Courses from 8th November to 17th December, 2021

MERC area

- **Modeling Complex Systems**
  Lecturer: Prof. Mario Di Bernardo
  Teaching mode: in-person (Aula 1) | Hours: 24
  Team code: 1nbhrv7

- **Numerical Methods for Complex Systems**
  Lecturer: Prof. Constantinos Siettos
  Teaching mode: in-person (Aula 1) | Hours: 24
  Team code: 2m9lbno

- **Seminar lectures**
  Lecturers: Prof. Francesco Bullo, Prof. Stefano Boccaletti
  Teaching mode: in-person (Aula 1) | Hours: 10+10
  - Part I: Dynamics of Network Systems in Science and Technology
    Lecturer: Prof. Francesco Bullo
    Hours: 10
  - Part II: Introduction to complex networks' structure and dynamics
    Lecturer: Prof. Stefano Boccaletti
    Hours: 10

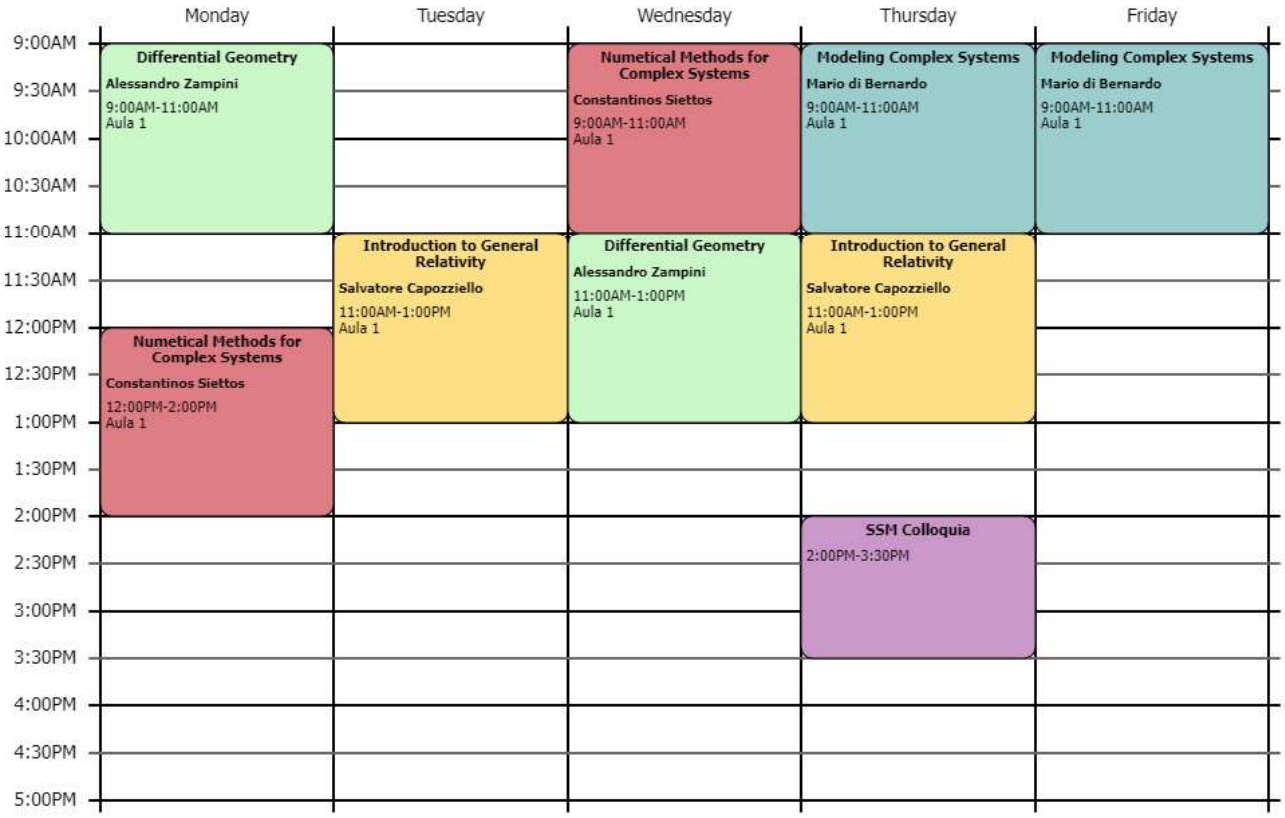
MPHS area

- **Differential Geometry**
  Lecturer: Dr. Alessandro Zampini
  Teaching mode: in-person (Aula 1) | Hours: 24
  Team code: tzzrjxx

