



16th International Congress on Artificial Materials for Novel Wave Phenomena

Metamaterials 2022

Siena, Italy, 12 – 17 September, 2022

The Sixteenth International Congress on Artificial Materials for Novel Wave Phenomena – Metamaterials 2022, will comprise a **4-day Conference (12–15 September)**, and a **2-day Doctoral School (16–17 September)**. Co-organized by the METAMORPHOSE VI AISBL (<https://www.metamorphose-vi.org>) and The University of Siena, this Congress follows the success of *Metamaterials 2007-2021* and continues the traditions of the highly successful series of *International Conferences on Complex Media and Metamaterials (Bianisotropics)* and *Rome International Workshops on Metamaterials and Special Materials for Electromagnetic Applications and Telecommunications*. The Congress will provide a unique topical forum to share the latest results of the metamaterials research. It will bring together the engineering, physics, applied mathematics and material science communities working on artificial materials and their applications in electromagnetism/optics, acoustics/mechanics, transport, and multi-physics.

The Congress is expected to be on-site. However, if the sanitary emergency and the travel restrictions will not allow a full on-site event, the Congress will be held in a hybrid format in the same date.

Paper Submission

Papers should be 2-3 pages long and contain an abstract, a brief conclusion, and a main body where technical content and novelty of the work are clearly presented.

Papers should be submitted as camera-ready PDF files to the website:

<https://congress.metamorphose-vi.org>

Authors are requested to use the template provided on the Congress website when preparing their submission. Authors of accepted and presented papers will be given the option of publishing their work in IEEE Xplore subject to the manuscript compliance with the format and copyright requirements.

Topics

Potential topics include but are not limited to:

- Physics of complex electromagnetic materials
- Analytical and numerical modelling of metamaterials and metasurfaces
- Homogenization and effective medium models
- Fabrication and experimental characterization of metamaterials
- Nonlinear, tunable, reconfigurable, and programmable metamaterials and metasurfaces
- Time-space modulated structures
- Active and absorption-free metamaterials
- Chiral and bianisotropic composites
- Metamaterials with extreme parameters
- Quantum and superconducting metamaterials
- Carbon nanotubes, graphene and other 2D materials
- Nonreciprocal and topological metamaterials
- Multiscale metamaterials
- Plasmonics
- Photonic crystals and EBG structures
- Antenna and absorber applications of metamaterials
- RF and microwave metamaterials: design, properties, applications
- Metamaterials for 5G (and beyond) applications
- Millimeter wave/THz metamaterials and applications
- Optical metamaterials and their applications
- Acoustic metamaterials
- Mechanical and elastic metamaterials
- Metamaterials for nanoelectronics, nanophotonics and nanoantennas
- Metamaterials for control of heat flow and radiation
- Metamaterials for quantum electronics
- Metamaterials for sensing
- Metamaterials in naval and aeronautic applications
- Biological and biomedical applications of metamaterials
- Super-resolution and near-field imaging: effects and devices
- Transformational electromagnetics, elastodynamics, hydrodynamics and thermodynamics
- Advances in cloaking and invisibility
- Metamaterials in education

Committees

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Doctoral School on Metamaterials

A course of the *European School on Metamaterials* operated by the METAMORPHOSE VI will be held in conjunction with the Congress (16-17 September 2022). The theme of the course is still under consideration and will be announced soon in the website. For more information visit the website: <https://school.metamorphose-vi.org/>

Contact

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Submission deadline

6 March 2022