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18 - 22 June 2023

Rome, Italy

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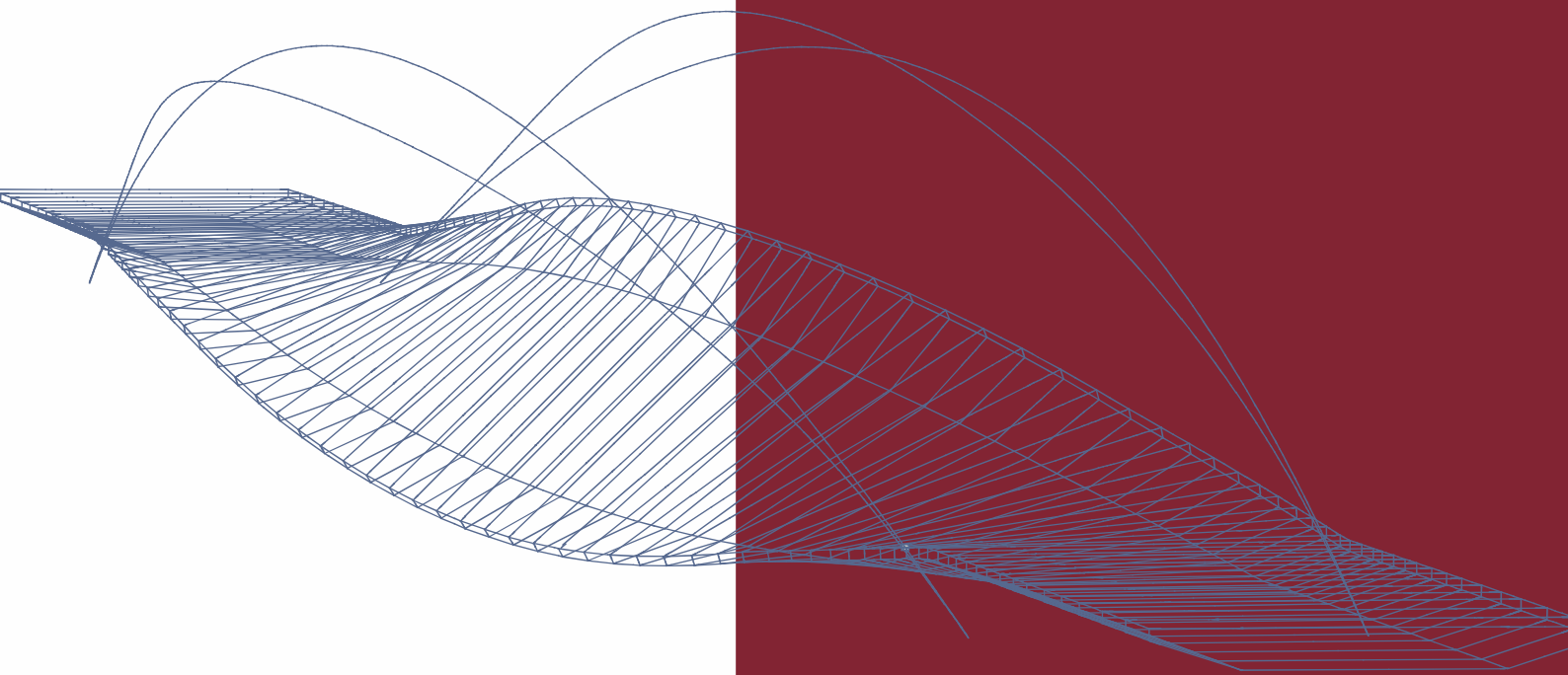
NODYCON 2023

Third International
Nonlinear Dynamics
Conference

www.nodycon.org

About NODYCON2023

NODYCON2023 is a forum where researchers, professionals and industry technical leaders come together to present and discuss recent progress on a rich spectrum of topics covered by **NONLINEAR DYNAMICS**.



The Third International Nonlinear Dynamics Conference intends to foster the tradition of an illustrious conference series that was originally launched by Prof. A. H. Nayfeh in 1986 at Virginia Tech as the Nonlinear Vibrations, Stability and Dynamics of Structures Conference.

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Location

Faculty of Civil and
Industrial Engineering

Sapienza University of Rome



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Via Eudossiana 18,
00184 Roma, Italy



The conference will be held at the Faculty of Engineering, in a historical building in Rome center, a few steps away from the Colosseum and the Forum.

