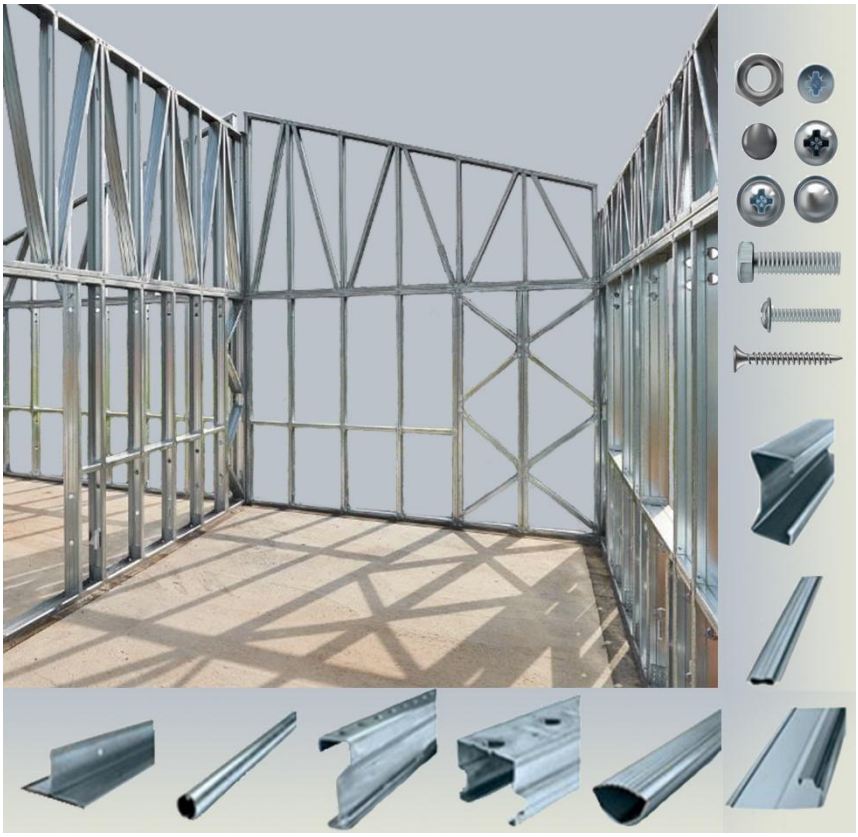
INTERNATIONAL TRAINING SCHOOL

06 – 10 October 2025
Naples - Italy



UNIVERSITY OF NAPLES FEDERICO II

Department of Structures for Engineering and Architecture

DIPARTIMENTO DI ECCELLENZA 2023-2027 MUR

Within the course of the PhD program in *Structural & Geotechnical Engineering and Seismic Risk*

DATES

06 - 10 October 2025

40 hours (5 CFU)

LOCATION

Federico II DiST
Via Forno Vecchio, 36
80134 Naples

CHAIR

Raffaele Landolfo
University of Naples Federico II

AUDIENCE

Engineers, architects, PhD students, postdoctoral researchers

CONTACTS

Organizing issues:
landolfo@unina.it -
lfiorino@unina.it
Administrative issues:
immacolata.diez@unina.it -
valeria.peluso@unina.it

INTERNATIONAL TRAINING SCHOOL ON LIGHTWEIGHT STEEL FRAMED CONSTRUCTIONS

2nd Edition

Program

AIM

In the field of solutions proposed by the construction market, the choice of technology and products to use is strongly influenced by costs and implementation times, as well as by the ability of the construction system to satisfy appropriate performance standards in terms of safety, durability and eco-friendliness. From this perspective, dry constructions that use lightweight cold-formed steel members (LightWeight Steel – LWS, Cold-Formed Steel – CFS), optimally combining high structural performance with high quality levels and reduced construction times, offer highly competitive solutions capable of satisfying extremely demanding client requirements. Starting from this assumption, the course aims to provide the basic information that characterizes the LWS construction solutions, which are more suitable, compared to more traditional systems, for an integrated and sustainable design approach. The aim of the course is to present the solutions for the main categories of LWS structures applied in buildings. The following types LWS solutions are concerned: stick-built constructions; panelised constructions; modular constructions; non-structural architectural elements. On the purpose to give students a global approach of the specific problems to given construction type, the specific lectures are organised according to the following integrated structure: specific structural typologies and detailing; loading conditions and design criteria; analysis and design checking at ULS and SLS; specific requests for execution. Particular aspects related to stability problems, dynamics, and specific connecting design will be addressed where and when they are significant. Relevant parts of EN 1993, as well as of EN 1990, EN 1991 and EN 1998 will be employed for the calculation of such elements. The theoretical part is supplemented with practical applications by various methods: analytical and numerical analysis, design project. The second edition of the school will include a wide range of new topics aimed at enhancing the course content and providing a more comprehensive and diversified learning experience

