National Institute of Technology, Tiruchirappalli:
Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Brief Profile: I am an academic in the field of Computer Science with teaching and research interests in compiler design, program analysis, data structures, automata theory, and Python programming. I am committed to delivering conceptually strong and application-oriented instruction, fostering critical thinking and problem-solving skills among students. My teaching approach integrates theoretical foundations with practical exposure to prepare students for research and industry challenges.

My research focuses on secure compiler optimizations, with an emphasis on verifying the preservation of security properties between source and optimized programs. I explore techniques such as static taint analysis, bisimulation, and model checking to ensure semantic and security equivalence during program transformations. I am actively engaged in scholarly research and aim to contribute to the development of reliable and secure software systems. I am also interested in collaborative research and interdisciplinary applications within the broader domain of programming languages and software security.

1. Name: Dr. Priyanka Panigrahi
2. Designation: Assistant Professor
3. Office Address: Room 310, Dept. of CSE
4. Telephone : 0431-250-3224
5. Email (Primary): ppriyanka@nitt.edu Email (Secondary): ppriyankacse@gmail.com
6. Field(s) of Specialization: Compiler Security, Information Security, Security Verification, Program Analysis, Software Security, Vulnerability Detection

7. Employment Profile

Job Title	Employer	From	To
Assistant Professor	NIT Trichy, Tamil Nadu	Dec 2025	Present
Assistant Professor	KIIT Bhubaneswar, Odisha	July 2024	Dec 2025

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
PhD	IIT Guwahati, Assam	2024		Computer Science and Engineering

MTech	VSSUT, Burla, Odisha	2015	First	Computer Science and Engineering
BTech	BPUT, Odisha	2012	First	Computer Science and Engineering

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)
2022	Winner of Qualcomm Innovation Fellowship	Qualcomm, India	July 2022	June 2023
2017	PhD Fellowship	MHRD	July 2017	June 2022
2013	MTech Fellowship	MHRD	Aug 2013	June 2015

13. Details of Academic Work
   (i) Curriculum Development
   (ii) Courses taught at Postgraduate and Undergraduate levels
      - CSIR12: Introduction to Comp. Prog. (Python)
      - CSPC62: Compiler Design
   (iii)Projects guided at Postgraduate level
   (iv)Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role (Supervisor/ Co-Supervisor)	Year of Award

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue

18. Invited Talks delivered

Topic	Date	Inviting Organization

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Annual	IEEE	98273431

20. Academic Foreign Visits

Country	Duration of Visit	Programme

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
Priyanka Panigrahi, and Chandan Karfa	MQIL: Model Checking based Quantification of Information Leakage	IEEE Embedded Systems Letters (ESL)	Early Access		2026	Q2, IF: 2
Priyanka Panigrahi, and Chandan Karfa	Translation Validation of Information Leakage of Compiler Optimizations	IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD)	42(11)	3585-3598	2023	Q1, IF: 2.9
Priyanka Panigrahi, Abhik Paul and Chandan Karfa	Quantifying Information Leakage for Security Verification of Compiler Optimizations	IEEE Transactions on Computer-Aided Design of Integrated	41(11)	4385-4396	2022	Q1, IF: 2.9

		Circuits and Systems (TCAD)				
Priyanka Panigrahi, Vemuri Sahithya, Chandan Karfa, and Prabhat Mishra	Secure Register Allocation for Trusted Code Generation	IEEE Embedded Systems Letters (ESL)	14(3)	127-130	2022	Q2, IF: 2

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Priyanka Panigrahi, Vignesh Ravichandra Rao, Thockchom Birjit Singha, and Chandan Karfa	SRIL: Securing Registers from Information Leakage at Register Transfer Level	37th International Conference on VLSI Design and 23rd International Conference on Embedded Systems (VLSID)	492-498		Kolkata, India	2024
Priyanka Panigrahi and Chandan Karfa	An Investigation into the Security of Register Allocation with Spilling and Splitting	IEEE Computer Society Annual Symposium on VLSI (ISVLSI)	1-6		Foz do Iguacu, Brazil	2023
Priyanka Panigrahi, Rajesh Kumar Jha, and Chandan Karfa	User Guided Register Manipulation in Digital Circuits	VLSI Design and Test (VDAT)	468-481		Indore, India	2019

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number