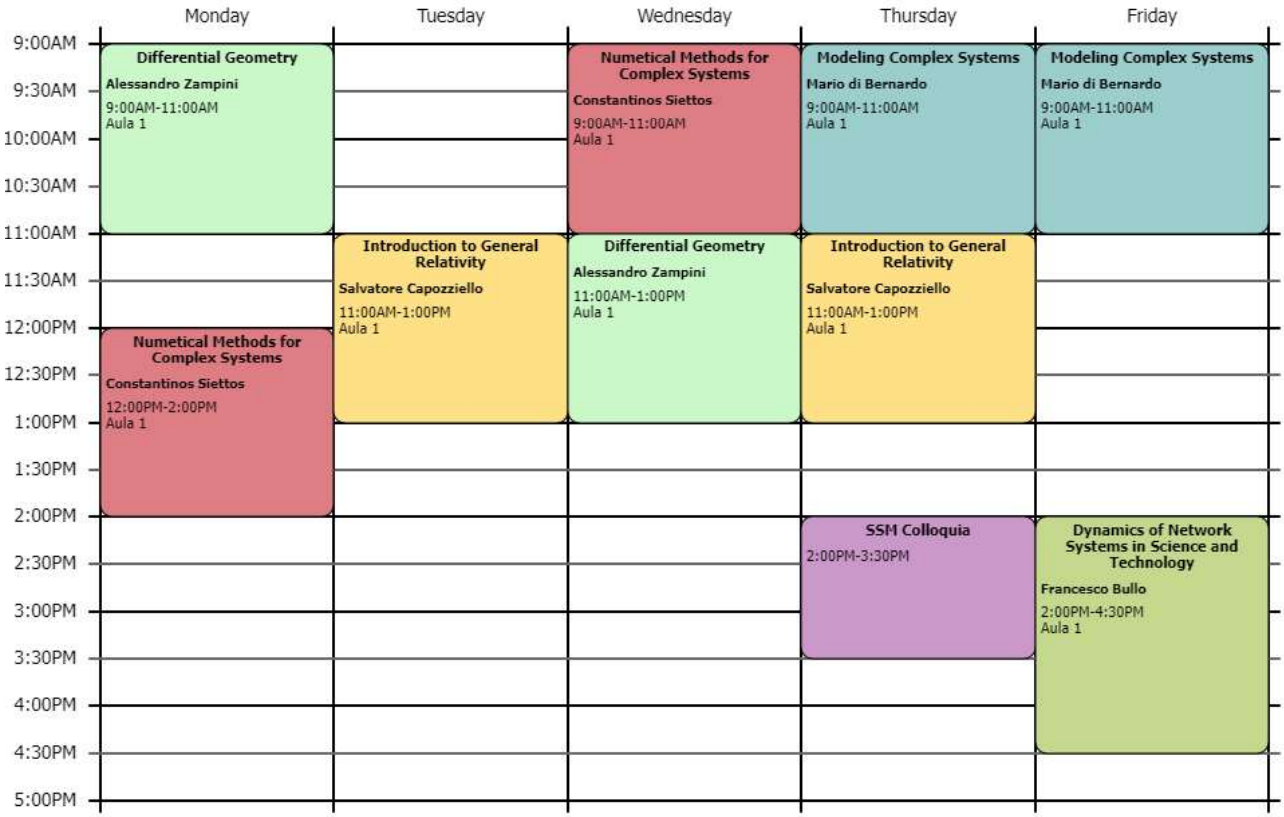
SPACE area

- **Introduction to General Relativity**
  Lecturer: Prof. Salvatore Capozziello
  Teaching mode: in-person (Aula 1) | Hours: 24
  Team code: t8r0z51

