First Summer School on Security and Privacy in 6G Networks

June 24 – 28, 2024

Even though 5G networks are not yet fully deployed, the design of future 6G is already ongoing. The increasing volume of cyberattacks and their severity make Security a top consideration in 6G design. On the other hand, users are increasingly aware of the risk associated with certain services in terms of privacy.

This Summer School will focus on how to make 6G networks more secure while following privacy-friendly approaches. We will review concepts such as:

- ✓ Trust in Networks
- ✓ User Privacy
- ✓ Advancements in technologies such as Artificial Intelligence (AI) and Quantum Computing.

Organized by:

UNIVERSIDAD COMPLUTENSE MADRID

GASS — Group of Analysis Security and Systems

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Registration

To register for the Summer School it is essential to fill in this form. The registration fee entitles you to attend all the conferences, sessions, activities, coffees, meals and social activities organized during the Summer School.

Deadlines and prices
Registration: 250 € until 23/06/2024 (included)

Method of payment
Payment is made by bank transfer or by credit card, it is essential to fill in this <u>form</u>.

Venue

The First Summer School on Security and Privacy in 6G Networks will take place from 24 to 28 June 2024 in Complutense University of Madrid, Faculty of Computer Science and Engineering, Madrid, Spain.

The Faculty of Computer Science and Engineering at UCM is located on the Moncloa Campus (Ciudad Universitaria), right in the center of Madrid and near the "Ciudad Universitaria" Metro station. To reach the faculty by public transportation, you can use the following options:

Metro
- Línea 6 (Ciudad Universitaria)

Buses
- U (Ciudad Universitaria)
- F (Cuatro Caminos)
- G (Moncloa)
- 82 (Moncloa)

Grants

UCM will be awarding 25 grants to doctoral candidates participating in the First Summer School on Security and Privacy in 6G Networks.

- 25 regular grants (covering the Summer School fee).

The grants are intended to encourage and support PhD candidates with limited economic support and with limited opportunities to participate in international academic events. The grant will cover the Summer School fee.
Likewise, all those PhD candidates who present a poster about their work in progress will have their fee covered.

Program

Monday, June 24

08:00 - 08:45 **Registration**

08:45 - 09:00 **Welcome.** Luis Javier García Villalba, Ana Lucila Sandoval, Jesús Alonso López, Group of Analysis, Security and Systems (GASS), UCM.

09:00 - 11:00 **Tutorial:** "Searchable encryption and CTI sharing - Part I". António Pinto, INESC TEC - Porto.

11:00 - 11:30 **Coffee Break**

11:30 - 13:00 **Tutorial:** "Searchable encryption and CTI sharing - Part II". António Pinto, INESC TEC - Porto.

13:00 - 14:30 **Lunch**

14:30 - 16:00 **Tutorial:** "Review of 5G security features. Security and privacy attacks on/with cellular and wireless networks - Part I". Xavier Costa NEC Laboratories Heidelberg

16:00 - 16:30 **Coffee Break**

16:30 - 18:00 **Tutorial:** "Review of 5G security features. Security and privacy attacks on/with cellular and wireless networks - Part II". Xavier Costa, NEC Labs.

First Summer School on Security and Privacy in 6G Networks

Tuesday, June 25

09:00 - 11:00 **Tutorial:** "6G Networks, the AI role: AI-related threats, AI-driven attacks, AI-based attack detection - Part I". Maria Christopoulou, NSRD-Demokritos.

11:00 - 11:30 **Coffee Break**

11:30 - 13:00 **Tutorial:** "6G Networks, the AI role: AI-related threats, AI-driven attacks, AI-based attack detection - Part II". Maria Christopoulou, NSRD-Demokritos.

13:00 - 14:30 **Lunch**

14:30 - 16:00 **Tutorial:** "The role of AI in 6G - Part I". Scott Cadzow, C3L Ltd & ETSI Industry Specification Group for Securing AI.

16:00 - 16:30 **Coffee Break**

16:30 -18:00 **Tutorial:** "The role of AI in 6G - Part II". Scott Cadzow, C3L Ltd & ETSI Industry Specification Group for Securing AI.

Wednesday, June 26

09:00 - 11:00 **Tutorial:** "Trust and Cyber Threat Intelligence in the perspective of 6G - Part I". Robson Albuquerque, University of Brasília.

11:00 - 11:30 **Coffee Break**

11:30 - 13:00 **Tutorial:** "Trust and Cyber Threat Intelligence in the perspective of 6G - Part II". Robson Albuquerque, University of Brasília.

13:00 - 14:30 **Lunch**

14:30 - 16:00 **Tutorial:** "Quantum safe cryptography - Part I". Martin Strand, The Norwegian Defense Research Institute.

16:00 - 16:30 **Coffee Break**

16:30 - 18:00 **Tutorial:** "Quantum safe cryptography - Part II". Martin Strand, The Norwegian Defense Research Institute.

18:00 - 19:30 **Poster Session**

First Summer School on Security and Privacy in 6G Networks

Thursday, June 27

09:00 - 11:00   **Tutorial:** "Trust & Attestation in 5G/6G Networks - Part I". Antonio Lioy, Politecnico di Torino.

11:00 - 11:30   **Coffee Break**

11:30 - 13:00   **Tutorial:** "Trust & Attestation in 5G/6G Networks - Part II". Antonio Lioy, Politecnico di Torino.

13:00 - 14:30   **Lunch**

14:30 - 16:00   **Tutorial:** "Quantum Key Distribution in 6G Networks - Part I". Laura Ortiz Martín - Javier Faba, Universidad Politécnica de Madrid.

16:00 - 16:30   **Coffee Break**

16:30 - 18:00   **Tutorial:** "Quantum Key Distribution in 6G Networks - Part II". Laura Ortiz Martín - Javier Faba, Universidad Politécnica de Madrid.

18:00 - 19:30   **Panel I:** "Privacy & Trust". Panel Chair: Scott Cadzow (C3L, UK) Participants: Robson Albuquerque (CyberSecurity INCT, Brazil), Javier Faba (UPM, Madrid), Antonio Lioy (Politecnico di Torino, Italy).

Friday, June 28

09:00 - 11:00   **Tutorial:** "Cloud and Data Cybersecurity Issues Considering 6G - Part I". Robson Albuquerque, University of Brasília.

11:00 - 11:30   **Coffee Break**

11:30 - 13:00   **Tutorial:** "Cloud and Data Cybersecurity Issues Considering 6G - Part II". Robson Albuquerque, University of Brasília.

13:00 - 14:30   **Lunch**

14:30 - 16:00   **Panel II:** "Technologies for safer 6G that could become a threat: AI, Quantum Computing". Panel chair: Antonio Lioy (Politecnico di Torino, Italy). Participants: Scott Cadzow (C3L & ETSI, UK), Javier Faba (UPM, Madrid), Martin Strand (FFI, Norway)

16:00 - 16:30   **Closure**

Speakers

- Robson Albuquerque, University of Brasília.

- Scott Cadzow, C3L Ltd & ETSI Industry Specification Group for Securing AI.

- Maria Christopoulou, NCSR-Demokritos.

- Xavier Costa Perez, NEC Laboratories Heidelberg.

- Antonio Lioy, Politecnico di Torino.

- Laura Ortiz Martín, Universidad Politécnica de Madrid.

- Javier Faba, Postdoctoral Researcher at the Universidad Politécnica de Madrid

- António Pinto, INESC TEC - Porto.

- Martin Strand, The Norwegian Defense Research Institute.