



UNIVERSITÀ DEGLI STUDI DI NAPOLI  
FEDERICO II

itee<sup>PhD</sup>  
information technology  
electrical engineering



## Roberto D'Isanto

Analisi e sviluppo degli aspetti di cybersecurity  
legati alle tecnologie V2X (Vehicle To Everything)  
e relative ripercussioni sui sistemi a guida  
autonoma

Tutor: Prof Simon Pietro Romano

Cycle: XXXIX

Year: II

# Candidate's information

- MSc degree in Computer Engineering from Università di Napoli Federico II
- DIETI Research group: ARCLAB
- PhD start date: 01/11/2024
- No fellowship

# Summary of study activities

- Courses attended:
  - Ad hoc for PhD:
    - AI Code Generation: Foundations, Evaluation, and Security
    - Innovation and Entrepreneurship
    - Practical Network Intrusion Detection with Machine Learning and Generative AI
    - Preparation Course for the Cambridge

# Summary of study activities

	Courses	Seminars	Research	Tutorship	Total
<b>Bimonth 1</b>	6	0	2,5	0	8,5
<b>Bimonth 2</b>	0	0,2	6	0	6,2
<b>Bimonth 3</b>	0	1,4	6	0	7,4
<b>Bimonth 4</b>	0	0,2	12	0	12,2
<b>Bimonth 5</b>	3	0	10	0	13
<b>Bimonth 6</b>	7	2,4	4	0	13,4
<b>Total (Y2)</b>	<b>16</b>	<b>4,2</b>	<b>40,5</b>	<b>0</b>	<b>60,7</b>
<b>Total (Y1+Y2)</b>	<b>58</b>	<b>13</b>	<b>58,7</b>	<b>0</b>	<b>129,7</b>
<b>Expected (Y1+Y2+Y3)</b>	<b>30 - 70</b>	<b>10 - 30</b>	<b>80 - 140</b>	<b>0 - 4.8</b>	

# Research area

- Contributing to the AKADIMOS European project, aimed at strengthening cybersecurity education and cooperation across Europe and long-term cybersecurity capacity building.
- Conducting research in cybersecurity, with interest in IoT and drone systems.
  - One of the ongoing experiments involves developing a UAV-focused Cyber Range.

