

# Bhupendra Acharya

## Curriculum Vitae

Saarbrücken, Germany (Temporary)  
New Orleans, LA, USA (Permanent)  
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🌐 [www.bhupendraacharya.com](http://www.bhupendraacharya.com)

### Research Interests

Internet Cybercrime; Large Scale Internet Measurement; Phishing; Abuse; Scams. Web and Network Security

### Education

- Jan 2018 – **Doctoral in Engineering and Applied Sciences**  
Dec 2023 Department of Computer Science, University of New Orleans  
**Thesis:** Analyzing the Robustness of Social Engineering Attacks on Defense Systems
- Jan 2018 – **MS in Computer Science (Cyber Security)**  
Dec 2020 Department of Computer Science, University of New Orleans  
**Thesis:** PhishPrint: A Novel Framework for Scalable Evaluation of Web Security Crawlers and Mining of Unknown Cloaking Vectors
- Jan 2007 – **BS in Computer Science**  
Dec 2010 Department of Computer Science, Cameron University

### Academic Experience

- Mar 2023 – **Postdoctoral Researcher**, CISPA Helmholtz Center for Information Security, Germany.  
Present Advisor: Dr. Thorsten Holz
- Jan 2018 – **Teaching / Research Assistant (PhD Student)**, University of New Orleans, LA, US.  
Dec 2022 Advisor: Dr. Phani Vadrevu

### Industrial Experience

- 2021 - 2022 – **Software Development Engineer in Test, Payments and Devices.** [Amazon Inc.](#)  
2013 - 2018 Seattle, WA and Sunnyvale, CA, US.
- 2012 - 2013 – **Software Development Engineer in Web and Test.** [Raima Inc.](#)  
Seattle, WA, US.
- 2011 - 2012 – **Software Development Engineer.** [Microsoft Inc](#) (Contracting via [PeopleTech Group](#)).  
Redmond, WA, US.

### Honors and Awards

- 2022 **Innovative and Think Big**, HackaFire Amazon Fire TV and Devices Awards  
2021 **Offensive Attack**, Google Vulnerability Rewards (Twice)  
2021-2022 **Conference Grants**, USENIX Registration (2021), DIMVA Travel (2022)  
2007-2010 **List of Honors**, Cameron University Dean's List

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## Publications (peer-reviewed and pre-print)

### Color coding:

**\*lime green\*:** Available in pre-print (4/10)

**\*orange\*:** To be submitted to upcoming conferences, and pre-print available (1/10)

**\*purple\*:** Under review at conferences, and pre-print available (3/10)

**\*blue\*:** Published at peer-reviewed (6/10)

[10] **Bhupendra Acharya**<sup>\*\*</sup>, Dominik Sautter<sup>\*\*</sup>, Muhammad Saad, Thorsten Holz. **ScamChatBot: An End-to-End Analysis of Fake Account Recovery on Social Media via Chatbots.** **To be submitted** to ACM CSS 2025

<sup>\*\*</sup> Both authors equally contributed

**Available Pre-print** at arXiv (arXiv:2412.15072) and personal website

[9] Christian Böttger, Nurullah Demir, Jan Hörnemann, **Bhupendra Acharya**, Norbert Pohlmann, Thorsten Holz, Matteo Grosse-Kampmann, Tobias Urban. **Understanding Regional Filter Lists: Efficacy and Impact.** In Proceedings of 25<sup>th</sup> Privacy Enhancing Technologies Symposium (PETS), 2025.

**Acceptance Rate: 30.13% (44/146)**

[8] **Bhupendra Acharya**, Dario Lazzaro, Antonio Emanuele Cinà, Thorsten Holz. **Pirates of Charity: Exploring Donation-based Abuses in Social Media Platforms.** **Under Review** at the World Wide Web Conference, 2025

**Available Pre-print** at arXiv (arXiv:2412.15621) and personal website

[7] **Bhupendra Acharya**, Thorsten Holz. **An Explorative Study of Pig Butchering Scams.** **Under Review** at the IEEE Symposium on Security and Privacy (IEEE S&P), 2025.

