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Date of birth: 18/11/1990

Office: Faculty of Science and Engineering, Sorbonne University, CNRS, LIP6

Adresse: 4 place Jussieu, Paris, 75005

Current position

Sorbonne University, CNRS, LIP6

Paris, France

Associate Professor

Sep 2024 – Present

Executive Education

HEC Paris (French: *École des Hautes Études Commerciales de Paris*, English: “Paris School of Advanced Business Studies”) Paris, France

Program: Challenge+ Entrepreneurial Studies Jan 2024 – Nov 2024

Education

Sorbonne University, CNRS, LIP6

Paris, France

Ph.D.

Oct 2019 – Jan 2023

Field: Computer Science, Telecommunications, and Electronics

Advisors: Professors Haralampos Stratigopoulos, Hassan Aboushady

Thesis: Security and Trust for Wireless Integrated Circuits. Available [here](#).

Cinvestav - Guadalajara

Zapopan, Mexico

M.Sc. in Electrical Engineering

Sep 2016 – Dec 2018

Field: Telecommunications

Advisors: Professors Ramón Parra Michel, Manuel Mauricio Lara Barrón

Thesis: Characterization, modeling, estimation, and compensation techniques for widely linear systems in software-defined radios with homodyne transceivers. Available [ES] [here](#).

University of Guadalajara (UDG)

Guadalajara, Mexico

Electronics and Communications Engineering

Aug 2010 – Dec 2015

Exchanges

National Institute of Applied Sciences (INSA)

Toulouse, France

Fourth year of Electrical and Information Engineering Sep 2014 – Jun 2015

Research experience

Sorbonne University, CNRS, LIP6

Paris, France

Associate Professor

Sep 2024 – Present

Sorbonne University, CNRS, LIP6

Paris, France

Post-doctoral researcher

Feb 2023 – Aug 2024

Objective: Anti-piracy design of Integrated Circuits (IC) to prevent Intellectual Property (IP) theft.

Sorbonne University, CNRS, LIP6

Paris, France

Ph.D. candidate researcher

Oct 2019 – Jan 2023

Objective: Hardware security mechanisms to protect wireless communication devices against IP theft, IC piracy, Hardware Trojan (HT) infection, and unauthorized use.

Cinvestav and University Paris VI

Mexico and France

M.Sc. candidate researcher

Sep 2017 – Dec 2018

Objective: Design of DC offset and IQ imbalance estimation and compensation algorithms for a Software Defined Radio (SDR).

Fellowship & Grants

Pre-maturation program (Alliance Sorbonne Université - France)	2024
French Tech grant (Bpifrance - France)	2024
Pre-maturation program (CNRS - France)	2023
Ph.D. fellowship (CONACYT - Mexico)	2019
Exchange grant (CONACYT - Mexico)	2018
M.Sc. fellowship (CONACYT - Mexico)	2016
MEXFITEC fellowship (SEP - Mexico)	2014

Awards

Best Thesis Award (2nd) (Doctoral School EDITE)	2022
Laureate of the innovation contest i-PhD (Bpifrance)	2022
Project name: SyncLock. 2022 Awards here .	

Teaching Responsibilities

Sorbonne University

Paris, France

Department: UFR 919 of Engineering
Master (M); Licence (L);

Position: Associate Professor

M2: Advanced Analog Circuit Design	Since 2020
M1: Summer Scientific Internship	Since 2022
M1: SESI project	Since 2022
L3: Microcontroller-based systems	Since 2024
L3: Digital Systems and Embedded Processors	Since 2020
L2: Analog and Digital Electronics	Since 2020
L1: Supervised Research Workshop	Since 2024

