Gorka Abad

Curriculum Vitae.
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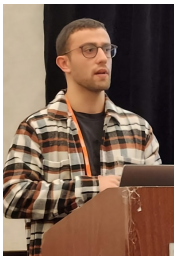

Education

2021–now **Ph.D. candidate**, *Radboud University*, Nijmegen, The Netherlands,
In collaboration with Ikerlan research center in Spain.

research area Adversarial machine learning, mostly backdoor attacks.

supervisor Dr. Stjepan Picek

2019–2020 **Master's degree in cybersecurity**, *Universidad Internacional de La Rioja (UNIR)*, Spain, *8.6/10*

thesis *Enhancing IoT security through DLTs 9/10*

supervisor Fidel Paniagua

2015–2019 **Bachelor's degree in Software Engineering**, *Euskal Herriko Unibertsitatea (EHU)*, Spain,

thesis *Online penetration testing laboratory 9/10*

supervisor Juan Antonio Pereira

Experience

2020–2020 **Assistant researcher**, *Euskal Herriko Unibertsitatea (EHU)*, Spain
Working on the Group for Adaptive Teaching-Learning Environment (Ga-Lan Group), which centers on applying Artificial Intelligence techniques for developing learning systems and tools with dynamic adaptation to the user.

2020–2020 **Cybersecurity Engineer**, *Arinn Innovation*, Spain
Internship working on cloud-based WAF management.

2018–2019 **Software developer**, *IDE*, Spain
Internship working on Java software development.

Teaching

2023 Teaching assistant in master's course *Security and Privacy of Machine Learning* at Radboud University, The Netherlands.

Service to the Academic Community

2023–now Reviewer at *IEEE Transactions on Information Forensics & Security (TIFS)*

2023–2024 Artifact evaluator at *Network and Distributed System Security (NDSS)*

Publications

2024 Li, J., Abad, G., Picek, S., & Conti, M. (2024). *Membership Privacy Evaluation in Deep Spiking Neural Networks.* arXiv preprint.

2024 Abad, G., Picek, S., Cavallaro, L., & Urbieta, A. (2024). *Context is the Key: Backdoor Attacks for In-Context Learning with Vision Transformers.* arXiv preprint.

2024 Abad, G., Picek, S., & Urbieta, A. (2024). *Time-Distributed Backdoor Attacks on Federated Spiking Learning.* arXiv preprint.

2024 Abad, G., Ersoy, O., Picek, S., & Urbieta, A. (2024). *Sneaky Spikes: Uncovering Stealthy Backdoor Attacks in Spiking Neural Networks with Neuromorphic Data.* Network and Distributed System Security (NDSS) Symposium.

2023 Pleiter, B., Tajalli, H., Koffas, S., Abad, G., Xu, J., Larson, M., & Picek, S. (2023). *Tabdoor: Backdoor Vulnerabilities in Transformer-based Neural Networks for Tabular Data.*

2023 Tajalli, H., Abad, G., & Picek, S. (2023). *Poster: Backdoor Attack on Extreme Learning Machines.* In Proceedings of the 2023 ACM SIGSAC Conference on Computer and Communications Security

2023 Xu, J., Abad, G., & Picek, S. (2023). *Rethinking the Trigger-injecting Position in Graph Backdoor Attack.* In International Joint Conference on Neural Networks (IJCNN)

2023 Abad, G., Xu, J., Koffas, S., Tajalli, B., & Picek, S. (2023). *A Systematic Evaluation of Backdoor Trigger Characteristics in Image Classification.* arXiv preprint arXiv:2302.01740.

2023 Abad, G., Paguada, S., Ersoy, O., Picek, S., Ramírez-Durán, V. J., & Urbieta, A. (2023). *Sniper Backdoor: Single Client Targeted Backdoor Attack in Federated Learning.* In First IEEE Conference on Secure and Trustworthy Machine Learning.

2022 Abad, G., Ersoy, O., Picek, S., Ramírez-Durán, V. J., & Urbieta, A. (2022). *Poster: Backdoor Attacks on Spiking NNs and Neuromorphic Datasets.* In Proceedings of the 2022 ACM SIGSAC Conference on Computer and Communications Security (pp. 3315-3317).

2022 Abad, G., Picek, S., & Urbieta, A. (2022). *On the Security & Privacy in Federated Learning.* arXiv preprint arXiv:2112.05423.

Talks

2024 **Security of AI: Are we there?**

At Universidad de Cantabria (UC), Spain.

2024 **Sneaky Spikes: Uncovering Stealthy Backdoor Attacks in Spiking Neural Networks with Neuromorphic Data.**

At NDSS'24 in San Diego, California.

2023 **Introduction to the Security and Privacy in Deep Learning.**

At the University of the Basque Country (UPV/EHU), Basque Country.

2023 **Security and Privacy in Deep Learning.**
At the University of the Basque Country (UPV/EHU), Basque Country.

2023 **Sniper Backdoor: Single Client Targeted Backdoor Attack in Federated Learning**
At SaTML'23 in Raleigh, North Carolina.

2023 **Poster: Backdoor Attacks on Spiking NNs and Neuromorphic Datasets.**
At Ikerlan research center.

2022 **Backdoor Attacks on Spiking NNs and Neuromorphic Datasets.**
At Radboud University.

2022 **Poster: Backdoor Attacks on Spiking NNs and Neuromorphic Datasets.**
At CCS'22.

2022 **On the security and privacy in Federated Learning**
For VeriDevOps European project.

2022 **Sniper Backdoor: Single Client Targeted Backdoor Attack in Federated Learning**
At Radboud University.

2022 **Sniper Backdoor: Single Client Targeted Backdoor Attack in Federated Learning**
At Ikerlan research center.

Research Visits

2024 Visiting Lorenzo Cavallaro and his team at University College London (UCL), London, UK

Courses

2022 Summer School on real-world crypto and privacy, Šibenik, Croatia

2022 Summer School on Security and Privacy, KU Leuven, Leuven, Belgium

Students Supervision

2023 Oct.–2024 July **Master's student supervision**, *at UPV/EHU & Ikerlan*, Working on the security of SNNs.

2023 Feb.–2023 June **Bachelor's student supervision**, *at UPV/EHU & Ikerlan*, Working on adversarial examples against autonomous driving systems.

2022 June – 2023 March **Master's student supervision**, *at Mondragón University & Ikerlan*, Working on adversarial examples against face recognition systems.

Languages

Basque Native

Spanish Native

English Advanced