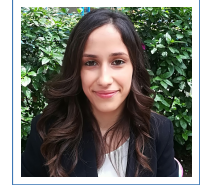# Antonia Affinito

Nationality: Italian
Date of birth: 10 August 1992
✉ a.affinito@utwente.nl

## Work experience

**Feb 2024 - Present**
**Assistant Professor** at *University of Twente*, Enschede (the Netherlands) in Energy-Efficient Network Measurements

**May 2023 - Jan 2024**
**Postdoctoral Researcher** at *University of Twente*, Enschede (the Netherlands) in Internet Measurements and Cybersecurity

**Oct 2019 - May 2023**
**Ph.D. Candidate** at *University of Naples 'Federico II'*, Naples (Italy)
- Detection of network anomalies in network traffic traces by using **Big Data** technologies.
- Identification of **domain names** associated with cyber threats.
- Study of the **effects of large-scale events** (e.g., COVID-19 pandemic) on the Internet infrastructure by exploring the Domain Name System.

**Apr 2021 - Apr 2022**
**Visiting Ph.D. Candidate** at *University of Twente*, Enschede (the Netherlands): Study on domain name lifetimes at scale and over a ten-year period, with emphasis on malicious name lifetimes, suspicious short-livedness and take-down efforts.

**Aug 2018 - Oct 2019**
**Cisco Research Grant** at University of Naples 'Federico II', Naples (Italy)
- **Research activities** on Application hosting on **Cisco IOx** switch, testing different IoT tools. **Cisco collaboration tools** analysis in terms of resources and APIs.
- **Cisco Academy Mentor**: teaching and organization activities at the Cisco DTL (Digital Transformation Lab). The activities are focused on teaching topics like Networking (CCNA Curriculum), Python programming language.

**Oct 2017 - May 2018**
**Research Internship** at University of Naples 'Federico II', Naples (Italy)

Study and implementation of a scanning activity detection system in high-speed networks with Big Data technologies. Numerous analyses were performed to evaluate its goodness, in terms of precision, recall and processing time.

## Education

**Sep 2014 - May 2018**
**Master's degree in Computer Engineering** at *University of Naples 'Federico II'*, Naples (Italy)

- **Thesis**: Detecting Port and Net Scan using Apache Spark, supervisor Alessio Botta, co-supervisor Mauro Garofalo
- **Grade**: 110/110 cum laude

**Sep 2010 - July 2014**
**Bachelor's degree in Computer Engineering** at *University of Naples 'Federico II'*, Naples (Italy)

- **Thesis**: WLAN networks in the 60 GHz bandwidth, supervisor Stefano Avallone

**11 Jun 2018 - 6 July 2018**
**Training Course "Salesforce Developer Bootcamp"- Digital Transformation & Industry Innovation Academy** at *University of Naples 'Federico II'- Deloitte Consulting S.r.l.*, Naples (Italy)

## Publications

- A. Affinito, A. Botta, L. Gallo, M. Garofalo, G. Ventre. Spark-based port and net scan detection; *Proceedings of the 35th Annual ACM Symposium on Applied Computing, 2020*
- A. Affinito, A. Botta, L. Gallo, M. Garofalo, G. Ventre. The impact of covid on network utilization: an analysis on domain popularity; *IEEE 25th International Workshop on Computer Aided Modeling and Design of Communication Links and Networks (CAMAD), 2020*
- A. Affinito, A. Botta, G. Ventre. Local and Public DNS Resolvers: Do You Trade-off Performance Against Security?; *IFIP Networking, 2022*
- A. Affinito, R. Sommese, G.Akiwate, S. Savage, KC Claffy, G. Voelker, A. Botta, M. Jonker. Domain Name Lifetimes: Baseline and Threats; *TMA Conference, 2022*
- M. Jonker, G. Akiwate, A. Affinito, KC Claffy, A. Botta, G. M. Voelker, R. van Rijswijk-Deij, S. Savage; "Where .ru? Assessing the Impact of Conflict on Russian Domain Infrastructure"; *Internet Measurement Conference (IMC), 2022)*
- S. Zinno, A. Affinito, N. Pasquino, A. Botta; "Prediction of RTT Through Radio-Layer Parameters in 4G/5G Dual-Connectivity Mobile Networks"; *2023 IEEE Symposium on Computers and Communications (ISCC)*
- A. Affinito, S. Zinno, G. Stanco, A. Botta, G. Ventre; "The evolution of Mirai botnet scans over a six-year period"; *Journal of Information Security and Applications*
- R. Sommese, G. Akiwate, A. Affinito, M. Muller, M. Jonker, KC Claffy; "Darkdns: Revisiting the value of rapid zone update"; *Proceedings of the 2024 ACM on Internet Measurement Conference*
- A. Mariani, M. Liberato, A. Sperotto, A. Affinito; "Analyzing Privacy Implications of Mobile Apps Data Collection across Age Groups"; *2024 20th International Conference on Network and Service Management (CNSM)*
- MYM Haq, A. Affinito, A. Botta, A. Sperotto, LJM Nieuwenhuis, M. Jonker, A. Abhishta; "Victimization in DDoS Attacks: The Role of Popularity and Industry Sector"; *Computers & Security - Elsevier Ltd)*
- A. Affinito. Malicious and Large-Scale Phenomena over the Internet: An Analysis based on DNS; *PhD Thesis, University of Naples Federico II, Italy, 2023*
- M. Liberato, A. Affinito, B. Meijerink, M. Jonker, A. Botta, A. Sperotto. To Block Or Not To Block?: Evaluating Parental Controls Across Routers, DNS Services, and Software; *9th Network Traffic Measurement and Analysis Conference, TMA 2025*
- R. Sommese, A. Sperotto, A. Prado, J. van der Ham, A. Affinito. 90th Minute: A First Look to Collateral Damages and Efficacy of the Italian Piracy Shield; *2025 21th International Conference on Network and Service Management (CNSM)*