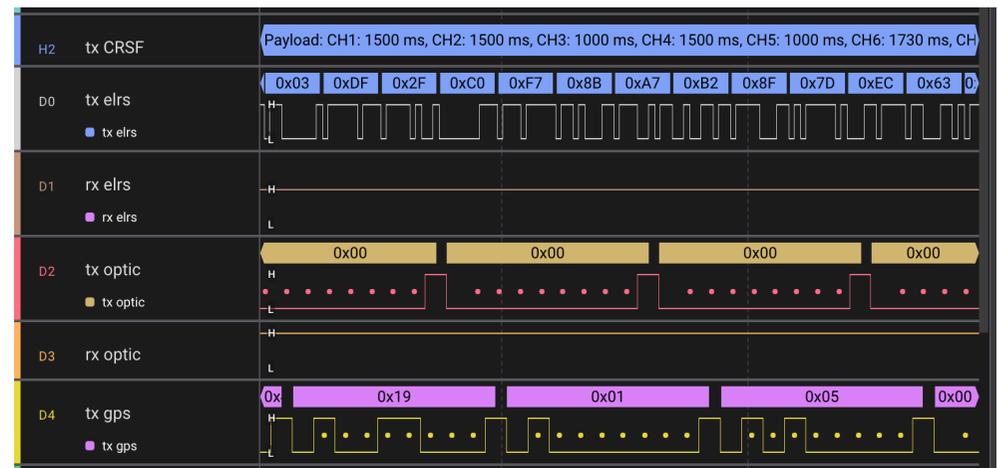
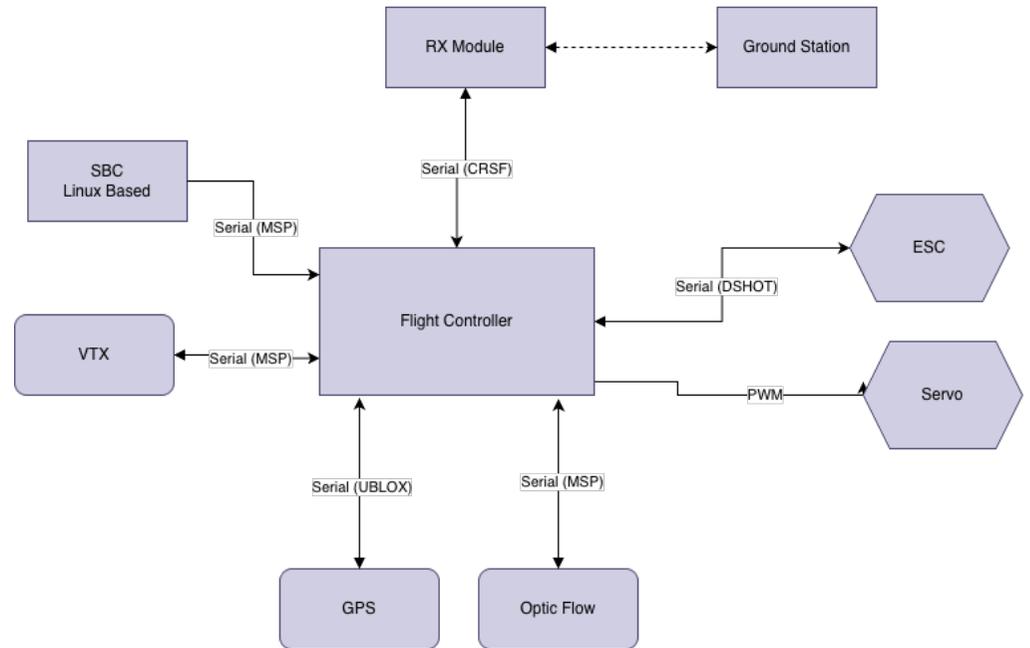
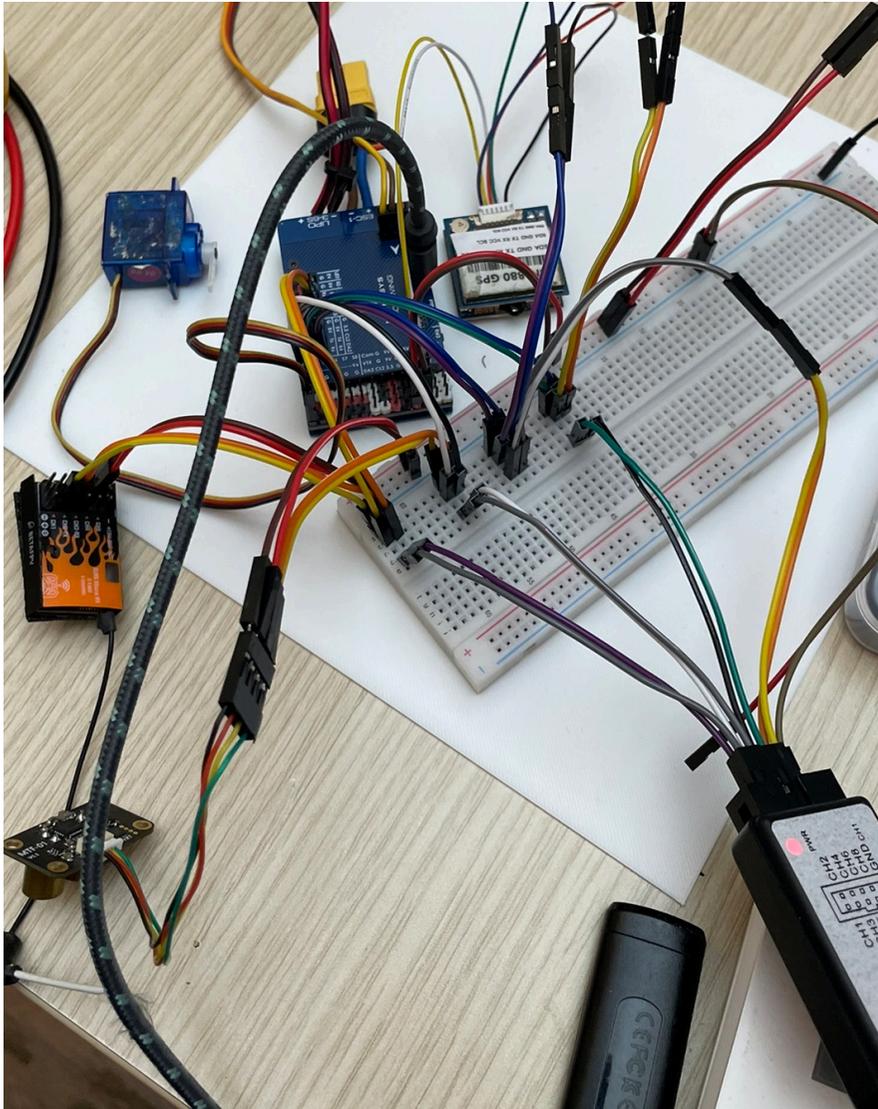
# Research results (AKADIMOS)

- The AKADIMOS project is divided in multiple work package and involve multiple partner. In the current WP, we focused on analyzing and improving the European Cybersecurity Skills Framework (ECSF) through:
  - Comparative analysis with other frameworks.
  - Qualitative assessment of roles and competencies.
  - Mapping of interdependencies among skill categories.
- Results: defined strategies to enhance ECSF and promote a harmonized understanding of cybersecurity roles across Europe.

# Research results (UAV Cyber Range)

- Collected attack datasets.
- Built a physical test environment.
- Future goal: develop a UAV-focused cyber range for both software and hardware testing and training.

# Research results (UAV Cyber Range)



# Research products

[P1]	Perrone, G., d'Ambrosio, N., D'Isanto, R., Rak, M., Russo, L., Romano, S. P., Varlese, M. (2025), <i>One Europe, One Framework: aligning ECSF with global standards through the AKADIMOS Initiative.</i> [pending submission]
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