Topics

Dynamics of structures, systems and devices

- Multi-scale dynamics: coexistence of multiple time/space scales, large system dynamics;
- Experimental dynamics: benchmark experiments, experimental methods, instrumentation techniques, measurements in harsh environments, experimental validation of nonlinear models;
- Dynamics of structures/industrial machines/equipment/facilities (e.g., cable transportation systems, suspension bridges, cranes, vehicles, etc.);
- Composite structures: multi-layer, functionally graded, thermal loading;
- Nonlinear interactions and energy transfers: parametric vibrations with single/multi-frequency excitations, multiple external and autoparametric resonances;
- Nonlinear system identification: parametric/nonparametric identification, data-driven identification;
- Fluid/structure interaction.

Computational dynamics

- Space/time reduced-order modeling: enhanced discretization methods, center manifold reduction, nonlinear normal modes, normal forms;
- Fractional-order system dynamics;
- Computational techniques: efficient algorithms, use of symbolic manipulators, integration of symbolic manipulation and numerical methods, use of parallel processors, advances in path following of ODEs and PDEs;
- Multibody dynamics: modeling and computational methods for rigid and flexible multibody system dynamics, impact and contact mechanics, tire modeling, railroad vehicle dynamics, computational multibody dynamics.

Wave propagation, solitons, kinks, breathers

- Solution methods for PDEs: Lie groups, Hirota's method, perturbation methods, etc;
- Nonlinear waves in media (granular materials, porous materials, materials with memory).



Topics

Nonsmooth and retarded dynamics

- Nonsmooth dynamics: systems with impacts, free play, stick-slip, friction, hysteresis;
- Nonlinear systems with time and/or space delays;
- Stability of delay differential equations,

Nonlinear dynamics and control

- Influence of nonlinearities on vibration control systems;
- Passive, semi-active, active control of structures and systems;
- Synchronization;
- Network dynamics control (multi-agent systems, leader-follower dynamics, swarm dynamics, biological networks dynamics);
- Human-machine interaction.

Ecosystem dynamics

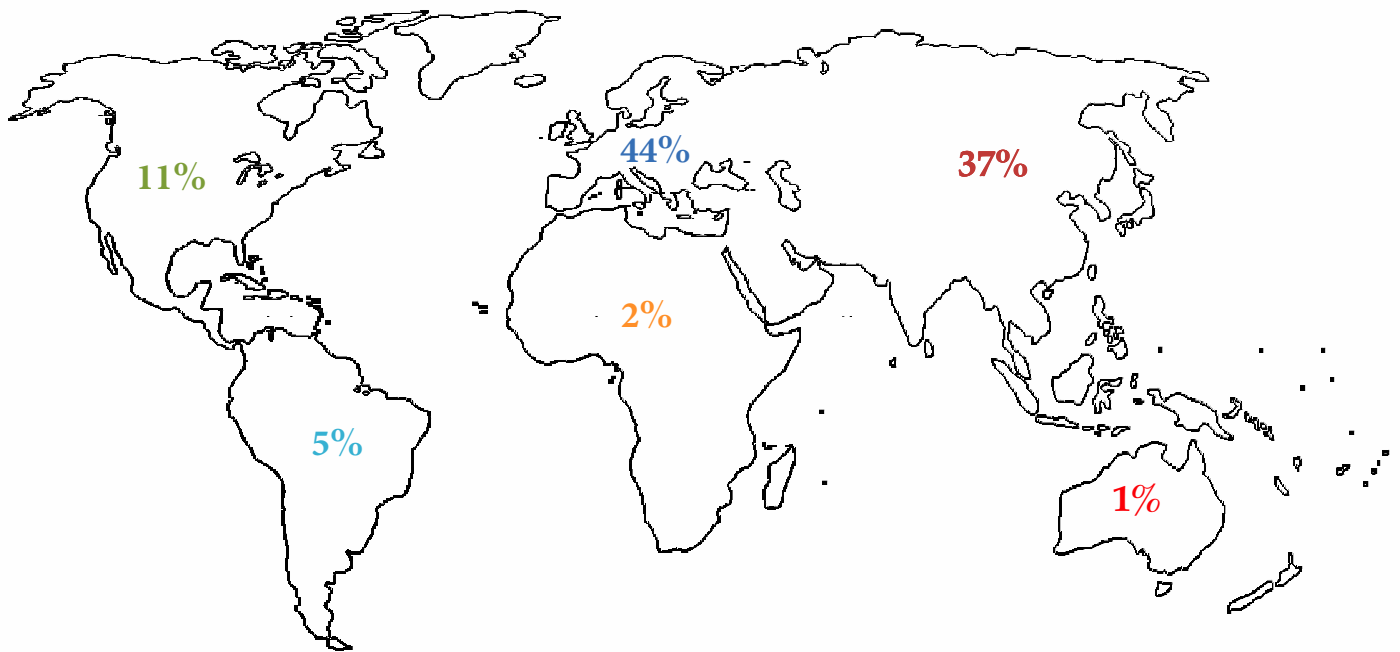
- Ecosystem dynamics, social media dynamics (user behavior dynamics in multi-messages social hotspots, prediction models), financial engineering, complexity in engineering).