**Available Pre-print** at arXiv (arXiv:2412.15423) and personal website

[6] Mario Beluri, **Bhupendra Acharya**, Soheil Khodayari, Giada Stivala, Giancarlo Pellegrino, Thorsten Holz. **Exploration of the Dynamics of Buy and Sale of Social Media Accounts.** **Under Review** at the ACM Internet Measurement Conference (IMC), 2025.

**Available Pre-print** at arXiv (arXiv:2412.14985) and personal website

[5] **Bhupendra Acharya**, Dario Lazzaro, Efren Lopez Morales, Adam Oest, Muhammad Saad, Antonio Emanuele Cinà, Lea Schönherr, Thorsten Holz. **The Imitation Game: Exploring Brand Impersonation Attacks on Social Media Platforms.** In Proceedings of the 33<sup>rd</sup> USENIX Security Symposium (USENIX Security), 2024.

**Acceptance Rate: 382/2176 (17.6%)**

[4] **Bhupendra Acharya**, Muhammad Saad, Antonio Emanuele Cinà, Lea Schönherr, Hoang Dai Nguyen, Adam Oest, Phani Vadrevu, Thorsten Holz. **Conning the Crypto Conman: End-to-End Analysis of Cryptocurrency Technical Support Scams.** In Proceedings of the 45<sup>th</sup> IEEE Symposium on Security and Privacy (IEEE S&P), 2024.

**Acceptance Rate: 100/582 (17.18%)**

[3] Hoang Dai Nguyen, Karthika Subramani, **Bhupendra Acharya**, Roberto Perdisci, Phani Vadrevu. **C-FRAME: Characterizing and Measuring in-the-wild CAPTCHA Attacks.** In Proceedings of the 45<sup>th</sup> IEEE Symposium on Security and Privacy (IEEE S&P), 2024.

**Acceptance Rate: 70/601 (11.64%)**

[2] **Bhupendra Acharya**, Phani Vadrevu. **A Human in Every APE: Delineating and Evaluating the Human Analysis Systems of Anti-Phishing Entities.** In Proceedings of the 19<sup>th</sup> Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA), 2022.

**Acceptance Rate: 11/39 (28.2%)**

[1] **Bhupendra Acharya**, Phani Vadrevu. **PhishPrint: Evading Phishing Detection Crawlers by Prior Profiling.** In Proceedings of the 30<sup>th</sup> USENIX Security Symposium (USENIX Security), 2021.

**Acceptance Rate: 246/1316 (18.7%)**

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## Research (In the pipeline to submissions)

[11] Exploration of Forms Abuse [Target CCS, Jan 13, 2025]

[12] Analysis of Sensitive Content Share in Social Media Platforms [Target USENIX, Jan 23, 2025]

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## Academic Service

- 2024** Reviewer, ACM International World Wide Web (WWW) Conference  
Program Committee, USENIX Security  
Conference Program Session Chair, ACM CCS  
Artifact Evaluation Committee, USENIX Security
- 2023** Artifact Evaluation Committee, ACM CCS  
Artifact Evaluation Committee, USENIX Security

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## Teaching

- CS 2467 Systems Programming and Concept, Instructor**, University of New Orleans, LA, US  
**2021:** Spring and Summer Semesters  
**2020:** Spring, Summer, and Fall Semesters
- CS 2450 Machine Language and Assembly, Instructor**, University of New Orleans, LA, US  
**2021:** Fall Semester

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## Advising Students (Thesis/Research Projects)

### Current Graduate Students

- 2024 – Present **Abdullah Alfurjani**, Saarland University, Germany, [Thesis Research](#)  
2024 – Present **Amala Augustine**, Saarland University, Germany, [Thesis Research](#)  
2024 – Present **Lie Sue Chung**, Saarland University, Germany, [Thesis Research](#)  
2024 – Present **Sagar Kishore**, Saarland University, Germany, [Thesis Research](#)  
2024 – Present **Marjo Toska**, Saarland University, Germany, [Thesis Research](#)  
2024 – Present **Nilaa Maharjhan**, Saarland University, Germany, [Thesis Research](#)

