

Curriculum Vitae

PERSONAL INFORMATION

Andrea Ciccotelli
Nationality: Italian
Birth date: 15 January 1996
Master's degree in Software System Security
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RESEARCH COMMUNITY MEMBERSHIP

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|------|--|
| 2026 | Title: Session Chair
Conference: IEEE SECON 2026: 22nd Annual IEEE International Conference on Sensing, Communication, and Networking
Location: Pisa, Italy |
| 2026 | Title: Technical Program Committee Member
Conference: ESORICS 2026: 31st European Symposium on Research in Computer Security
Location: Rome, Italy |
| 2026 | Title: Publicity co-chair
Conference: IEEE CNS 2026: IEEE Conference on Communications and Network Security 2026
Location: Newark, Delaware, USA |
| 2025 | Title: Publication chair
Conference: IEEE SECON 2026: 22nd Annual IEEE International Conference on Sensing, Communication, and Networking
Location: Pisa, Italy |
| 2024 | Title: Technical Program Committee Member
Conference: NSS: 8th International Conference on Network and System Security
Location: Zayed University, Abu Dhabi, UAE |

PUBLICATIONS

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|------|--|
| 2025 | Title: NoBU: An effective and viable cyber-physical solution to thwart BadUSB attacks
Authors: Andrea Ciccotelli, Maurantonio Caprolu, Roberto Di Pietro
Language: English
Publication place: AsiaCCS 2025
URL: https://dl.acm.org/doi/10.1145/3708821.3710816 |
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DOI: 10.1145/3708821.3710816

Status: published

2022

Title: A Framework for the Simultaneous Acquisition and Analysis of Gait and Clinical Data

Authors: Nicoletta Balletti, Andrea Ciccotelli, Gennaro Laudato, Rocco Oliveto

Language: English

Publication place: SIAMOC 2022 - Poster session

Proceedings URL: [http://amsacta.unibo.it/id/eprint/7027/1/Proceedings of SIAMOC 2022.pdf](http://amsacta.unibo.it/id/eprint/7027/1/Proceedings%20of%20SIAMOC%202022.pdf)

Status: published

2021

Title: A Virtual Assistant for Home Rehabilitation: the 2Vita-B Physical Project

Authors: Mauro Antico, Nicoletta Balletti, Andrea Ciccotelli, Marco Ciccotelli, Gennaro Laudato, Aldo Lazich, Marco Notarantonio, Rocco Oliveto, Stefano Ricciardi, Simone Scalabrino, Jonathan Simeone

Language: English

Publication place: IEEEIC (International Conference on Environment and Electrical Engineering)

URL: <https://ieeexplore.ieee.org/document/9584548>

Status: published

2021

Title: 2Vita-B Physical: An Intelligent Home Rehabilitation System Based on Microsoft Azure Kinect

Authors: Mauro Antico, Nicoletta Balletti, Andrea Ciccotelli, Marco Ciccotelli, Gennaro Laudato, Aldo Lazich, Marco Notarantonio, Rocco Oliveto, Stefano Ricciardi, Simone Scalabrino, Jonathan Simeone

Language: English

Publication place: Frontiers in Human Dynamics

URL: <https://www.frontiersin.org/articles/10.3389/fhumd.2021.678529/full>

Status: published

EDUCATION

12/2023–today

Ph.D., Computer science - Cybersecurity

King Abdullah University of Science and Technology (KAUST), Thuwal, Saudi Arabia

Standard duration: 3 years

08/2020–10/2022

Master's degree, Software System Security

University of Molise, Pesche (IS), Italy

Standard duration: 2 years

Principal subjects: Network security, Software security, Computer forensics, Social engineering, Software analytics

Achived title: Doctor in Software System Security

Final mark: 110L/110

09/2016–10/2020 **Bachelor degree, Computer Science**

University of Molise, Pesche (IS), Italy

Standard duration: 3 years

Principal subjects: Math, Algorithm, Procedural and object oriented programming language (C, Java), Logic, Software engineering, Networking, Artificial intelligence