REGISTRATION

The course will offer a limited number of seats for participants to attend.
Registration:
On-line Registration Form
Registration confirmation: 28-07-2025
Registration fees:

- Students/Postdoc: **350 €**
- Professionals: **450 €**

Payment deadline: 8-09-2025
Payment by **Bank transfer** to:
Dip. di Strutture per l'Ingegneria e l'Architettura - IBAN code:
IT81P0623003543000058328001
BIC/SWIFT code: **CRPPIT2P549**
Bank: Credit Agricole SPA

VENUE

The Summer School will be held at the Department of Structures for Engineering and Architecture of the University of Naples Federico II.

The venue is located in the historic center of Naples, one of the largest and oldest in Europe. It was designated a UNESCO World Heritage Site in 1995. Its remarkable historical and cultural stratification makes it a unique setting where different eras coexist, offering an ideal environment for academic and cultural activities.

SKILLS

The course is conceived to give students the following skills:
- Adopting different design approaches as appropriate for the characteristic structural system
- Understanding the behaviour of different LWS structures.
- Understanding ULS and SLS conditions for different structural typologies.
- Assigning best detailing according to structural system.
- Structural analysis, structural design, and interpretation of results.

CONTENT

General introduction to LWS construction systems and their common application; Analytical and Numerical Models for the Load-Bearing Capacity of Thin-Walled Profiles; LWS solutions for structural and non-structural uses; Architectural Integration and Sustainability of Lightweight Steel Systems; Residential LWS buildings: specific loading, conditions for design at ULS and SLS, constructive details; Seismic design according to the 2nd generation of Eurocodes; International Perspective: Japanese Design and Fabrication Practices; Tutorial on the design of LWS buildings for gravity loads, horizontal loads and seismic actions.

ORGANIZERS

Raffaele Landolfo, University of Naples Federico II, Italy
Luigi Fiorino, University of Naples Federico II, Italy

LECTURERS

Luigi Fiorino, University of Naples Federico II, Italy
Iuorio Ornella, Polytechnic of Milan, Italy
Raffaele Landolfo, University of Naples Federico II, Italy
Aldo Milone, University of Naples Federico II, Italy
Alessandro Prota, University of Naples Federico II, Italy
Annarosa Lettieri, Nagoya Institute of Technology, Japan
Sato Atsushi, Nagoya Institute of Technology, Japan

COURSE SCHEDULE

Day 1 | October 6th, 2025

- 8:00 – 9:00 Registration of participants
- 9:00 – 10:00 **Raffaele Landolfo**: Opening of the Training School, Welcome to the University of Naples Federico II, Presentation of Lecturers
- 10:00 – 10:30 Coffee break
- 10:30 – 12:30 **Raffaele Landolfo**: *General introduction to lightweight cold-formed steel structures and their applications.*
- 12:30 – 13:30 **Luigi Fiorino:** *Analytical models for the evaluation of the load-bearing capacity of thin walled profiles (Part 1)*
- 13:30 – 14:30 Lunch
- 14:30 – 15:30 **Luigi Fiorino:** *Analytical models for the evaluation of the load-bearing capacity of thin walled profiles (Part 2)*
- 15:30-16:30 **Aldo Milone:** *Tutorial: Analytical models for the evaluation of the load-bearing capacity of thin walled profiles under bending. Resistance and buckling verification*
- 16:30-17:30 **Alessandro Prota:** *Tutorial: Analytical models for the evaluation of the load-bearing capacity of thin walled profile under compression. Resistance and buckling verification*

