing, and debugging programs in order to make them more robust while improving the developer experience.

Education :

2020 – Present **PhD** (expected), *University of Oslo*.
Dissertation Title :
Formal Specification and Analysis of Privacy Policies GDPR in Distributed Systems
Yet to be submitted, advisor: Prof. Silvia Lizeth Tapia Tarifa, Olaf Owe
2023 - OPLSS summer school , *University of Oregon, USA*
2018–2020 **M.Sc.**, in Information systems, *City University of London, UK*.
Thesis: Exploitation Development in Ada to detect memory based vulnerabilities
Supervisor : Martin Brian Nyx, City University of London
2012–2016 **B.Sc.**, in Electronics & Communication engineering VTU, India
Thesis: Smart Health Monitor systems

Previous Positions :

2016–2018 **Assistant System Engineer** TATA Consultancy Services, KA.

- Automated troubleshooting server operations of Solaris, Linux and Docker systems
- Maintained iCloud services with good understanding of IMAP, SMTP, DNS, etc
- Honed practical experience on OS version upgrade, patches and verdad configurations
- Practical knowledge on proof-points, milters, puppet and docker

2018–2019 **Data Analyst**, *IORA healthcare, UK*

- Conducted reliable data analysis, visualisations for commercial purposes
- Maintained and modeled automated data collection methods
- Experience in manipulating and analysing medium to large scale sized data sets

External Collaboration :

- On GDPR formal privacy modelling with runtime constraint checks and static guarantees using type system with Prof. Paola Giannini from University of Torino led to a submission for ECOOP'24

Community Service :

- PC Member : FASE'22 , AOL'23
- Reviewer: iFM'22, SEFM'21, F-IDE'21, TACAS'24, FM'24
- Volunteer : POPL'24

Presentation :

- Conferences : iFM'22, NISK'21, AOL'23, IFIPSC'23
- Workshops : NWPT'21, ISOLA'22

Teaching Experience

- Teaching assistant : Models of Concurrency '22, UiO
- Teaching assistant : Models of Concurrency '21, UiO
- Guest Lecture : Adaptive methods for data based decision making'22, UiO
- Guest Lecture : Adaptive methods for data based decision making'22, UiO
- Guest Lecture : Programming Languages '23, UiO

Scholarships & Awards

- OPLSS fellowship for attending summer school
- British Council 70th scholarship for women

Contributions to Scientific Software

- Contributor GreenHouse DT : An Exemplar for Digital Twin

References

- Prof. Silvia Lizeth Tapia Tarifa, sltarifa@ifi.uio.no, PhD Advisor
- Prof. Olaf Owe, olaf@ifi.uio.no, PhD Advisor and Co-Author
- Prof. Einar Broch Johnsen, einarj@ifi.uio.no, PhD Group leader and Co-Author

Publications

- [1] Baramashetru, Chinmayi Prabhu, et al. "A policy language to capture compliance of data protection requirements." *International Conference on Integrated Formal Methods*. Cham: Springer International Publishing, 2022.
- [2] A Type System for Data Privacy Compliance in Active Object Languages – Under submission for ECOOP 2024
- [3] Baramashetru, Chinmayi Prabhu, Silvia Lizeth Tapia Tarifa, and Olaf Owe. "Integrating Data Privacy Compliance in Active Object Languages." *Active Object Languages: Current Research Trends*. Cham: Springer Nature Switzerland, 2024. 263-288
- [4] Kamburjan, Eduard, et al. "GreenhouseDT: An Exemplar for Digital Twins." (2024).
- [5] Baramashetru, Chinmayi Prabhu, et al. "Towards a Policy Language Enforcing Privacy by design in Distributed Services."
- [6] Assuring GDPR conformance through language based compliance to appear in Volume **695** of the **IFIP Advances in Information and Communication Technology** series.
- [7] Duguma, Daniel Gerbi, et al. "Privacy-preserving transactive energy systems: Key topics and open research challenges." *arXiv preprint arXiv:2312.11564* (2023).