

Smartfan European School on Carbon Fibers reinforced polymers for advanced applications

27th - 30th September 2021

Varano de' Melegari (Italy)







PROGRAMME

Monday 27th September

Fundamentals of composite materials

09:00-09:15

Welcome and Introduction to the SMARTFAN school
Gianmarco Beltrami (DALLARA)

Massimo Rinaldi (Warrant Hub)

09:15-10:00

Introduction to the project:

Prof. Costas Charitidis/ Tanja Kosanovic (NTUA); Introduction to Smartfan composite technologies: Prof. Costas Charitidis/Kate Trompeta (NTUA)

10:00-10:45

Introduction on carbon fibres and applications: Luca Vescovi (DALLARA)

h. 10:45-11:15 Coffee break

11:15-12:00

Review of the mechanical testing methods of composite materials: Prof. Nicholas Tsouvalis (NTUA | on-line)

12:00-12:45

High Performance Car Design in the racing ecosystem:

Matteo Piraccini (HAAS)

12:45-13:00

Closing Day 1

h. 13:00-14:00 Lunch break

In-person

14:00-16:00

Visit to DALLARA

16:00-19:00

Free Time

19:00-21:00

Driving experience: Team building activity

Students will be involved in a kart competition at the Varano racetrack. The group will be divided into teams that will compete

in a thrilling speed race.

Are you ready for the challenge?







Tuesday 28th September

Design & Processing of composites

Andreia Araújo (INEGI)

09:00-09:15 Introduction to Day 2
 Sara Attanà (Warrant Hub)
 Hybrid multi-scale and data-driven models for designing
 the smart properties of nanocomposite materials:
 Matteo Fasano (POLITO), Agustín Chiminelli (ITAINNOVA | on-line)
 Processing methods and conditions to achieve smart and multifunctional composites:

h. 10:45-11:15 Coffee break

11:15-12:00 Advanced and Automated Composites Manufacturing:
Elena Rodríguez Senín (AIMEN)

Nanocomposites: Occupational safety considerations & The role of Personal Protective Equipment:
Panagiotis Karayannis (IRES)

12:45-13:00 Closing Day 2

h. 13:00-14:00 Lunch break

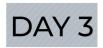
In-person

19:00-22:00 Free time in Parma

22:00 Transfer to Varano de' Melegari







Wednesday 29th September

Characterization & Advanced functionalities

09:00-09:15	Introduction to Day 3 Stefania Melandri (Warrant Hub)
09:15-10:00	Plasma surface functionalisation and characterisation of carbon fibres for high-performance composites: Prof. Hanshan Dong (University of Birmingham online)
10:00-10:45	The role of graphene in the world of multifunctional composite materials: Panagiotis Pappas (FORTH)

h. 10:45-11:15 Coffee break

11:15-12:00	Artificial Intelligence – Internet of Things synergies: Domenico Romano (TECHEDGE)
12:00-12:45	Design and testing of multifunctional composite structures: Prof. Robert Böhm (HTWK Leipzig)
12:45-13:00	Closing Day 3

h. 13:00-14:00 Lunch break

In-pers	on
14:00-16:00	Practical session (Interactive session / Problem solving contest)
16:00-17:00	Transfer to ALMA International School of Italian Cuisine
17:00-18:00	Guided tour of the school
18:00-20:00	Cook your own gala dinner! Team building activity: ALMA's chef will teach students how to prepare a typical Italian type of pasta. This dish will be the main course of the gala dinner.
20:00-22:30	Gala Dinner
22:30	Transfer to Varano de' Melegari







Thursday 30th September

Case studies & Application

09:00-09:15	Introduction to Day 4
09.00-09.15	Sara Attanà (Warrant Hub)

09:15-10:00 Carbon-based smart shape memory polymer composites: Prof. Fabrizio Quadrini (Tor Vergata University)

3D printing of composite structures with dynamically reconfigurable and reversible shape transformations upon external stimuli: Panagiotis Zouboulis (BIOG3D)

h. 10:45-11:15 Coffee break

2D and 1D materials based composites for the next generation of sensors, Energy storage, Harvesting, information storage and EMS devices:

Paolo Bondavalli (THALES)

12:00-12:45 The use of carbon-fiber for automotive application:
Oliver Streilein (BUGATTI | online)

In-person

Closing Day and Cerimony
12:45-13:45
Isella Vicini (Warrant Hub)
Andrea Pontremoli (Dallara)

h. 13:45-15:00 Lunch



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