New topics and trends

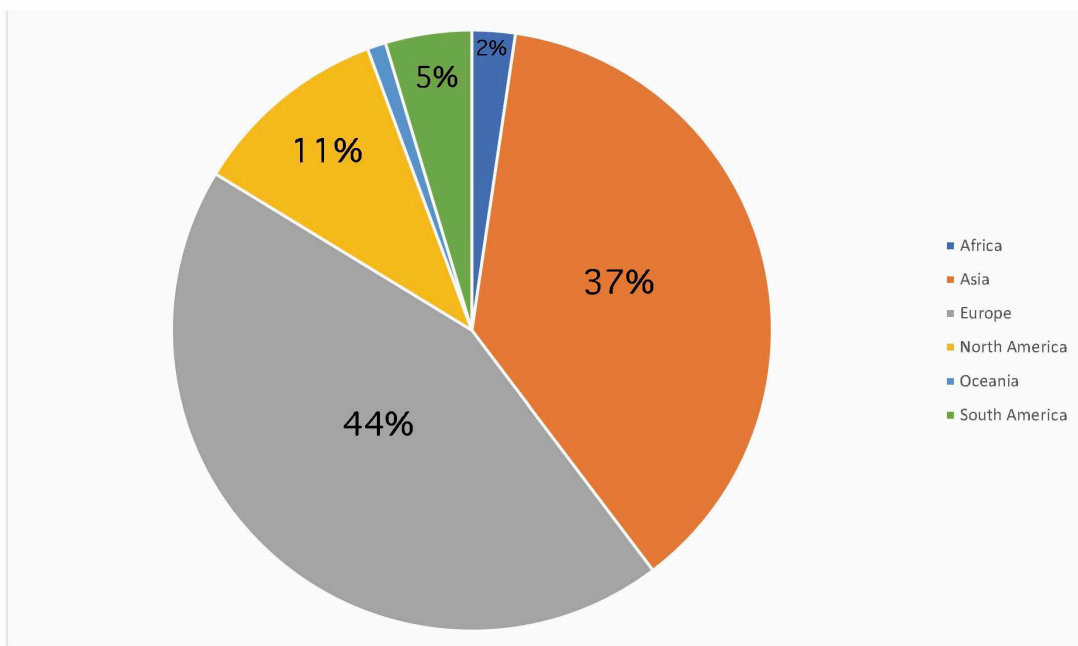
- Biomechanics applications: DNA modeling, heart dynamics, walking dynamics, capsule robots, jellyfish-like robots, nanorobots;
- Nanocomposite structures (e.g., carbon nanotube/polymer composites, composites with functionalized nanoparticles);
- 0D,1D,2D,3D nanostructures;
- Metamaterial structures;
- MEMS/NEMS sensors and actuators.

Participants

822 contributions"



1640 authors



Sponsorship packages

Gain visibility in the Nonlinear Dynamics leading community

PLATINUM

€3000

- 1 Full Conference Registration + 2 Conference Banquet Tickets
- 1 Full Page Ad in the Conference Program
- Promotional material distributed at registration
- Large company banners in the main registration/dining halls
- **Plenary presentation**
- Your platinum sponsorship will be acknowledged in the NODYCON2023 proceedings published by Springer

GOLD

€1500

- 1 Full Conference Registration + 1 Conference Banquet Ticket
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SILVER

€1000

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- Promotional material distributed at registration
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BRONZE

€500

- 1 Conference Banquet Ticket
- 1 Half Page Ad in the Conference Program
- Promotional material distributed at registration
- Company banners in the main registration/dining halls
- Your bronze sponsorship will be acknowledged in the NODYCON2023 proceedings published by Springer

Exhibitors

BOOTH

€1000

- 1 Booth (1.8m x 2m): one desk, two chairs, one poster panel, power outlet

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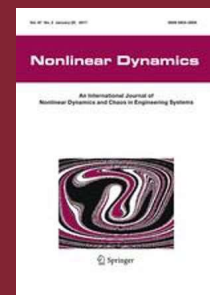
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