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COST Action CA19118 - High-performance Carbon-based composites with Smart properties for Advanced Sensing Applications (EsSENce)

2nd Training School:
Modelling & characterization of CNM composites

Politecnico di Torino, Torino (Italy) & online streaming, June 13–16, 2022

Monday, June 13th, 2022 | Modelling

- Venue: Lingotto campus, Classroom 302
- Link to the live streaming (*registration required*): https://attendee.gotowebinar.com/register/9086302942621091083

Time	*Type*	*Title and Trainer*
12:45 – 13:00		*Check in and registration of trainees (online/in presence)*
13:00 – 13:15	LR	**Welcome and Introduction to EsSENce COST Action** Costas Charitidis (NTUA, Greece)
13:15 – 13:30	L	**Introduction to the 2nd Training School** Matteo Fasano (Politecnico di Torino, Italy) Ludwig Cardon (UGent, Belgium) Evangelia Pavlatou (NTUA, Greece)
13:30 – 15:00	L	**Multi-scale and data-driven models of the thermal-mechanical properties of nanocomposite materials** Matteo Fasano (Politecnico di Torino, Italy)
15:00 – 16:00	L	**Biochar: bio-carbon material characterization and applications** Mauro Giorcelli (Politecnico di Torino, Italy)
16:00 – 16:30		*Coffee break*
16:30 – 17:30	LR	**Continuum models and virtual testing of CNM composites** Agustín Chiminelli (ITA Innova, Spain)
17:30 – 18:30	L+P	**Computing the thermal properties of CNM by atomistic simulations and hands-on to nanoHUB** Luca Bergamasco (Politecnico di Torino, Italy)
18:30 – 19:00	Q&A	**Interaction with trainers on project work** Matteo Fasano (Politecnico di Torino, Italy) Luca Bergamasco (Politecnico di Torino, Italy)

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Tuesday, June 14th, 2022 | Characterization

- Venue: Lingotto campus, Classroom 302
- Link to the live streaming (*registration required*): https://attendee.gotowebinar.com/register/8322554678177254928

Time	*Type*	*Title and Trainer*
9:30 – 10:00		*Welcome coffee*
10:00 – 11:00	L	**Liquid moulding of carbon nanoparticle filled composites** Elisabete Fernandes Reia da Costa (SINTEF, Norway)
11:00 – 12:00	L	**Modelling and testing delamination of composites** Frode Grytten (SINTEF, Norway)
12:00 – 13:00	LR	**Characterization of multifunctional graphene and carbon nanotubes reinforced polymers – utilization of advanced thermal properties** Costas Charitidis (NTUA, Greece) George Konstantopoulos (NTUA, Greece)
13:00 – 14:00		*Lunch break*
14:00 – 15:00	L	**Characterization of dispersion quality of carbon nanoparticles by different direct and indirect methods** Petra Pötschke (IPFDD Dresden, Germany)
15:00 – 16:00	LR	**Raman spectroscopy as versatile tool for investigating structural properties of carbon-based composites** Evangelia Pavlatou (NTUA, Greece)
16:00 – 16:30		*Coffee break*
16:30 – 17:15	LR	**Characterization of particle and fibre reinforced composites** Ludwig Cardon (UGent, Belgium)
17:15 – 18:15	L	**Engineering modelling strategies for multifunctional composite materials and its experimental validation** Robert Böhm (HTWK Leipzig, Germany)
18:15 – 19:00	Q&A	**Interaction with trainers on project work** Matteo Fasano (Politecnico di Torino, Italy) Ludwig Cardon (UGent, Belgium)

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Wednesday, June 15th, 2022 | Visit to Dallara

- Venue: Dallara Academy and laboratories
- Link to the live streaming:
  The link will be sent to trainers and trainees via email

Time	*Type*	*Title and Trainer*
8:00 – 11:00		*Bus transfer: Torino > Varano de' Melegari (Dallara)*
11:00 – 11:15	L	**Welcome and company presentation** Chiara Pernechele (Dallara, Italy)
11:30 – 13:00	L	**Fatigue in composite materials: modelling and characterisation at Dallara** Francesco Panozzo, Andrea Oliva (Dallara, Italy)
13:00 – 14:00		*Lunch break*
14:00 – 16:00	D, P	**Visit to Dallara labs** Chiara Pernechele (Dallara, Italy)
16:00 – 17:00	Q&A	**Discussion on characterisation project work** Chiara Pernechele, Francesco Panozzo, Andrea Oliva (Dallara, Italy)
17:00 – 20:00		*Bus transfer: Varano de' Melegari (Dallara) > Torino*

Thursday, June 16th, 2022 | Project work

- Venue: Lingotto campus, Classroom 302
- Link to the live streaming (*registration required*):
  https://attendee.gotowebinar.com/register/4916565622978373899

Time	*Type*	*Title and Trainer*
9:30 – 10:00		*Welcome coffee*
10:00 – 12:00	P	**Modelling and characterisation project work interaction** Luca Bergamasco (Politecnico di Torino, Italy) Chiara Pernechele (Dallara, Italy)
12:00 – 12:45	P	**Project presentation pitches & awards** Matteo Fasano (Politecnico di Torino, Italy) Ludwig Cardon (UGent, Belgium) Evangelia Pavlatou (NTUA, Greece)
12:45 – 13:00	LR	**Closing remarks** Costas Charitidis (NTUA, Greece)

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Event types legenda

L: Lecture (trainer in presence + live streaming)
LR: Lecture (trainer from remote + live streaming)
D: Demonstration in presence (+ live streaming)
P: Project work in presence (+ live streaming)
Q&A: Questions and answers session (+ live streaming)

How to reach Lingotto campus, Classroom 302

The classroom is at the 3rd floor of the Lingotto campus of Politecnico di Torino. Once arrived at the main entrance of the Lingotto campus in via Nizza 230 (Torino), just follow the visual indications that will be posted.
The Lingotto campus can be reached in multiple ways:

- *By public transportation (recommended)*: take the subway line M1 and get off at LINGOTTO stop, then walk 2 minutes to the Lingotto campus of Politecnico di Torino.
- *By car*: drive to Lingotto parking, then walk 5 minutes to the Lingotto campus of Politecnico di Torino.
- *By taxi*: you can reserve your ride by app.