

José Jair Cardoso de Santanna

Enthusiastic Researcher, Internet Security Specialist and (Big) Data Analyst

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Languages

Dutch ★★☆☆☆

English ★★★★★

Portuguese ★★★★★

Status and Professional Objective

I am currently assistant professor at University of Twente, I provide technical support to the Team High Tech Crime Unit Police on digital forensics, and I am the product manager of the Dutch DDoS Clearing House (a coalition of 25 players from industry (ISPs, xSPs, IXPs, banks, not-for-profit DPS) and gov't (ministries and agencies)). A Ph.D. degree means: capacity to think analytically and abstractly to solve complex problems. In the period between 2013 and 2017, I was a Ph.D. candidate at the same university. A number of solutions proposed in my Ph.D. thesis were deployed by network operators worldwide and some methodologies will be used by the Dutch High Tech Crime Unit. During my Ph.D., I also acted as technical advisor to the Dutch National Cyber Security Center and to the Japanese Ministry of Internal Affairs and Communications, both on the topic of Cyber Security and DDoS attacks. I presented my work in more than 30 countries. In 2018, I won a national competition as "the best science communicator of The Netherlands" and I was elected as one of the best lectures of the computer science faculty in the University of Twente. My professional objective is to improve the security in all types of computer networks, especially the Internet by transferring my enthusiasm, knowledge, skills and experience into high impact solutions.

Education

- 2013–2017 **Doctor** in Computer Science University of Twente, The Netherlands
"DDoS-as-a-Service—Investigating Booter Websites".
Supervisor: Prof. Dr. Ir. Aiko Pras
This work has being used by both the security community and by network operators worldwide. One of the outcomes that stands out is publicly available at 'booterblacklist.com' and already downloaded by more than three thousand users worldwide.
- 2010–2012 **Master** in Computer Science Federal University of Rio Grande do Sul, Brazil
"A BPM-based Solution for Inter-domain Circuit Management".
Supervisor: Prof. Dr. Lisandro Zambenedetti Granville
The outcome of this work is still in production used by the Brazilian National Education and Research Network and available at 'meican.cipo.rnp.br'.
- 2005–2010 **Bachelor** in Computer Engineer Federal University of Pará, Brazil
"A Comparative Evaluation of DCCP Protocol in Mesh Networks."
Supervisor: Dr. Kelvin Lopes Dias

Experience

Project Leader

- 2017–current **Collecting, Transforming, Applying, and Disseminating DDoS Attack Knowledge**
€200k Funded by: SIDN fonds
- 2018–2019 **Online Discoverability and Vulnerabilities of ICS/SCADA Devices in the Netherlands**
€80k Funded by: Wetenschappelijk Onderzoek- en Documentatiecentrum (WODC)

Task Leader

- 2019–2023 **Cybersecurity Competence for Research and Innovation (CONCORDIA)**
€16M Funded by: the European Framework Programme for Research and Innovation
Responsible to lead 42 partners on the investigation of network-centric security solutions for Europe.

Technical Advisor

- 2019–2019 **To the *Nationale Beheersorganisatie Internet Providers (NBIP)* and the *Stichting Internet Domeinregistratie Nederland (SIDN)*** The Netherlands
Report on: “The impact of DDoS attacks on Dutch enterprises.”
- 2016–2016 **To the *Yokohama National University*** Japan
For the production of a report on “Reflection & Amplification DDoS attacks” requested by the *Japanese Ministry of Internal Affairs and Communications*.
- 2016–2016 **To the *Dutch National Cyber Security Center* and the *Scientific Research & Documentation Center*** The Netherlands
For the production of a report on “Cyber metrics 2016: DDoS and Malware” requested by the *Dutch Ministry of Security and Justice*.

Assistant Professor

- 2017–2019 **University of Twente** Enschede, The Netherlands
Tasks & Responsibilities: teach, supervise students, lead projects, submit project proposals, review academic papers and journals, and perform own research.