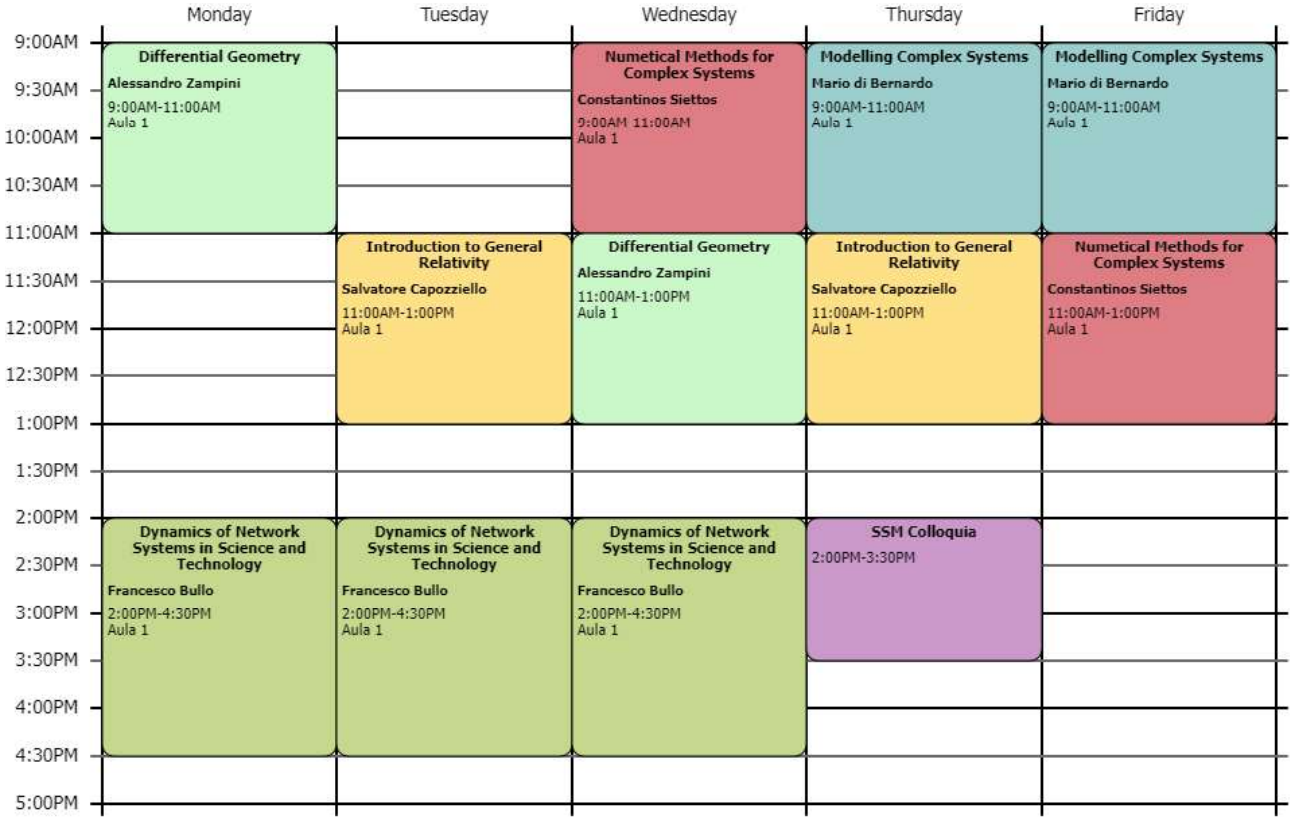
Timetable: 8th-12th November 2021



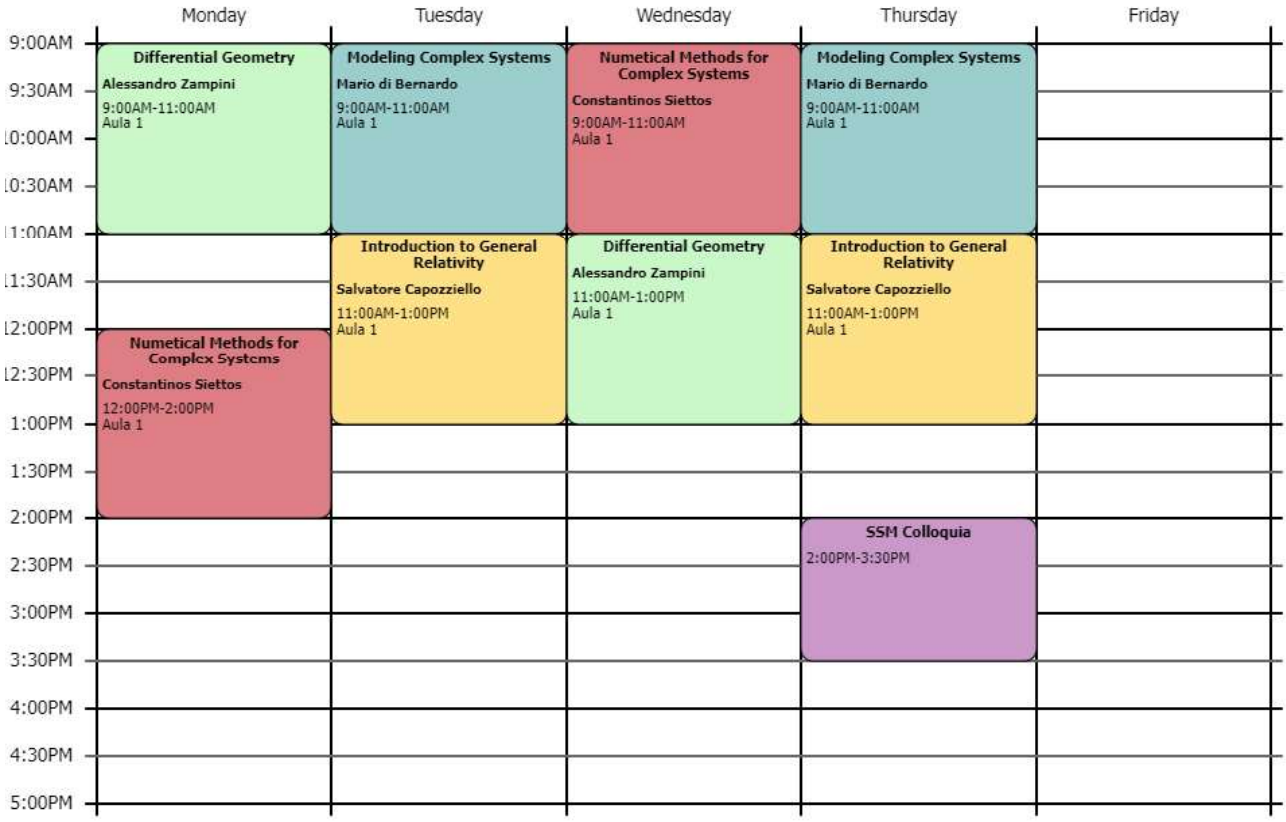
Timetable: 15th-19th November 2021



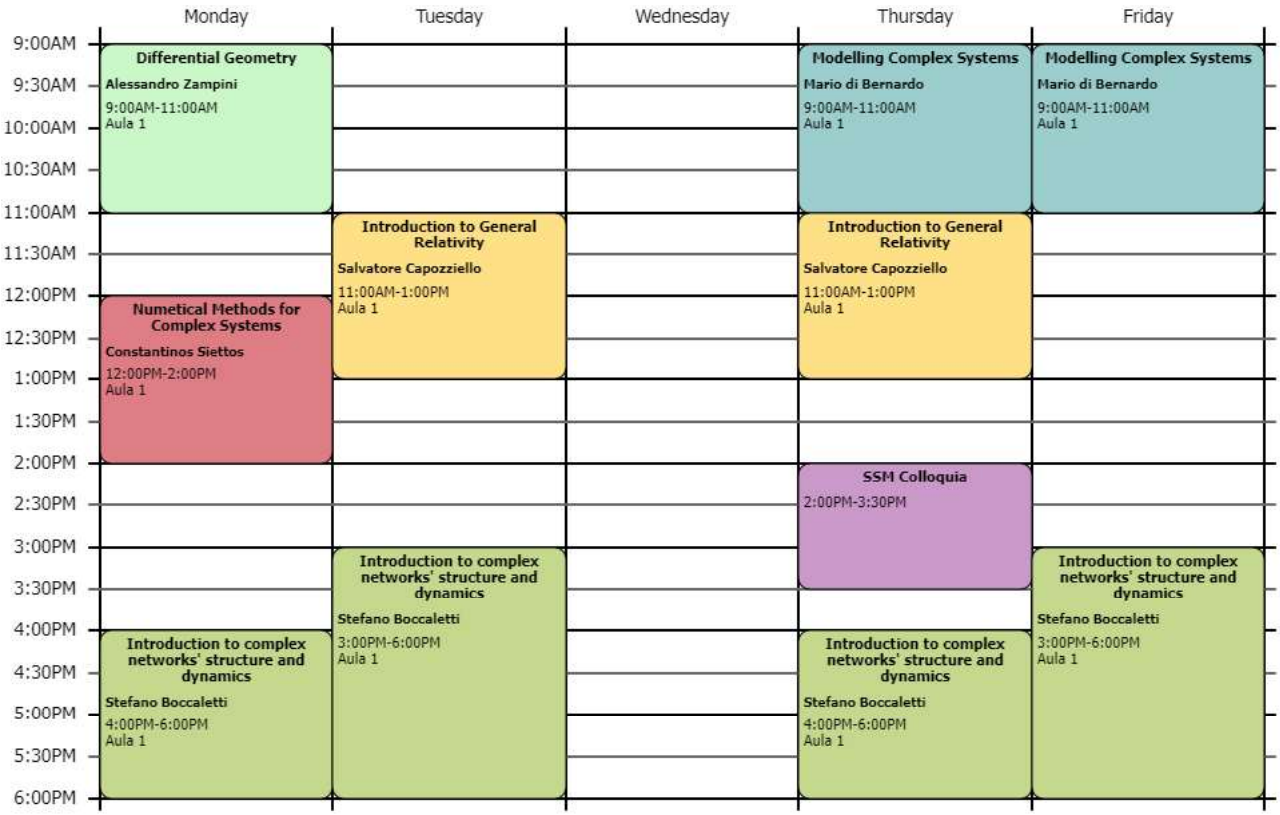
Timetable: 22nd-26th November 2021



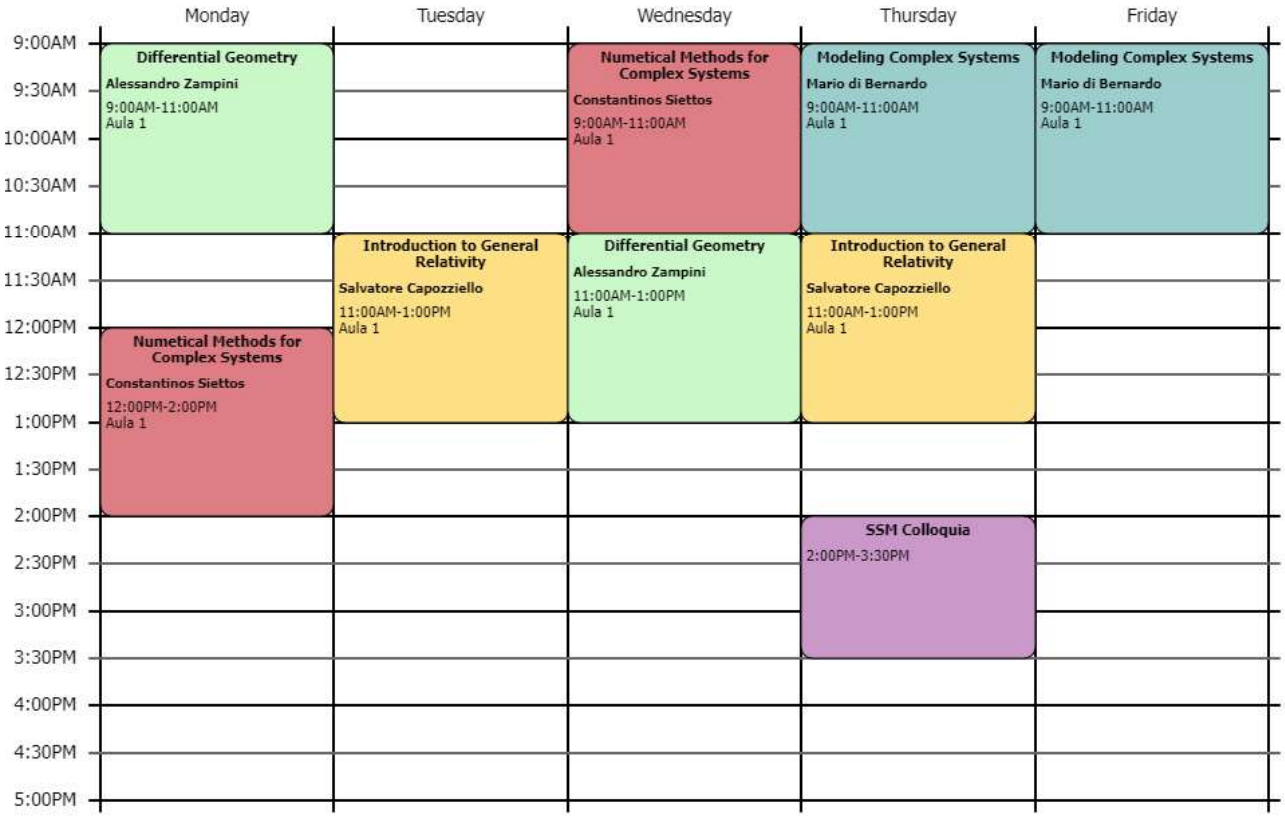
Timetable: 29th-3rd December 2021



Timetable: 6th-10th December 2021



Timetable: 13th-17th December 2021



Courses from 10th January to 25th February, 2022

MERC area

- **Probability calculus and elements of stochastic modelling**
  Lecturer: Prof. Massimiliano Giorgio
  Email: massimiliano.giorgio@unina.it
  Teaching mode: in-person (Aula 4) | Hours: 24
  Team code: cn22z0q
  Start date: 12 January 2022 | 6-week course duration
  Course days: Tuesday 14h-16h, Friday 11h-13h
  Note: the first lesson will take place on Wednesday 12/01 at 11h-13h

MPHS area

- **Numerical treatment of PDEs**
