12th International Workshop on Numerical and Evolutionary Optimization (NEO 2025): First Call for Participation

Dear Colleague,

This is the second call for participation and the call for special sessions for the 12th International Workshop on Numerical and Evolutionary Optimization (NEO 2025).

The NEO 2025 will be held in Tijuana, Baja California, from September 23 - 26, 2025.

Please find below further information on the event as well as on the call for special sessions. We are looking forward to welcome you at the NEO 2025 in September.

Marcela Quiroz
Daniel Hernández
Leonardo Trujillo
Oliver Schütze
(NEO 2025 Organization Team)

Scope and Topics

The goal of the Numerical and Evolutionary Optimization (NEO) workshop series is to bring together people from all optimization fields to discuss, compare and merge their complimentary perspectives.

NEO encourages the development of fast and reliable hybrid methods that maximize the strengths and minimize the weaknesses of each underlying paradigm, while also being applicable to a broader class of problems. Moreover, NEO fosters the understanding and adequate treatment of real-world problems, particularly in emerging fields that affect us.

Topics of interest include (but are not limited to):

I. Search and Optimization:

- Single and multi-objective optimization.
- Advances in evolutionary algorithms and genetic programming.
- Hybrid and memetic algorithms.
- Set oriented numerics.
- Stochastic optimization.
- Robust optimization.

II. Real World Problems:

- Health systems.
- Computer vision and pattern recognition.
- Energy conservation and prediction.
- Modeling and control of real-world systems.
- Smart cities.
- Machine Learning in Robotics.

Hybrid Event

The NEO 2025 will be held as a hybrid event, participants have the possibility to attend in person or virtually.

Invited Speakers

- Jian-Qiao Sun, University of California, Merced, USA.
- Ryan J. Urbanowicz, Cedars-Sinai Medical Center, Los Angeles, USA.

Publication

The NEO 2025 will accept abstracts that will be published in the book of abstracts of the event. Further, there is the possibility to publish substantially extended works in a special issue in Mathematical and Computational Applications (JCR, Q2).

It is important to note that these extended versions of the papers presented at NEO will undergo the journal's standard peer-review process; if accepted, the Article Processing Charges (APC) will be waived.

Special Sessions (TBC)

If you have a proposal for a special session at the NEO 2025, please contact Daniel Hernández (daniel.hernandezm@tectijuana.edu.mx) not later than April 15, 2025.

Confirmed Sessions

- Women at NEO
  - Chair: *Yazmín Maldonado*
  - Chair: *Adriana Lara*
- Evolutionary Multi-objective Optimization
  - Chair: *Oliver Schütze*
- Discrete Optimization
  - Chair: *Marcela Quiroz*
- Applications of Machine Learning
  - Chair: Daniel E. Hernandez
- Genetic Programming
  - Chair: *Leonardo Trujillo*
- Optimization on graphs: AI and Distributed Approaches
  - Chair: *Rolando Menchaca-Méndez*
- Large-Scale and Expensive Optimization
  - Chair: *Guadalupe Carmona Arroyo*

Important Dates

- September 23, 2025: *Research Experience Day*.
- September 24 - 26, 2025: *NEO 2025*.

Further Information

Details and up-to-date information can be found on the webpage of the event:

https://neo-workshop.com

In case of any questions or concerns, please contact Daniel Hernández:

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