

EURO Summer Institute on
Decision-Making Under Uncertainty for Commodities and Financial Markets
Sorriso Thermae Resort, Forio d'Ischia (Na), Italy
September 15 – 25, 2024

Call for Application

Summary

EURO Summer/Winter Institutes serve as a key initiative established by EURO to foster robust scientific and social connections among promising early-stage Operational Research (OR) scientists.

The upcoming EURO Summer Institute (ESI) focused on "*Decision-making under uncertainty for commodities and financial markets*" will take place in Forio d'Ischia (NA), Italy, from September 15th to the 25th, 2024. This noteworthy event will be hosted at the esteemed "Sorriso Thermae Resort" and is jointly organized by the EURO Working Group on Stochastic Optimization (EWGSO) and EURO Working Group on Commodities and Financial Modelling (EWGCFM), under the patronage and sponsorship of the Association of European Operational Research Societies (EURO).

The primary objective of ESI is to convene early-stage scholars, providing them with a platform to forge connections within an exceptional network, with the aspiration that they evolve into sustained collaborations in the future. The Institute's agenda encompasses lectures by experts, presentations from laureates, and interactive workshops.

Prospective applicants are required to be the primary contributor of a single-authored or co-authored paper focused on decision-making under uncertainty, with potential applications in commodities and financial markets. This paper should not have been published or accepted for publication elsewhere. Additionally, applicants should be current Ph.D. students or researchers with less than two years of research experience post-Ph.D.

The ESI promises a blend of academic enrichment and social engagement, so numerous joint social activities are planned.

For those interested in participating, the application process entails submitting a curriculum vitae, the pertinent paper, and a motivation statement to the Scientific Committee of the ESI. This serves as a compelling opportunity for emerging scholars to contribute to and benefit from the vibrant community fostered by the EURO Summer Institute.

For more information, please visit the ESI webpage (<https://esi2024.unibg.it/>).



Overview of the EURO Summer Institute

EURO Summer/Winter Institutes are an instrument EURO has established for the encouragement of good scientific and social relationships between promising early stage OR scientists. The main purpose of the institutes is to establish in each field of OR a network of outstanding people who will continue to work together in the future.

The event will be hosted at “Sorriso Thermae Resort” where laureates will share a double room with another laureate.

The Institute is supported by two EWGs: the EURO Working Group on Stochastic Optimization (EWGSO) and the EURO Working Group on Commodities and Financial Modelling (EWGCFM).

The purpose of the EWGSO is to promote the development and application of Stochastic optimization theory, models, methods, analysis, and software tools and encourage the exchange of information among practitioners and scholars. Stochastic optimization (SO) is an active research area having important real-world applications and close links with other branches of Operational Research. SO research focuses on formulating and solving stochastic optimization problems, i.e., optimization problems whose parameters are random variables. The fact that every strategic decision is made in the presence of uncertainty is clear evidence of the practical importance of SO.

The EWGCFM aims is to advance to development of financial models tailored to address challenges encountered by decision-makers in firms, intermediaries, and the investment community.

Within the realm of economic and financial dynamics, strategic financing, asset allocation, and risk management stand out as pivotal themes. Effectively navigating these subjects necessitates a comprehensive grasp of the uncertainties prevalent in the financial landscape, calling for the application of optimization techniques, stochastic modeling, and an artificial intelligence approach. The EWGCFM actively engages with contemporary issues arising from recent regulatory mandates, technological innovations, the abundance of big data, the Fintech revolution, and the imperative of sustainability. These multifaceted topics reflect its commitment to staying at the forefront of developments that shape the evolving landscape of finance.

Scientific Programme

To be eligible, a candidate must be the main contributor of a single-authored or co-authored paper related to the field of decision-making under uncertainty with potential application in commodities and financial markets, which has not yet been published or accepted for publication.

Topics of interest include, but are not limited to:

- Optimization techniques under uncertainty
- Stochastic programming
- Robust optimization
- Distributionally robust optimization
- Portfolio selections and risk management
- Credit risk management in financial institutions
- Machine Learning to identify risk drivers in ESG investments
- Pricing complex securities and hedging strategies.

Each laureate will give a presentation of 45 minutes about their paper, plus questions.

