

REGISTRATION FORM

Only for Ph.D. students:

PERSONAL DATA

Full surname: _____

Full name: _____

Birthdate: _____

Birthplace: _____

Study title: _____

University: _____

University address (street, number, ZIP code, town, province): _____

E-mail: _____

Phone: _____

Mobilephone: _____

Skype: _____

I authorize my personal data to be processed according to D.Lgs. 196/03.

I agree my personal data being processed to receive information about upcoming courses and for statistical purposes.

Pursuant to D. Lgs. 196/03 I will be able to access my data, request their modification or cancellation at any time.

Signature _____

Summer School Director

Prof. Marco di Prisco

marco.diprisco@polimi.it

Ph.D. Programme Coordinator

Prof. Umberto Perego

umberto.perego@polimi.it

Secretary for post-graduated engineers

Secretariat of Ordine degli Ingegneri della Provincia di Lecco

Via Achille Grandi, 9 – 23900 LECCO

Phone: +39 0341 286107

e-mail: segreteria@ordinglc.it

24 CFP will be recognized to post-graduated engineers.

Secretary for Ph.D. students

Mrs. Elena Raguzzoni - Politecnico di Milano

Department of Civil and Environmental Engineering

Phone: +39 02 23996504

E-mail: elena.raguzzoni@polimi.it

5 CFU will be recognized to students of the Ph.D. programme in Structural, Seismic and Geotechnical Engineering (Politecnico di Milano).

CFU recognition for other Ph.D. students is committed to the Academic Board of the Ph.D. course they belong to.

For additional information, please visit: <http://www.cte-it.org/>

Ph.D. Programme in Structural, Seismic and Geotechnical Engineering



In cooperation with



Collegio dei Tecnici della Industrializzazione Edilizia



International Federation National for Structural Concrete

SUMMER SCHOOL 2021

Fibre reinforced concrete. Material characterization and structure design.

July 2nd – 7th 2021

Ph.D. Students: Politecnico di Milano – Lecco Campus – Room B0.2

Post-graduated engineers: on line on Cisco Webex

Lectures will be held in English



SUMMER SCHOOL PROGRAMME

FRIDAY, 2nd JULY 2021

- 9:00-10:30 Fibre reinforced concrete materials: introduction
(**Prof. Walraven**)
- 10:30-11:00 *Coffee break*
- 11:00-12:30 Fibre reinforced concrete properties at fresh and hardened states
(**Prof. Mobasher**)
- Lunch*
- 14:30-16:00 Mechanical characterization and classification of fibre reinforced materials
(**Prof. Kanstad**)
- 16:00-16:30 *Coffee break*
- 16:30-18:00 Constitutive models for design
(**Prof. di Prisco**)

SATURDAY, 3rd JULY 2021

- 9:00-10:30 Creep and shrinkage
(**Prof. Mobasher**)
- 10:30-11:00 *Coffee break*
- 11:00-12:30 UHPFRC for architectural design
(**Prof. Walraven**)

SOCIAL PROGRAMME TO BE DEFINED

SATURDAY 3rd
JULY 2020 – 14:00-23:00

MONDAY, 5th JULY 2021

- 9:00-10:30 Structure design approach according to Eurocode 2020 (**Prof. Kanstad**)
- 10:30-11:00 *Coffee break*
- 11:00-12:30 Case studies: reliability of predictive models (**Prof. di Prisco**)
- Lunch*
- 14:30-16:00 FRC as a sustainable material
(**Prof. Mobasher**)
- 16:00-16:30 *Coffee break*
- 16:30-18:00 Structural applications in Civil Engineering
(**Prof. Walraven**)

SUMMER SCHOOL PROGRAMME

TUESDAY, 6th JULY 2021

- 9:00-10:30 Properties of Ultra High Performance concrete and their characterization (**Prof. Grünewald**)
- 10:30-11:00 *Coffee break*
- 11:00-12:30 Modeling and reliability
(**Prof. di Prisco**)
- Lunch*
- 14:30-16:00 SFRC models for design of structural elements (**Prof. Mobasher**)
- 16:00-16:30 *Coffee break*
- 16:30-18:00 Use of fibre reinforced concrete in soil structure interactions (**Prof. Walraven**)