  Lecturer: Prof. Francesco Calabrò
  Email: calabro@unina.it
  Teaching mode: in-person (Aula 4) | Hours: 24
  Team code: 0860qmm
  Start date: 11 January 2022 | 6-week course duration
  Course days: Tuesday-Thursday 9h-11h
  No-course days: 25/01 and 10/02

- **Partial Differential Equations**
  Lecturer: Prof. Carlo Nitsch
  Email: carlo.nitsch@unina.it
  Teaching mode: in-person (Aula 4) | Hours: 24
  Team code: riitwty
  Start date: 10 January 2022 | 6-week course duration
  Course days: Monday-Wednesday 9h-11h

SPACE area

- **Electromagnetic Fields at PhD**
  Lecturer: Prof. Daniele Riccio
  Email: daniele.riccio@unina.it
  Teaching mode: in-person (Aula 4) | Hours: 24
  Team code: 5gtwgod
  Start date: 11 January 2022 | 6-week course duration
  Course days: Tuesday-Thursday 11h-13h

- **Statistical Mechanics: from basic concepts to applications in Complex Systems, Astrophysics and beyond**
  Lecturer: Prof. Mario Nicodemi
  Email: nicodem@na.infn.it
  Teaching mode: in-person (Aula 4) | Hours: 24
  Team code: 908uika
  Start date: 10 January 2022 | 6-week course duration
  Course days: Monday-Wednesday 11h-13h
  The following lessons are rescheduled:
  - 12/1 to 10/1 at 14:00
  - 19/1 to 17/1 at 14:00
  - 07/2 to 09/2 at 14:00
  - 14/2 to 16/2 at 14:00

- **Introduction to Quantum Mechanics**
  Lecturer: Prof. Gennaro Miele
  Email: gennaro.miele@unina.it
  Teaching mode: in-person (Aula 4) | Hours: 24
  Team code: s3tr9cz
  Start date: 18 January 2022 | 6-week course duration
  Course days: Tuesday-Thursday 16h-18h

- **Spacecraft Attitude Control via Momentum Exchange Devices**
  Lecturer: Prof. Riccardo Bevilacqua
  Email: bevilacr@erau.edu
  Teaching mode: in-person (Aula 4) | Hours: 24
  Team code: nmzyle3
  Start date: 24 January 2022 | 2-week course duration
  Course days: Monday-Wednesday-Friday 14h-17h, Friday 9h-11h, 25/01 9h-11h

Third quarter courses at Scuola Superiore Meridionale

MPHS area

- Physics of matter from the zepto-scale to the macro-scale
  Lecturer: Prof. Marrucci, Prof. Ambrosino, Prof. Fazio
  Email: lorenzo.marrucci@unina.it, Fabio.Ambrosino@na.infn.it, rosario.fazio@unina.it
  Teaching mode: in-person (Aula 1) | Hours: 24
  Team code: 88m1u9q
  Start date: 07 March 2022 | 6-week course duration
  Course days: Tuesday – Thursday 11h-13h
  Note: there will be no lesson on 22 March

SPACE area

- Introduction to Cosmology
  Lecturer: Prof. Matarrese
  Email: sabino.matarrese@pd.infn.it
  Teaching mode: online | Hours: 24
  Team code: 8cgxwel
  Start date: 14 March 2022
  Course days: Monday -Wednesday 9h-11h
  Note: there will be no lessons on 18/04 and 25/04 due to a national holiday.

