
UNIVERSITY OF AMSTERDAM

AMOLF

## 19th International Congress on Artificial Materials for Novel Wave Phenomena

# Metamaterials 2025

## Amsterdam, The Netherlands, 1 – 6 September, 2025

The *Nineteenth International Congress on Artificial Materials for Novel Wave Phenomena – Metamaterials 2025*, will comprise a **4-day Conference** (**1–4 September**), and a **2-day Doctoral School** (**5-6 September**). Co-organized by the *METAMORPHOSE VI AISBL* (https://www.metamorphose-vi.org), the *University of Amsterdam*, and the *AMOLF*, this Congress follows the success of *Metamaterials 2007-2024* 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 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/photonics, acoustics/mechanics, transport, and multi-physics.

## 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.

## Committees

**General Chair**

Femius Koenderink

**Technical Program Committee Chairs**

Corentin Coulais, Netherlands
Francesco Monticone, USA

**Steering Committee Chair**

Alessio Monti, Italy

**Local Organizing Commitee**

Femius Koenderink
Esther Alarcón Lladó
Jorik van de Groep
Sander Mann
Albert Polman

## Topics

- Physics of artificial materials for novel and extreme wave phenomena
- Metamaterials modelling - analytical and computational approaches
- Computational, AI-based, data-driven design of metamaterials
- Fabrication and experimental characterization of meta-structures
- Tunable, reconfigurable and programmable metamaterials
- Nonlinear metamaterials and metasurfaces
- Time-space modulated metamaterials
- Nonreciprocal and topological metamaterials
- Chiral and bianisotropic composites; Nonlocality and spatial dispersion
- Active and non-Hermitian metamaterials; Exceptional-point physics
- ENZ metamaterials; Extreme parameters and broken symmetries
- RF, microwave and THz metamaterials and metasurfaces
- Photonic crystals and electromagnetic-bandgap structures
- Nanophotonics and nano-optics
- Plasmonics and polaritonics; Strong light-matter effects; Hot electrons
- 2D and Van-der-Waals metasurfaces and metamaterials
- Acoustic and mechanical metamaterials
- Metamaterials in soft matter and robotics
- Quantum and superconducting metamaterials
- Multiphysics metamaterials
- Homogenization and effective medium models
- Transformational electromagnetics, elastodynamics, thermodynamics
- Metamaterials for farfield and nearfield imaging; Super-resolution
- Metamaterials for sensing and metrology
- Metamaterials for computing, information and AI
- Metamaterials for quantum optics and nano-electronics
- Metamaterials for energy harvesting and conversion
- Thermal metamaterials and metasurfaces
- Metamaterials for communication technologies (5G and beyond)
- Antenna and absorber applications of metamaterials
- Advances in cloaking and scattering engineering
- Biological and biomedical applications
- Space, naval, aeronautic and automotive applications
- Metamaterials in education

## 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 (5-6 September 2025). The theme of the course is still under consideration and will be announced soon on the website.

## Contact

contact@metamorphose-vi.org

## Submission deadline

**7 March 2025**