Achived title: Doctor in Computer Science

Final mark: 110L/110

09/2010–06/2015 **High school, Surveyor**

ITCAT, Campobasso (CB), Italy

Standard duration: 5 years

Achived title: Surveyor diploma

Principal subjects: 2D and 3D CAD design, 3D printing, math, structural computations, topography

Final mark: 80/100

STUDIES ABROAD

09/2018–02/2019 **Erasmus, Computer Science**

University of Dubrovnik, Dubrovnik (HR), Croatia

Standard duration: 5 months

Principal subjects: Software engineering (30L/30), Basics of Communications in naval communications (30L/30), Researching and Writing (29/30), New media (27/30)

TEACHING

09/2026 **Teaching assistant - KAUST Jeddah**

Standard duration: 1 Semester

Main topic: Applied Cryptography

12/2025 **Teaching - The KAUST School (TKS High school)**

Standard duration: 4 hours

Main topic: Hands-on Cybersecurity activities with DVWA by OWASP: packet sniffing, network mapping, password cracking, brute forcing, code injection, SQL injection, and XSS

04/2026 **Teaching assistant - MOI Ryihad, sponsored by KAUST Academy**

Standard duration: 40 hours of support

Main topic: Applied Cryptography

- 12/2025 **Teaching - The KAUST School (TKS High school)**
Standard duration: 4 hours
Main topic: Hands-on Cybersecurity activities with DVWA by OWASP: packet sniffing, network mapping, password cracking, brute forcing, code injection, SQL injection, and XSS
- 02/2025 **Teaching assistant - MOI Ryihad, sponsored by KAUST Academy**
Standard duration: 40 hours of support
Main topic: C, C++, and programming language introduction
- 03/2020–09/2020 **Tutor - Teaching assistant**
Standard duration: 100 hours of support
Main topic: Support students in study method, repetition of key concepts, and connection between student and course instructor.

SCHOLARSHIPS

- 11/2021–10/2022 **Research scholarship**
Title: Motion analysis per la diagnosi di patologie del sistema posturale
Standard duration: 12 months
Main topic: Gait analysis using motion tracking systems, machine learnign algorithms
Supervisor: Prof. Stefano Ricciardi

COMPETITIONS AND AWARDS

- 2025 **Title:** CSAW'25 MENA - ARC competition
Awards: 2nd Best Paper Award
Description: The CSAW25 MENA ARC competition (Applied Research Competition) is a student-research challenge within the CSAW25 MENA cybersecurity event (November 6-8, 2025, at NYU Abu Dhabi) that invites students in the MENA region to submit or present a practical cybersecurity research paper.
Presented paper: NoBU: An effective and viable cyber-physical solution to thwart BadUSB attacks (<https://dl.acm.org/doi/10.1145/3708821.3710816>)
Reference URL: <https://www.csaw.io/mena>
- 2020 **Title:** Cyberchallenge
Awards: Winner of the local competition
Description: This is a national competition based on the CTF game. Each team

must attack other teams' computer and defend their own. The team that completes the competition with the most flags wins. Each flag is a special key contained in a file reachable by performing attacks on vulnerable services. The competition was held on-site for national team selection and remotely for the final competition. The whole experience was preceded by a dedicated training course on pentesting.
Principal subjects: Pentesting, OS vulnerabilities, web vulnerabilities, network scanning tools, exploits creation tools
Supervisor: Prof. Francesco Mercaldo
Reference URL: <https://cyberchallenge.it/>

2020

Title: Global Game Jam
Awards: Winner of the local competition
Description: The Global Game Jam (GGJ) is an annual distributed game jam. At each site, the Global Game Jam runs continuously for 48 hours in each time zone, beginning at 5:00 PM on the start date, and ending at 5:00 PM two days later. At the beginning of the event participants are given a theme, such as Extinction in the 2011 Jam. Participants are asked to create a game that in some way relates to this theme.
Produced game: As a team of four students we developed a game called GodJob using the Unreal engine. This is a Top-To-Down game with our world which is going to die, and humans are making this faster. Your role is to enter "God mode" to try to avoid the worst: its death. The detailed description and a copy of the game is available at <https://globalgamejam.org/2020/games/godjob-2>
Principal subjects: Game development, Unity engine, Unreal engine
Reference URL: <https://globalgamejam.org/>