- Introduction to Astrophysics
  Lecturer: Prof. Della Valle
  Email: massimo.dellavalle@inaf.it
  Teaching mode: online | Hours: 24
  Team code: mjkjfwz
  Start date: 28 March 2022
  Course days: Monday 14h-16h and Tuesday 9h-11h
  Note: there will be no lessons on 18/04 and 25/04 (due to a national holiday) and 2-3/05

- Introduction to Deep Learning
  Lecturer: Prof. Poggi and Dr. Gragnaniello
  Email: poggi@unina.it , diego.gragnaniello@unina.it
  Teaching mode: online | Hours: 24
  Team code: kj13pgl
  Start date: 14 March 2022
  Course days: Monday 11h-13h and Wednesday 13h-15h
  Note: there will be no lessons on 18/04 and 25/04 due to a national holiday.

- **Introduction to astro-particle and particle physics**
  Lecturer: Prof. Vissani
  Email: francesco.vissani@lngs.infn.it
  Teaching mode: in-person (Aula 1) | Hours: 24
  Team code: 9cz9x96
  Start date: 14 March 2022
  Course days: Wednesday 15h-17h and Thursday 9h-11h

MERC area

- **Introduction to Reinforcement Learning and Data-Driven Control for Complex Systems**
  Lecturers: Mirco Musolesi, Giovanni Russo
  Email: m.musolesi@ucl.ac.uk, giovarusso@unisa.it
  Teaching mode:
  - weeks 1, 3, 4: In person (Classroom 4 at SSM) and online on Teams
  - week 2: online on Teams

  Hours: 24
  Team code: uvya7tk
  Start date: 21 March 2022
  Timetable: *Available here*

- **Performance-Based Seismic Risk Analysis of Complex Infrastructural Systems**
  Lecturer: Iunio Iervolino
  Email: iunio.iervolino@unina.it
  Teaching mode: In person (Classroom 4 at SSM) and online on Teams | Hours: 24
  Team code: twmhdas
  Start date: 07 March 2022
  Timetable: *Available here*

- **Risk Analysis of Chemical Processes**
  Lecturers: Almerinda Di Benedetto, Roberto Andreozzi, Ernesto Salzano
  Email: almerinda.dibenedetto@unina.it, roberto.andreozzi@unina.it, ernesto.salzano@unibo.it
  Teaching mode: In person (Classroom 4 at SSM) and online on Teams | Hours: 25
  Team code: s1l3v1r
  Start date: 07 March 2022
  Timetable: *Available here*

Fourth quarter courses at Scuola Superiore Meridionale

SPACE area

- Quasars as cosmological probes
  Lecturer: Prof. Risaliti
  Email: guido.risaliti@unifi.it
  Teaching mode: in person (Aula 1) | Hours: 12
  Team code: **7g8qb3h**
  Start date: 11 May 2022 | 2-week course duration
  Course days: Wednesday 14:00-17:00, Thursday 9:00-12:00
  Note: On 12 May the lecture will be held 9h-11h in Aula4 and 12h-13h in Aula1

- Relativistic position as a way of probing gravitational field
  Lecturer: Prof. Fatibene
  Email: lorenzo.fatibene@unito.it
  Teaching mode: in person (Aula 1) and online | Hours: 12
  Team code: **eioo8m6**
  Start-End date: 9 May 2022 | 2-week course duration
  Course days: Monday 14h-16h, Tuesday- Wednesday 11h-13h, Thursday 15:30-17:30
  Note: Dates refer to the 8 hours of frontal lectures. The additional 4 hours are held on the 18th at 11h-13h and 23th at 11h-13h.