Day 2 | October 7th, 2025

- 9:00 – 11:00 **Aldo Milone**: *Numerical models for the evaluation of the load-bearing capacity of thin walled profiles*
- 11:00 – 11:30 Coffee break
- 11:30 – 13:30 **Alessandro Prota:** *Connection systems for thin walled profiles: technical and theoretical aspects*
- 13:30 – 14:30 Lunch
- 14:30 – 16:30 **Luigi Fiorino:** *Design of lightweight steel buildings for gravity and horizontal loads*
- 16:30-17:30 **Alessandro Prota:** *Tutorial: Design of lightweight steel buildings for gravity and horizontal loads (Part 1)*

UNDER THE AUSPICES OF

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DETAILS

Please periodically check the dedicated webpage through QRcode:

Day 3 | October 8th, 2025

- 9:00 – 11:00 **Atsushi Sato:** *Recommendation for the design and fabrication of lightweight steel structures in the Japanese practice*
- 11:00 – 11:30 Coffee break
- 11:30 – 13:30 **Raffaele Landolfo:** *General principles of seismic design according to the 2nd generation of Eurocodes, research and development at UNINA*
- 13:30 – 14:30 Lunch
- 14:30 – 16:30 **Ornella Iuorio:** *Architecture in lightweight steel*
- 16:30 – 17:30 **Aldo Milone:** *Tutorial: Design of lightweight steel buildings for gravity and horizontal loads (Part 2)*

Day 4 | October 9th, 2025

- 9:00 – 11:00 **Annarosa Lettieri:** *Typical lateral force resisting system used in the Japanese practice of lightweight steel structures*
- 11:00 – 11:30 Coffee break
- 11:30 – 12:30 **Ornella Iuorio:** Sustainability of lightweight steel constructions
- 12:30 – 13:30 **Raffaele Landolfo:** *Design in seismic areas - Specific rules for lightweight steel buildings*
- 13:30 – 14:30 Lunch
- 14:30 – 15:30 **Luigi Fiorino:** *Tutorial: Design in seismic areas - Specific rules for lightweight steel buildings*
- 15:30-17:30 **Aldo Milone:** *Nonstructural lightweight drywall systems (Part 1)*
- 15:30-17:30 **Alessandro Prota:** *Nonstructural lightweight drywall systems (Part 2)*
- 17:30 – 18:30 **Knauf:** *Knauf Drywall Systems: Innovation and Performance in Ligthweight Constrictions*

Day 5 | October 10th, 2025

- 9:00 – 13:00 Technical visit

BOOK

A printed copy of the book “Design of Cold-formed Steel Structures" by Dan Dubina, Viorel Ungureanu and Raffaele Landolfo, ECCS – European Convention for Constructional Steelwork will be distributed to all participants (the cost of the book will be included in the Training School fee).

SUGGESTED ACCOMODATIONS

The following list includes some suggested accommodations in Naples.
Applicants are encouraged to book their accommodation as soon as possible.

B&B/Hotel	Website	Mobile
At home Lettieri	https://bnbathomelettieri.wixsite.com/athomelettieri	+39.347.6533386
Bed in Naples	https://beb.it/bedinnaples/it/	+39.348.7556557
Casetta partenopea	https://www.airbnb.com/h/casettapartenopea	+39.389.8842803
Hotel Cimarosa	https://www.hotelcimarosa.it/	+39.331.4464424
Hotel Royal	https://www.royalgroup.it/royalcontinental/	
La Maisonette	http://www.lamaisonnettebb.it/	+39.329.7483282
Nannarè luxe home	https://www.booking.com/hotel/it/nannare-luxe-home-napoli	+39. 347.7559555
Luna Vomerese	https://abnb.me/weSRTh5BiS	+39.329.2948894
Villino Manina	https://beb.it/villinomanina/it/	+39.335.498412
Casa e Studio Gravina	https://abnb.me/aXduwgi93Eb	+39.333.4112510
Casa Valparaiso	https://air.tl/NEGiJWrz	+39.328.1569936
Charming Naples	https://www.charmingnaples.it/	+39.335.5874052