GRADUATION THESIS

10/2022

Course: Master degree
Title: Risk-free Security Analysis and Awareness: An Approach for a Fully Interactive Network Virtualisation
Language: English
Supervisor: Prof. Rocco Oliveto
Thesis summary: People are increasingly discussing virtual reality, the digital world, and the evolution of software in general. These concepts are key words that introduce the thesis topic, which is currently a point of intense research. Despite the fact that virtual reality and global digitization are now highly developed subjects, there is still no clear and solid path to transition from reality to a virtual environment. Indeed, many businesses are looking for a tool that can map entire corporate networks into virtual environments for a variety of purposes, including pentesting, employee training, and simple network analysis. As the market for such tools grows, strong software vendors are slowly moving toward this area of research, attempting to develop a tool that can virtualize, test, and provide complete detail of a physical network. All difficulties, limitations, and benefits of developing

a tool to virtualize and automatically assess the network are highlighted in this thesis. The aim of this work is to fill this gap by presenting a network virtualization approach that serves as the foundation for a comprehensive security assessment software. The proposed approach introduces the following features: (i) network scan and topology identification, (ii) virtualisation of devices in a containerized environment, (iii) routing reconfiguration according to the topology, (iv) exposed services emulation, (v) web TTY access to containers. These features are usefull for the usage in scenarios like network analysis, pentesting, CTF organization and employee training.

GRADUATION THESIS

10/2020 **Course:** Bachelor degree
Title: COLIN: un sistema di monitoraggio per persone ad alto rischio di smarrimento
Language: Italian
Supervisor: Prof. Rocco Oliveto
Thesis summary: COLIN is a monitoring system based on the presence of two main figures: the care-giver and the care-recipient. Each figure has a specific Android app. In particular, the care-recipient's app collects geolocation data and analyzes it by comparing it with a risk map (containing polygons of lakes, rivers, cliffs, etc.). In order to optimize computation time, the app requests a narrow portion of the italian risk map from a remote geo-server. Whenever the care-recipient approaches the edge of the map portion, it is updated. When the care-recipient approaches one of the risk areas, the app enters assistant mode by guiding the care-recipient back to his previous steps by using vocal commands. At the same time, the system sends a PUSH notification to the care-giver containing geolocation info. The care-giver's app allows the care-recipient's geographic location to be monitored in real time and the care-recipient's app configurations (refresh time, alarm distance, etc.) to be managed remotely.

CERTIFICATIONS AND COURSES

09/2023 **Title:** British Council - IELTS test
TRF Number: 2320009205CICA1IHA
Overall result: 6,5 / advanced B2
Listening: 7,5
Reading: 7,5
Speaking: 6,5
Writing: 6,0

19/07/2023 **Title:** ACI guida sicura - Master

Principal subjects: Secure driving, safety, awareness, practical driving exercises on special tracks

- 01/2023–02/2023 **Connected Products Cybersecurity Academy**
Technologies: Cybersecurity advisory on the V-cycle development phases for Automotive, Aerospace, Defence, Railway, Industrial, IoT, Life Sciences, Telecom/Media
Brief description: This is an academy aiming to prepare the worker for the specialized job. The main topics are: (i) E/E System Engineering and Life Cycle Process, (ii) Requirements Management, (iii) Vehicle E/E architecture and network, (iv) Cybersecurity for automotive (ISO 21434), (v) Hybrid and Electric Powertrain, (vi) Adas, AD, (vii) Engine Control, (viii) TARA, RISK scenery and STRIDE model, (ix) Infotainment, (x) AutoSAR security features, (xi) Cybersecurity process validation, (xii) Penetration testing (OSSTMM), SAST.
- 2022 **Title:** PreFIT24
Principal subjects: Anthropology, pedagogy, psychology, technologies and teaching methodologies