- Standard Model of Fundamental Interactions
  Lecturer: Prof. Sannino
  Email: francesco.sannino@unina.it
  Teaching mode: online | Hours: 12
  Team code: **c3x669m**
  Start date: 23 May 2022 | 2-week course duration
  Course days: Monday 14h-16h, Tuesday - Wednesday 11h-13h

- Observational Cosmology
  Lecturer: Dr. Benetti
  Email: micol.benetti@gmail.com
  Teaching mode: in person (Aula 4) | Hours: 12
  Team code: **8ezkbz0**
  Start date: 24 May 2022 | 3-week course duration
  Course days: Tuesday 16h-18h, Wednesday 15h-17h

MPHS area

- **Micromagnetism**
  Lecturer: Prof. Thomas Schrefl
  Email: thomas.schrefl at donau-uni.ac.at
  Teaching mode: in person | Hours: 10
  Team code: **8nd9x4y**
  Start date: 02 May 2022 | 1-week course duration
  Course days: Monday 09h-11h, Tuesday to Friday 11h-13h
  Note: see the calendar at the link

- **Fundamentals of Computational Fluid Dynamics**
  Lecturer: Prof. Alessandro Veneziani
  Email: avenez2@emory.edu
  Teaching mode: online | Hours: 24
  Team code: **tjpnzcf**
  Start date: 02 May 2022 | 6-weeks course duration
  Course days: Monday and Wednesday 15h-17h
  Note: The course will take place in the first four weeks of May, then it will resume right after the 12 of June. See the calendar at the link

- **Nonlinear Computational Solid Mechanics**
  Lecturer: Prof. Ferdinando Auricchio
  Email: auricchio@unipv.it
  Teaching mode: in person | Hours: 24
  Team code: **nsplp2e**
  Start date: 05 May 2022 | 6-weeks course duration
  Course days: Check the timetable
  Note: see the calendar at the link

- **Molecular Thermodynamics of Materials: An Introduction**
  Lecturer: Prof. Francesco Greco, Prof. Giuseppe Milano, Dr. Antonio De Nicola
  Email: francesco.greco@unina.it, giuseppe.milano@unina.it, antonio.denicola@unina.it
  Teaching mode: in person | Hours: 28
  Team code: **btcxqbf**
  Start date: 20 May 2022 | 7-weeks course duration
  Course days: Wednesday and Friday 09h-11h from 20 May to 24 June, then Tuesday and Wednesday 09h-11h
  Note: see the calendar at the link

MERC area

- **Fundamentals of Natural Hazard Forecasting**
  Lecturer: Prof. Warner Marzocchi
  Email: warner.marzocchi@unina.it

Teaching mode: in person | Hours: 24
Start date: 2 May 2022 | 6-weeks course duration
Course days: timetable available here
Team code: **jowpzj3**

- **Stochastic differential equations and singular stochastic control**
  Lecturer: Prof. Tiziano De Angelis
  Email: tiziano.deangelis@unito.it; tiziano.deangelis-ssm@unina.it
  Teaching mode: in person | Hours: 24
  Start date: 11 May 2022 | 3-weeks course duration
  Course days: timetable available here
  Team code: **43fsbml**

- **Short-term forecasting of heavy hydrogeological events**
  Lecturer: Prof. Gianfranco Urciuoli; Prof. Luciano Picarelli
  Email: gianurci@unina.it; luciano.picarelli@unicampania.it
  Teaching mode: in person | Hours: 12
  Start date: 24 May 2022 | 3-weeks course duration
  Course days: timetable available here
  Team code: **bd9cgun**

- **Earthquake early warning systems**
  Lecturer: Prof. Aldo Zollo
  Email: aldo.zollo@unina.it
  Teaching mode: in person | Hours: 12
  Start date: after 20 June 2022 (*tbd*)
  Course days: *tbd*
  Team code: *available soon*

MOSES area

- **Astrochemistry (second part)**
  Lecturer: Prof. Vincenzo Barone, Dr. Marco Mendolicchio
  Email: vincenzo.barone@sns.it
  Teaching mode: in person and online | Hours: 24
  Start date: 02 May 2022 | 6-weeks course duration
  Course days: Monday 9:30-11:30, Thursday 15:00-17:00. Seminars on June 6-8.

- **Medicinal Physical Chemistry (second part)**
  Lecturer: prof. Concetta Giancola, Prof. Giordano Mancini
  Email: concetta.giancola@unina.it, giordano.mancini@sns.it
  Teaching mode: in person and online | Hours: 24
  Start date: 05 May 2022 | 6-weeks course duration
  Course days: Thursday 11:00-13:00, Friday 14:30-16:30

- **Experimental and theoretical chemistry for sustainable materials**
  Lecturer: Prof. Giovanni Talarico, Prof. Nadia Rega
  Email: talarico@unina.it, nadrega@unina.it

Teaching mode: in person and online | Hours: 24
Start date: 02 May 2022 | 6-weeks course duration
Course days: Monday 14:00-17:00, Wednesday 16:00-18:00