

# REGISTRATION FORM

## PERSONAL DATA

Surname: \_\_\_\_\_

Full name: \_\_\_\_\_

Birthdate: \_\_\_\_\_

Birthplace: \_\_\_\_\_

Study title: \_\_\_\_\_

Company: \_\_\_\_\_

## INVOICING DATA (Invoice will VAT included)

Company name:.....

Address:.....

City:.....

Cap:.....

Vat/ Fiscal Code:.....

I authorize the processing of my personal information under D.Lgs. 196/03. I agree with the processing of my data for receiving information about the upcoming courses and for statistical purpose. At any time, pursuant to D. Lgs. 196/03, I will be able to access my data, request their modification or cancellation.

Amount

€ \_\_\_\_\_

**POST-GRADUATED ENGINEERS BANK TRANSFER TO:**

Banca Popolare di Sondrio - Agenzia n. 2 - Lecco  
Payable to: Fondazione degli Ingegneri della  
Provincia di Lecco:  
**IBAN IT42E0569622902000005611X68**

Please always write: SUMMER SCHOOL 2022 + YOUR NAME AND SURNAME

Signature: \_\_\_\_\_

## Summer School Director

**Prof. Marco di Prisco**

[marco.diprisco@polimi.it](mailto:marco.diprisco@polimi.it)

## Ph.D. Programme Coordinator

**Prof. Stefano Mariani**

[stefano.mariani@polimi.it](mailto:stefano.mariani@polimi.it)

## Secretary for post-graduated engineers

Ordine degli Ingegneri della Provincia di Lecco  
Via Achille Grandi 9, 23900 Lecco  
Phone: +39 0341 286107

E-mail: [segreteria.lecco@ordineingegneri.it](mailto:segreteria.lecco@ordineingegneri.it)

## Secretary for CTE

Eng. Anna Magri  
CTE – Collegio dei Tecnici della Industrializzazione Edilizia  
Viale Bianca Maria 35, 20122 Milano  
Phone: +39 327 9127660

E-mail: [info@cte-it.org](mailto:info@cte-it.org)

Up to 24 CFP will be recognized to post-graduated Engineers by Lecco Board of Engineers if a multiple choice test will be passed.

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

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



In collaboration with



Collegio dei Tecnici della Industrializzazione Edilizia



International Federation National for Structural Concrete

## SUMMER SCHOOL 2022

**Performance, Protection & Strengthening of Structures under Extreme Loading**

**Lecco Campus, July 8<sup>th</sup> – 13<sup>th</sup> 2022**  
room A1.1 – Edificio 10 I piano

**Post – graduated engineers can attend on line on Cisco Webex or in presence**



# PROGRAMME

## FRIDAY, 8<sup>th</sup> JULY 2022

09.00 - 10.30 HPFRC Material behaviour at high strain rates and high temperature (M. di Prisco)

10.30 - 11.00 coffee break

11.00 - 12.30 Meso-scale testing of FRC elements under blast and fire loads (M. di Prisco)

*Lunch*

14:30-16:00 Dynamic modelling of concrete structures subjected to high strain loadings (J. Ozbolt)

16:00-16:30 *Coffee break*

16:30-18:00 Modelling of coupled phenomena. (J. Ozbolt)

## SATURDAY, 9<sup>th</sup> JULY 2022

9:00-10:30 Impact collapse: an introduction - phenomenology, examples, modeling approaches. (A. Perez Caldentey)

10:30-11:00 *Coffee break*

11:00-12:30 Analytical and experimental approaches of impact loadings (A. Perez Caldentey)

### SOCIAL PROGRAMME

SATURDAY, 9 JULY 2022 – 14:00-23:00

Trip on Lake Como

SUNDAY, 10 JULY 2022 – 9:00-16:00

Mountain walk

## MONDAY, 11<sup>th</sup> JULY 2022

9:00-10:30 Structural behaviour under fire conditions (L. Taerwe)

10:30-11:00 *Coffee break*

11:00-12:30 Material response of concrete exposed to high temperatures. (L. Taerwe)

12.30-14.30 *Lunch*

14:30-16:00 Predictive numerical simulation: methodology, comparison to experimental results for impact (J. Ozbolt)

16:00-16:30 *Coffee break*

16:30-18:00 Examples of impact loadings (A. Perez Caldentey)

## TUESDAY, 12<sup>th</sup> JULY 2022

9:00-10:30 Reduced scale tests under blast and fire loads (M. di Prisco)

10:30-11:00 *Coffee break*

11:00-12:30 Case studies of durability modelling (J. Ozbolt)