Panamerican University

Guadalajara, Mexico

Department: DFA

Position: Tutor

Subjects/Fields: Linear algebra, calculus, and trigonometry 2017-2018

Publications: Peer-Reviewed Journal Articles

1. **Leaking Wireless ICs via Hardware Trojan-Infected Synchronization**
A. R. Díaz-Rizo, H. Aboushady, H.-G. Stratigopoulos
IEEE Transactions on Dependable and Secure Computing, vol. 20, no. 5, pp. 3845-3859, 1 Sept.-Oct. 2023, doi: 10.1109/TDSC.2022.3218507. [HAL](#).
2. **Anti-Piracy Design of RF Transceivers**
A. R. Díaz-Rizo, H. Aboushady, H.-G. Stratigopoulos
IEEE Transactions on Circuits and Systems I: Regular Papers, vol. 70, no. 1, pp. 492-505, Jan. 2023, doi: 10.1109/TCSI.2022.3214111. [HAL](#).
3. **RF Transceiver Security Against Piracy Attacks**
A. R. Díaz-Rizo, J. Leonhard, H. Aboushady, H.-G. Stratigopoulos
IEEE Transactions on Circuits and Systems II: Express Briefs, vol. 69, no. 7, pp. 3169-3173, July 2022, doi: 10.1109/TCSII.2022.3165709. [HAL](#).
4. **Digitally Assisted Mixed-Signal Circuit Security**
J. Leonhard, N. Limaye, S. Turk, A. Sayed, A. R. Díaz-Rizo, H. Aboushady, H.-G. Stratigopoulos
IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, vol. 41, no. 8, pp. 2449-2462, August. 2022, doi: 10.1109/TCAD.2021.3111550. [HAL](#).
5. **Tunable filtenna with DGS loaded resonators for a cognitive radio system based on an SDR transceiver**
A. A. Ibrahim, H. A. Mohamed, A. R. Díaz-Rizo, R. Parra-Michel, H. Aboushady
IEEE Access, vol. 10, pp. 32123-32131, 2022, doi: 10.1109/ACCESS.2022.3160467. [Open Access](#).

Publications: Conference Papers

1. **Live Demonstration: Securing Wireless ICs Against Supply Chain Attacks Using Synchronization Locking (SyncLock)**
A. R. Díaz-Rizo, H. Aboushady, H.-G. Stratigopoulos
2025 *IEEE International Symposium on Circuits and Systems (ISCAS)*, London, UK, 2025. [HAL](#).
2. **Covert Communication Channels Based On Hardware Trojans : Open-Source Dataset and AI-based Detection**
A. R. Díaz-Rizo, A. Abdelazim, H. Aboushady, H.-G. Stratigopoulos
2024 *IEEE International Symposium on Hardware Oriented Security and Trust (HOST)*, Tysons Corner, VA, USA, 2024, pp. 101-106, doi: 10.1109/HOST55342.2024.10545414. [HAL](#).
3. **SyncLock: RF transceiver security using synchronization locking**
A. R. Díaz-Rizo, H. Aboushady, H.-G. Stratigopoulos
2022 *Design, Automation & Test in Europe Conference & Exhibition (DATE)*, Antwerp, Belgium, 2022, pp. 1153-1156, doi: 10.23919/DATE54114.2022.9774556. [HAL](#).

Publications: Patents

1. **Method for securing telecommunication transceiver integrated circuit designs against piracy, counterfeiting and unauthorized use**
H.-G. Stratigopoulos, A. R. Díaz-Rizo, H. Aboushady
International Application No. [PCT/IB2022/000135](#) Mar 2022
Publication Number: [WO/2023/170439](#) Sep 2023

Publications: Datasets

1. **Covert Communication Channels based on Hardware Trojans: open-source dataset**
A. R. Díaz-Rizo, A. Abdelazim, H. Aboushady, H.-G. Stratigopoulos
Zenodo, Mar. 11, 2024. doi: 10.5281/zenodo.12190443.

Publications: Thesis

1. **Security and Trust for Wireless Integrated Circuits**
A. R. Díaz-Rizo
Cryptography and Security. Sorbonne University, Jan. 2023.
[⟨NNT : 2023SORUS005⟩](#). [⟨tel-03941314v3⟩](#)

Presented workshops, talks and tutorials as public speaker

1. **Covert Communication Channels based on Hardware Trojans: Open-Source dataset generation and AI-based detection**
Seminar: SemSecuElec, CREACH LABS
Place and date: Inria Center of the University of Rennes, Rennes, France. Feb 2025
Slides: [CREACH LABS](#)
2. **Covert Communication Channels based on Hardware Trojans**
Seminar: Journée Thématique GDR SoC²
Place and date: Sorbonne University, Paris, France. Nov 2023
Workshop: Hardware security and open-source
3. **Hardware security for integrated circuits**
Conference: Electronics, Automation and Communications Congress 2023
Place and date: Autonomous University of Nuevo León, Monterrey, Mexico. Nov 2023
4. **Security and trust for Wireless Integrated Circuits**
Place and date: Cinvestav - Guadalajara, Zapopan, Mexico. Jun 2023
5. **Hardware security and trust for RF transceivers**
Conference: European Microwave Week 2022 (EuMW 2022)
Place and date: Milan, Italy. Sep 2022
Workshop: RF and mmW reliable ICs: characterization, test and security challenges

National colloquia

1. **Anti-Piracy Security for RF Transceivers**
Conference: Colloque GDR SoC² (CGDR 2022)
Place and date: Strasbourg, France. Jun 2022

Foreign languages

Spanish (Native)
English (Full Professional Proficiency)
French (Full Professional Proficiency)