Lecturer

- 2012–2013 **University of Santa Cruz do Sul (UNISC)** Santa Cruz do Sul, Brazil
Tasks & Responsibilities: Supervise students and teach (integrally) the courses:
• **Digital Systems;**
• **Computer Networks; and**
• **Network Management.**

Guest Lecturer

- 2015–2019 **Cybercrime & Cybersecurity (minor)** University of Twente, The Netherlands
Course: Introduction to Network Forensics
Audience: bachelor students from University of Twente, European Research Center for Information (ERCIS), Westfälische Wilhelms □ Universität Münster, Universität Innsbruck, and University of Leicester.
- 2016–2019 **Network Management** University of Twente, The Netherlands
Lectures: (1) “SNMPv1, v2, v3 and Beyond” and (2) “Network management based on WebServices”
Audience: master students of computer science, electrical engineer, and telematics from the University of Twente.
- 2015–2019 **Network Security** University of Twente, The Netherlands
Lecture: “DDoS attacks into the Matrix”
Audience: master and bachelor students of computer science, electrical engineer, and telematics from the University of Twente, 3TU cyber security, and members of ICT labs.

2015 & 2016 **Product Design to Online Business** University of Twente, The Netherlands
 Lectures: (1) “Booters: the DDoS-as-a-Service phenomenon” and (2) “Product Design to Online Business”
 Audience: bachelor students of industrial engineering and business information technology.

Student Supervisor

6 students had their research published in international academic conferences, 5 decided to follow towards the next academic degree [] (Ph.D. or M.Sc.), 2 received the M.Sc. degree cum laude [+], 1 won the best paper award in an international conference [#], 1 won the second place of a renowned Dutch national prize (KIVI/Defensie & Veiligheid) for her thesis [!], and 2 are working as Digital Expert for the Dutch National High Tech Crime Unit [§].*

[M.Sc. Degree] Huub van Wieren, Joeri Kock, Shridhar Bangalore, Jessica Conrads, Kareem Fouda, Justyna Chromik[*,+,!] , Wouter de Vries[*,#], Joey de Vries[+], Mark Wierbosch, and Jarmo van Lenthe[§].

[B.Sc. Degree] Koen van Hove, Calvin Hendriks, Roeland Krak[*], Max Kerckers[*], Dirk Maan[*§], Jochum Börger, and Guilherme Dressler.

Conference Organizer

2019	Local Organiser ACM Internet Measurement Conference 2019 <i>ACM Internet Measurement (IMC) is one of the most renown measurement conference of the computer science community (ACM).</i>	IMC
2016	Shadow Technical Program Committee (TPC) <i>IFIP/IEEE International Conference on Network and Service Management is the premier conference in the area of network and service management. A shadow TPC is an experimental initiative for PhDs become better TPCs in the future. My reviews have the same weight as the actual TPC reviews.</i>	CNSM
2013-2016	Technical Program Committee (TPC) <i>Escola Regional de Redes de Computadores (pt_br), a conference for undergrad students from the south of Brazil. To motivate students to</i>	ERRC
2012	Local Organizing Committee <i>IEEE Latin American Conference on Cloud Computing and Communications.</i>	LatinCloud
2010	Local Organizing Committee <i>The Brazilian Symposium on Computer Networks and Distributed Systems.</i>	SBRC

Presentations

Invited	The Biggest Dutch Digital Experts Conference (DEX-XL)	2019
Invited	Stichting Nationaal Informatica Congres	2019
Invited	TEDx Talk Youth AnnaVanRijnCollege	2019
Invited	ONE conference	2019
Abstract	ONE conference	2018

Rewards & Awards

2018	Best Science Communicator of the Netherlands	FAMELab
2018	Among the 15 Best Young Engineers of the Country	Het Koninklijk Instituut Van Ingenieurs
2016	Best Poster Presentation	2nd Cyber Security Workshop in the Netherlands
2016	ACM SIGCOMM Travel Grant	Internet Measurement Conference (IMC)
2016	IFIP/DMTF Travel Grant	Conference on Network and Service Management (CNSM)
2016	Invited to the Dagstuhl Seminar 16361	on Security Challenges and Opportunities of SDN
2015	Best Paper Award	Autonomous Infrastructure, Management and Security Conference
2015	Best Ph.D. 'Elevator Pitch' (1st Place)	CTIT Symposium, University of Twente
2015	Best Poster Presentation (3rd Place)	CTIT Symposium, University of Twente
2015	Invited to the Dagstuhl Seminar 16012	on Global Measurements
2010	Student Award (3rd Place)	Computer Engineer, Federal University of Pará, Brazil