WEDNESDAY, 7th JULY 2021

- 9:00-10:30 Design of advanced applications
(**Prof. Grünewald**)
- 10:30-11:00 *Coffee break*
- 11:00-12:30 Design of FRC in Italy
(**Prof. di Prisco**)

REGISTRATION

Thanks to the contribution of Politecnico di Milano - Ph.D. Programme in Structural, Seismic and Geotechnical Engineering, CTE, *fib* and Ordine degli Ingegneri di Lecco, due to the particular COVID emergency, the course is offered for **FREE** to all the attendants who submit registration.

Ph.D students must submit registration to elena.raguzzoni@polimi.it.

Only the first 30 Ph.D. students can attend the course in presence at Lecco campus.

Post-graduated engineering can attend only on-line and must register on:

<https://lecco.ordineingegneri.it/aggiornamento-professionale/eventi-formativi/>

SUMMER SCHOOL LECTURERS



Marco di Prisco is professor of Structural Design at the Department of Civil and Environmental Engineering at Politecnico di Milano. Main research interests: constitutive modeling of advanced cement-based materials, reinforcement-concrete interaction mechanisms, sustainable design of new and existing r/c and p/c structural elements, prefabricated structures, structural response at exceptional loads. Series Editor of Lecture Notes in Civil Engineering for Springer-Nature, Presidium member of fib, member of ACI, RILEM, Coordinator of the Committee for MC2020 chapters on FRC, he is currently convener of the Commission TC250/SC2/Wg1/TG2 to introduce FRC in EC2.



Terje Kanstad is professor at the Department of Structural Engineering at NTNU, Trondheim University. His research and teaching concerns structural design of buildings and bridges, FRC, Early age concrete crack assessment, F.E.analysis with focus on time-dependent structural systems and material behavior. Deteriorated structures and related design methods. He is member of fib TG 8.3 FRC, Fib TG 8.8: Structural properties of flowable concrete, CEN/TC 250/SC 2/WG 1/ (Revision of Eurocode 2), TG 7 Time dependent effects, CEN/TC 250/SC 2/WG 1/ (Revision of Eurocode 2), TG 2 Fibre reinforced concrete, Norwegian Concrete Association committee for fibre concrete (chairman).



Barzin Mobasher is professor of Civil and Environmental Engineering, Ira A. Fulton School of Engineering, Arizona State University. Main research interests: Constitutive modeling of materials, fracture mechanics, non-destructive testing techniques, experimental stress analysis, biomechanics, composite materials, chemical and mechanical properties of concrete. He is member of ACI, and in particular of Committees 446 - Fracture Mechanics, Secretary, 544 - Fiber reinforced Concrete, 549 - Thin section products, 440 - Fiber reinforced plastic Reinforcement.



Joost Walraven is Prof. Em. of Concrete and Concrete Structures, Department of Structural Engineering, Delft University of Technology, The Netherlands. Main research interests: high performance concrete types and their applications, like self-compacting concrete, ultra high performance fibre concrete and ecoconcrete, design of precast concrete structures, shear and punching resistance of concrete structures, residual bearing capacity of existing concrete structures. Convener of fib Task Group TG 8.6 "Ultra High Performance Fibre Concrete", Convener of Working Group SAG7-B "Assessment of existing structures", President of fib 2000-2002.



Steffen Grünewald, Professor at Ghent University (BE) and Senior Consultant at Grunewald R&D Consulting; courses in concrete technology and concrete structures. Main interests: concrete components, mix design, rheology, execution, structural design and numerical simulations related to high performance (fibre) concretes and composites, advanced concrete technology, alternative binder systems and process optimization. Convener fib TG 4.3 'Structural design with flowable concrete'; member RILEM TC 266-MRP 'Measuring rheological properties of cement-based materials'. Extended industry experience in prefabrication, production with ready-mix concrete and R&D.