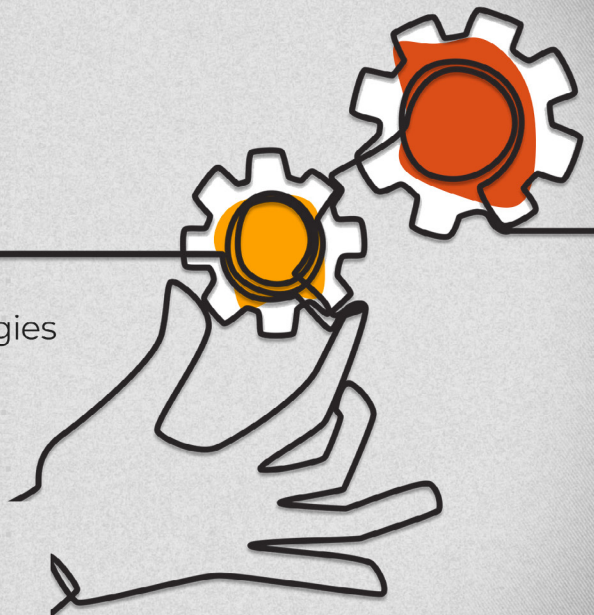


JULY 12-13, 2023

# SUMMER COURSE

on Nanotechnology  
and Sensing Technologies



## 2DSENSE PROJECT

2D MATERIAL BASED LOW COST SENSOR OF  
AGGRESSIVE SUBSTANCES  
NATO SCIENCE FOR PEACE AND SECURITY  
PROGRAM - GRANT # SPS G5777 (2020-2023)

[2dsense.net](http://2dsense.net)

In presence:  
CONFERENCE CENTER  
Gaeta Castle (Italy)

July 12-13, 2023

[Info and registration](#)

[info@2dsense.net](mailto:info@2dsense.net)

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<https://meet.google.com/yad-wwwd-dtm>

Given by internationally-recognized experts, aiming to provide a comprehensive overview of nano and sensing technology, the course start from the basics of theory, modelling and design, passing through synthesis and characterization, ending with compelling applications.

## AGENDA

### Day 1 – July 12

14.20 – 14.30

Introduction

**Antonio Maffucci** – CREATE/University of Cassino and Southern Lazio, Italy

14.30 – 15.20

Cutting-Edge Nano-Technologies for Sensing Applications

**Laura Micheli** – University of Rome Tor Vergata, Italy

15.20 – 15.30

Break

15.30 – 16.20

Self-Healing, stretchable and recyclable electronics

**Fabio Cicoira** – Polytechnique Montreal, Canada

16.20 – 17.10

Electronic properties and devices based on graphene and carbon nanotubes

**Georgy Fedorov** – University of Eastern Finland, Finland

### Day 2 – July 13

9.00 – 9.50

Electron quantum optics with beam nano-splitters and nano-waveguides in Dirac Matter

**Fedor Kusmartsev** – Khalifa University, Abu Dhabi, UAE

9.50 – 10.40

Terahertz radiation emission from carbon-based nanostructures

**Mikhail E. Portnoi** – University of Exeter, UK

10.40 – 11.00

Break

11.00 – 11.50

Machine Learning approaches to sensing

**Mario Molinara** – CREATE/University of Cassino and Southern Lazio, Cassino, Italy

11.50 – 12.40

Advanced 2D materials for sensing

**Stefano Bellucci** – INFN-LNF Frascati, Italy

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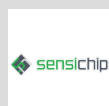


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SOUTHERN LAZIO, CASSINO, ITALY



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