*Lunch*

14:30-16:00 Fire design of concrete members and structures (L. Taerwe)

16:00-16:30 *Coffee break*

16:30-18:00 Full-scale tests under blast and fire loads (A. Caldentey)

## WEDNESDAY, 13<sup>th</sup> JULY 2022

9:00-10:30 Examples of fire design of concrete structures including the case of external FRP strengthening (L. Taerwe)

10:30-11:00 *Coffee break*

11:00-12:30 Design of tunnel segments taking into account exceptional loads. (Prof. M. di Prisco)

### REGISTRATION

**Post – graduated engineers can attend on line on Cisco Webex or in presence**

For registration send the form to the Order of Engineers:

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

The registration fee is **400,00 Euros per person** (VAT included) covering course attendance and social events.

. It is also possible, to register only for some days. The registration fee is (specify the choice):

- € 180,00 for Saturday 9<sup>th</sup> + Monday 11<sup>th</sup> morning + Tuesday 12<sup>th</sup> afternoon (9 hours – 9 CFP)
- € 400,00 full course (24 hours – 24 CFP)

For any information about the registration, please contact Ordine degli Ingegneri della Provincia di Lecco at [segreteria.lecco@ordinegneri.it](mailto:segreteria.lecco@ordinegneri.it)



### Josko Ozbolt

Since 1995 he is *Associate Professor at the University of Stuttgart* and since 2003 he is also *Professor at the University of Rijeka*, Faculty of Civil Engineering (Croatia). The main field of his interest includes computational mechanics, static and dynamic fracture of materials and structures, behavior of concrete at high temperature and durability mechanics. He is author of more than 250 publications in journals and books, a number of applications in the engineering practice, formulation of design rules and sophisticated software development for nonlinear analysis of materials and structures He is a member of fib Commission 4, TG 4.1, TG 4.3 and TG 4.4 and RILEM, Technical Committee 227-HPB. He served in Editorial boards of International Journal Computers & Concrete, Techno press, 2004-10 and in the International Journal for Engineering Modeling, University of Split, Croatia, since 1987.



**Luc Taerwe** is Emeritus Full Professor of Structural Engineering at Ghent University (Belgium) and the former director of the Magnel Laboratory for Concrete Research. He is a National RPGE Chair Professor at Tongji University (Shanghai) and an elected member of the Royal Belgian Academy of Technical Sciences. He is recipient of the Robert L'Hermite Medal 1988 of RILEM and the IABSE Prize 1991, Fellow of the ACI and the International Institute for FRP in Construction and also Honorary Life Member and fellow of fib. He is a member of several fib commissions and task groups and since 2006 he serves as Editor-in-chief of the fib journal "Structural Concrete". Luc Taerwe has an extensive research and practical experience in all aspects of reinforced and prestressed concrete structures, including fire resistance, robustness, tunnel linings, composite reinforcement (FRP), structural reliability, statistical quality control, high performance and fibre reinforced concrete.

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### Marco di Prisco

*Full Professor of Structural Design at the Department of Civil and Environmental Engineering at Politecnico di Milano*. Main research interests: constitutive modeling of plain and fibre reinforced concrete, fracture mechanics, composite materials, theoretical and experimental analysis on reinforcement-concrete interaction basic mechanisms, r/c and p/c structural elements, prefabricated structures, structural response at exceptional loads, tunnel safety, bridge assessment. Serial Editor of Springer Tracts in Civil Engineering, honorary Editor of the European Journal of Environmental and Civil Engineering, Coordinator of RILEM TC 288 on impact and explosion member ACI. He is fib fellow and member of the Presidium, coauthor of the MC2010 chapters on FRC and convener of the Commission TC250/SC2/Wg1/Tg2 to introduce FRC in EC2. He is Technical Director of DSC-ERBA design company.



### Alejandro Pérez Caldentey

*Professor of Structural Concrete, Steel and Composite Structures at the Universidad Politécnica de Madrid*. His main research interests include serviceability of concrete structures, punching and shear as well as blast resistance. He has contributed to the revision of Eurocode 2 through participation in Project Team SC2.PT1 and membership in CEN TC-250/SC2/WG1 and to the draft of Model Code 2020 through membership in TG2.1. He has extensive experience in structural design having worked for 33 years at FHECOR Consulting Engineers, where he is currently President of the Board. He holds licenses to practice engineering in Spain, Chile, Texas, Virginia, Florida, Ontario Québec and British Columbia. He has participated in 4 research projects involving blast testing and column removal of full size reinforced concrete structures.