### Current Undergraduate Students

- 2024 – Present **Jan-Julius Kallenborn**, Saarland University, Saarbrücken, Germany, [Thesis Research](#)  
2024 – Present **Tim Christmann**, Saarland University, Saarbrücken, Germany, [Cybersecurity Projects](#)  
2024 – Present **Ady Elouej**, Saarland University, Saarbrücken, Germany, [Thesis Research](#)  
2024 – Present **Louai Alkhatib**, Saarland University, Saarbrücken, Germany, [Thesis Research](#)  
2024 – Present **Khalil Hassan**, Saarland University, Saarbrücken, Germany, [Thesis Research](#)

### Alumni Students

- 2024 **Christoph Petersen\*\***, Ruhr University, Germany, Undergraduate Thesis  
**Thesis:** Cyber Thieves on Telegram: Investigating Stolen Data and Fraud Patterns in Messenger-based C2 Channels
- 2024 **Mario Beluri\*\***, Saarland University, Germany, Graduate Thesis  
**Thesis:** Exploration of the Dynamics of Buy and Sale of Social Media Accounts
- 2024 **Andreas Brix**, Saarland University, Germany, Cybersecurity Projects
- 2023/2024 **Laura Thineta Maulia\*\***, Saarland University, Germany, Undergraduate Thesis  
**Thesis:** Ghost Coins: Analyzing the Prevalence of Fake Cryptocurrency Wallet
- 2023/2024 **Dominik Sautter\*\***, Saarland University, Germany, Graduate Thesis  
**Thesis:** ScamChatBot: An End-to-End Analysis of Fake Account Recovery on Social Media via Chatbots

\*\* Alumni students successfully completed their thesis work whom I had the privilege of advising.

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## Media Coverage

[1] Felix Koltermann. *Seeking help for crypto wallet problems on social media can attract scammers.* <https://idw-online.de/de/news839794>. 2024

[2] Redazione. *Crypto scams on X, asking for help on social for problems with one's wallet attracts scammers, HoneyTweet study.* <https://decripto.org/en/crypto-scams-on-x-asking-for-help-on-social-for-problems-with-ones-wallet-attracts-scammers-honeytweet-study/>. 2024

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## Invited Research Talks (Selected)

- Dec 2024**      **Title: Protecting Users and Brands Against Social Engineering Attacks**  
Massachusetts Institute of Technology, Sloan (CAMS), MA
- Sep 2024**      **Title: Empirical Study of Scams and Abuses in Social Media Platforms**  
Boston University, Boston, MA
- Sep 2024**      **Title: Identifying Emerging Scams and Phishing Attacks via AI-Powered Automated Engagement**  
Symposium on Electronic Crime Research (e-Crime 2024), Boston, MA
- Apr 2024**      **Title: Empirical Study on Web Attacks and Abuses**  
Texas A&M, Kingsville, Texas
- Feb 2024**      **Title: Cloak and Scam: Creating Honeytraps to Measure Present-Day Internet Defense Mechanisms**  
University of New Mexico, New Mexico, NM
- Nov 2023**      **Title: How Safe Is the Web? Analyzing the Robustness of Prevalent Social Engineering Defenses**  
Tulane University, New Orleans, LA
- Jan 2023**      **Title: Analyzing the Robustness of Prevalent Social Engineering Defense Mechanisms**  
California State LA, Los Angeles, CA

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## Writing (Grant Proposal/Book)

**Grant Proposal.**    **Title: Enhancing Web Measurement Robustness In the Cases of Social Media Abuses and Web Tracking**

Grant Family: Deutsche Forschungsgemeinschaft (DFG), German Research Fund

PI 1: Tobias Urban, Professor

Westphalian University of Applied Sciences, Germany

PI 2: Bhupendra Acharya, Postdoctoral Researcher

CISPA Helmholtz for Information Security, Germany

Amount Requested: €950,000

Status: Pending

Submitted: Sep 02, 2024

Expected Result by: Feb/Mar 2025

**Book Write.**    I am currently in the early phase of writing a book - "**Advanced Web Security**" (Target: Aug 2026)