WORK EXPERIENCE

- 05/2023 **Capgemini engineering - ZF Customer**
Topics: Automotive security
Type of employment: Cybersecurity expert
Main activities: Transmission system Security assesment, TARA, Pentesting
- 01/2023 **Capgemini engineering**
Topics: Automotive security
Type of employment: Junior consultant and engineer
Main activities: Security assesment, TARA, Pentesting
- 05/2020–10/2022 **Datasound s.r.l.**
Topics: Data analytics, machine learning, cyber security, virtual reality
Type of employment: consultant
Main activities: System administration, full-stack developer, AI, cybersecurity manager, motion analysis, project management
Main technologies: Angular, Java, Spring boot, Android, Swift, Unity, Python, Docker, Gitlab, Bash scripting

PROJECTS

- 11/2021–10/2022 **System administration**
Technologies: Ubuntu 20.04, Linux, Nginx, UFW, Gitlab, Docker, CI/CD, Bash,

Python

Brief description: Management and maintenance of the four corporate servers. My daily activities depended on managing all the company projects and making sure that they were always available and active.

Main tasks: Repository management, nginx reverse proxy setup, CI/CD pipeline configuration for various environment (testing, staging and production), scripting in case of production of custom modules (e.g. daily backup module developed for the NAS device).

11/2021–10/2022 **EDAM, Explainable DiAgnosis recoMmender**

Technologies: Java, Spring boot, Unity, Python, Docker, Gitlab CI/CD

Involved devices: Vicon motion tracking system, Azure Kinect, DSI-7, Cometa System Wave mini, Polar wrist band

Brief description: EDAM is a system for automatic gait analysis. This system enables analysis using machine learning models trained on the knowledge base built from data acquired from motion tracking, EEG, EMG and heart rate systems.

Main tasks: Software architecture design, military call active collaboration, research, Back-end development, Unity engine Front-end development, CI/CD pipeline setup.

09/2020–09/2021 **2Vita-B Physical**

Technologies: Java, Spring boot (Zuul proxy, Load balancing, Eureka service), Angular, Docker, Gitlab, CI/CD

Brief description: 2Vita-B was created as a virtual assistant for support in performing rehabilitative exercises. In addition, the system generates a comprehensive report on exercise execution that the specialist can use for in-depth analysis of rehabilitation progress.

Main tasks: Software architecture design, military call active collaboration, microservice based Back-end development, Front-end development, CI/CD pipeline setup.

05/2020–01/2021 **SHADE**

Technologies: Java, Spring boot, Angular, Android, Swift, Docker, Gitlab, CI/CD

Brief description: Software for managing personnel, sharing PDF files and administering evaluation tests. Consists of web management and native application for Android and IOS.

Main tasks: Software architecture design, Back-end development, Front-end development, CI/CD pipeline setup and team management.

PERSONAL SKILLS AND COMPETENCES

Languages

Mother tongue: Italian (native)

Other languages: English

- Listening: C1;
- Reading: C1;
- Writing: C1;
- Speaking: C1;

Social skills

- Self awareness;
- Conflict management and resolution;
- Constructive feedback;
- Critical eye;

Organizational skills

- Context switch for multiple projects management;
- Manage content team tasks and deadlines;
- Ability to estimate time and cost of project development;

Technical skills

- Knowledge and implementation of both monolithics and microservice based architectures;
- Programming languages (Procedural and Object oriented);
- Linux server administration;
- DNS records and web servers management;
- Pentesting;
- Network protocols knowledge;
- Standards: ISO/SAE 21434, UNECE WP29;
- Applications: Microsoft Office, VirtualBox, JetBrains products, Unity engine, Autocad 3D, Blender;
- Operative Systems: Windows, Linux, MacOS;
- Programming Languages: Java, JavaScript, Python, C/C++/C, Bash, SQL, HTML, HTML5;
- Cybersecurity: Kali Linux, Metasploit, Wireshark, nmap;
- Data analysis;
- Machine learning;
- Project management;

I authorize the processing of my personal data in the CV pursuant to art. 13 d. lgs. 30. June 2003 no. 196 - Personal data protection code and art. 13 GDPR 679/16 - European Data Protection Regulation.

Jeddah (SA), 24/09/2026