## Teaching

Internet technology, Security Services for the IoT, Basic Computer Engineering, and Computer Networks

## Supervision of (Research) Master and Bachelor Theses

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|---|---|
| 2023 - Present | Supervisor and Co-supervisor of Master and Bachelor students, and 2 PhD students, University of Twente |
| 2018 - 2022 | Co-Supervisor, Master and Bachelor students, Information Technology and Electrical Engineering, University of Naples "Federico II" |

## Honor and Award

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| 2025 | **General Co-chair – for ACM CoNEXT 2026**: responsible for overseeing the conference organization, program planning, and coordination of speakers and sessions. |
| 2025 | **4TU.NIRICT Community Funding – Principal Investigator (PI)** for the project "*Measuring and Reducing Carbon Emissions in End-to-End Networked Systems*", conducted in collaboration with 4TU universities: leading research on sustainable networking and strategies to minimize the environmental impact of networked systems. |

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| 2024 | **RIPE RACI Fellow – RIPE 89** Selected as a RIPE Academic Cooperation Initiative (RACI) fellow to present my research at RIPE 89. Received travel support to attend and deliver the talk "Unveiling Domain Blocklist Performance: An Analysis over Four Years". |
| Dec 2022 | **Receipt of the travel grant at ACM CoNEXT 2022**: Selected for a travel grant at the ACM CoNEXT 2022 Conference, allowing full access to all briefings. |
| Oct 2022 | **Receipt of the travel grant at ACM IMC 2022**: Selected for a travel grant at the ACM IMC 2022 Conference, allowing full access to all briefings. |
| Jul 2022 | **Receipt of the travel grant at TMA PhD School 2022**: Selected for a travel grant at TMA PhD School 2022, allowing full access to all briefings both of the School and the Network Traffic Measurement and Analysis (TMA) Conference. |
| Jun 2019 | **Receipt of the travel grant at TMA PhD School 2019**: Selected for a travel grant at TMA PhD School 2019, allowing full access to all briefings both of the School and the TMA Conference. |
| Dec 2018 | **Receipt of the travel grant at ACM Conext 2018**: Selected for a travel grant at the ACM Conext 2018 conference, allowing full access to all briefings. |

## Professional & Academic Service

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| 2025 | **Faculty Representative for WANT (EEMCS, Computer Science)**: Acting as the liaison for the Woman's Academic Network Twente (WANT) within the EEMCS faculty. Supporting the professional development, networking, and visibility of women in Computer Science at the University of Twente through events, initiatives, and mentorship. |
| 2024 | **PhD School Chair, TMA PhD School 2024** Responsible for coordinating speakers, managing the agenda, and supporting participants throughout the school program focused on Internet traffic measurement and analysis. |
| 2022 | Member of the organizing committee for **CoNEXT Conference**: Assisted in the local logistics, communication, and coordination of one of the most prestigious conferences in the networking community. |
| 2023 | Web Chair for **TMA Conference**: Maintained the official website, ensured timely updates, and supported the online experience for participants, authors, and reviewers. |

## Certification

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| Jun 2018 - July 2018 | **Certification** - Salesforce Certified Platform Developer I |

## Personal skills

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| **Languages** | Italian (*mother tongue*), English (*Full professional proficiency*). |

## IT skills

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|---|---|
| **Programming-Scripting languages** | Python, Scala, Bash, JavaScript, C/C++, SQL, HTML/CSS, VHDL, UML, Latex. |
| **Tools** | Wireshark, Tshark, TIE, D-ITG, Docker, VMware, Apache Spark, Matlab, Visual Paradigm, Cisco Packet Tracer, GNS3 |
| **OS** | GNU/Linux, Windows, IOS, Cisco Internetwork Operating System. |