Animesh Chhotaray

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APPOINTMENTS

Research Scientist 2023-
Georgia Tech, USA

- Conduct research on cybersecurity of systems (especially cyberphysical systems and critical-infrastructure). My research entails discovering unique vulnerabilities, doing impact analysis via large-scale measurement studies and user studies, developing defenses with formal guarantees and building practical solutions for users to understand the security of their systems better.
- Active member of INL's Education Working Group for DoE's Cyber-Informed-Engineering (CIE), and IEEE P3528 CIE Guide for CIE Curricula
- Lead adoption of CIE initiative at Georgia Tech. Co-authored CIE Curriculum Guide V1 with INL and other CIE university partners
- Co-manage Cyber-Physical System Security lab with Dr. Saman Zonouz.
- Teach OMSCS (online masters in computer science) graduate students cybersecurity and AI research.
- Write grant proposals and research papers.

Teaching Associate 2013-2015
KIIT University, Bhubaneswar, India

- Research: Develop image-encryption techniques using orthonormal and self-invertible matrices.
- Teaching: Programming in C, Computer Security.

Engineer 2011-2013
Samsung Research & Development Institute, NOIDA, India

- Worked for Systems team (FM driver) on feature phones with ARM based SoC ranging from 2G (48xx, 49xx) to 3G (68xx).
- Worked on code optimization, bug fixing and code stabilization through analysisof RAM dumps and traces, and test cases performed for side effects.

EDUCATION

PhD Computer Science 2017-2023
University of Florida GPA: 3.8/4.0

- **Dissertation Title**: Provable-Security Treatment Of Circuit-Design Intellectual-Property Theft In Integrated-Circuit Supply Chain
- **Courses**: Computer Network Security, Penetration Testing, Advanced Data Structures, Introduction to Modern Cryptography, Network Algorithms and Data Structures, Analysis of Algorithms, Programming Language Principles, Computer Architecture, Computer and Information Security, Mathematics for Intelligent Systems, Automated Software and Hardware Verification, Applied Machine Learning

MS Computer Science 2015-2017
University of Florida GPA: 3.8/4.0

BTech Computer Science 2007-2011
NIT Rourkela, India GPA: 8.13/10

PUBLICATIONS

6. T. Chattopdhyay, F. Ceschin, M. Garza, D. Zyunkin, A. Chhotaray, A. Stebner, S. Zonouz, R. Beyah, "One Video to Steal Them All: 3D-Printing IP Theft through Optical Side-Channels", *ACM Conference on Computer and Communications Security (CCS)* , (2025).

5. A. Raymaker, R. Pickren, A. Chhotaray, F. Li, S. Zonouz, R. Beyah, "A Sea of Cyber Threats: Maritime Cybersecurity from the Perspective of Mariners", *ACM CCS* , (2025).

4. R. Pickren, A. Chhotaray, F. Li, S. Zonouz, R. Beyah, "Release the Hounds! Automated Inference and Empirical Security Evaluation of Field-Deployed PLCs using Active Network Data", *ACM CCS* , (2024).

3. A. Chhotaray, T. Shrimpton, "Hardening Circuit Design IP Against Reverse-Engineering Attacks", *IEEE Security & Privacy* , (2022).

2. W. Garcia, A. Chhotaray, J. Choi, S. K. Adari, K. Butler, S. Jha, "Brittle Features of Device Authentication", *ACM CODASPY* , (2021).

1. A. Chhotaray, A. Nahiyan, T. Shrimpton, D. Forte, M. Tehranipoor, "Standardizing Bad Cryptographic Practice - A teardown of the P1735 IEEE standard for protecting electronic-design intellectual property", *ACM CCS* , (2017).

AWARDS AND RECOGNITION

- Outstanding Research Scientist award in 2025 by College of Computing, Georgia Tech
- Graduate Fellowship Award in 2019 and 2022
- CCS'17 paper resulted in 7 Common Vulnerabilities and Exposures (CVE) entries in the Vulnerability Notes Database
- CCS'17 paper featured in The Register, threatpost, The Hacker News, and other cybersecurity news publications

SERVICE

- Program Committee member of Dependable Systems and Networks (DSN), 2025
- Judge of CoC Graduate Poster Symposium (2024), Project ENGAGES Summer Research Symposium (2025), and S.U.R.E Symposium (2025) at Georgia Tech
- External reviewer, Network and Distributed System Security (NDSS), 2020
- Sub-reviewer CRYPTO ACM WiSec, 2020

MENTEES OUTSIDE GEORGIA TECH

- Kollin Labowski (PhD candidate, University of Florida)— co-author of paper "Fourier-Analytic Framework for Characterizing the (Un)Hideability of Combinational-Logic Circuits" (in submission IEEE S&P'25)

- Marco Garza (UG senior, University of Texas at San Antonio)— co-author of paper "3D-Printing IP Theft through Optical Side-Channels" (ACM CCS'25)
- Khayri White (UG, junior, Howard University)— won best presentation award in the S.U.R.E program 2025, Georgia Tech.