Moreover, there will be presentations from international experts (120 minutes of lectures including 15 minutes of Q&A). Currently, the following have agreed to participate:

- Jörgen Blomvall, *Linköping University, Sweden.*
- Rita Laura D'Ecclesia, *Sapienza University of Rome, Italy.*
- Milos Kopa, *Charles University, Prague, Czech Republic.*
- Francesca Maggioni, *University of Bergamo, Italy.*
- Bernardo Pagnoncelli, *SKEMA Business School, France.*
- Georg Pflug, *University of Vienna, Austria.*
- Alois Pichler, *Technical University of Chemnitz, Germany.*
- Stavros Zenios, *University of Cyprus, Cyprus.*

Our agenda includes a series of workshops, each skilfully coordinated by two or three of the invited scientists in collaboration with members of the scientific committee. During these workshops, laureates will be organized into groups, offering them the unique opportunity to collaborate on specific topics. Over the course of two days, these groups will engage in intensive work, drawing insights from the expertise shared by our distinguished speakers. At the end of the workshop, each group will present their findings to all attendees.

This approach is designed to provide laureates with a platform for in-depth exploration of subjects touched upon in expert talks and to foster collaboration among them in tackling various challenges. We aim to not only deepen their understanding of critical topics but also to sow the seeds for enduring partnerships and future collaborations that extend beyond the event, contributing to the long-term growth and synergy within the OR community.

Each day's activity is organized into four sessions

1. Session 1, starts at 9:30 with a lecture given by a senior scholar;
2. Session 2, starts after the coffee break with a student's presentation;
3. Session 3, after the lunch break includes two students' presentations;
4. Session 4, after the coffee break, consists of a student presentation and workshop coordinated by the senior scholars.

Special Issue

We are very pleased to say that there will be a Special Issue of the Journal "Annals of Operations Research", devoted to the Summer Institute. The Call for papers will be opened to selected papers of the Institute.

Social Program

Several social activities are planned to encourage laureates to socialise. The (tentative) list of activities includes:

- Sunday, September 15, in the afternoon at 5:00 p.m. there will be an Opening Ceremony where the chairs will illustrate the organization of the Institute and will introduce the various participants. A dinner will follow with an informal get-together. The event will take place on the terrace of the Sorriso Thermae Resort;
- Saturday, September 21, 2024: Outdoors activities (hiking in the mountains and trip around the island);
- Sunday, September 22, 2024: Free day;
- September 23, 2024: Gala Dinner.

Conference Venue

The symposium will take place at Sorriso Thermae Resort, Via Provinciale Panza, 311 - 80075 Forio d'Ischia (Na) Italy.

Ischia is one of the wonderful islands in the Gulf of Naples, has a volcanic origin, and known and appreciated all around the world for its natural beauty and thermal water.



How to reach the Institute Site

Ischia Island is reachable from Naples either by hydrofoil or ferryboat:

- by hydrofoil (35-40 minutes) either from "Mergellina Port" (in "via Caracciolo") or from "Molo Beverello" (in "Piazza Municipio");
- by ferryboat (75-90 minutes) from "Molo Pisacane-Porta di Massa".

ESI's support

ESI will cover the full cost for lodging while participating to the Institute.

Applying to the ESI

Eligible candidates:

- Regularly enrolled Ph.D. students.
- Researcher with less than two year research experience since completing their Ph.D.
- Resident in a EURO member society country, or students in a EURO member society country.
- Scholars not previously participated to other EURO Summer/Winter Institute.

Additionally, up to two candidates can be appointed by IFORS, according to the EURO and IFORS exchange for ESWIs.

How to apply

Eligible candidates must submit:

- A Curriculum Vitae, including information about your education, research projects, publications, awards, and other pertinent experiences (pdf format).
- A single-authored or co-authored paper in the field of "Decision-Making Under Uncertainty for Commodities and Financial Markets" to which you are the main contributor and which has not yet been published or accepted for publication (pdf format).
- A statement outlining your motivation for participating in the ESI (at most one page).

How to submit?

Send all the required document to esi2024@unibg.it

The deadline for submission is **May 15, 2024**.

What's next?

The candidate admission process emphasizes several key criteria, including the quality of the submitted paper, the candidate's scientific background, and their demonstrated interest in the field of Decision-making for commodities and financial markets. In some instances, applicants may be requested to provide additional clarification on their statements before a final decision is reached.

The responsibility of selecting and ranking candidates falls to the Scientific Committee, which meticulously evaluates each application. Simultaneously, the Organizing Committee collaborates with national Operational Research (OR) societies to secure funding aimed at covering travel expenses. It's important to notice that ESI will not cover travel expenses.

Applicants will receive notification of the final decision via email by **June 15, 2024** from the Scientific Committee. Those successfully selected will be prominently featured in the official program and their names will be published on the institute's web page. This transparency ensures that the chosen participants receive due recognition and allows for broader dissemination of the ESI community's accomplishments.

Scientific Committee

- Rita Laura D'Ecclesia (**Chair**), *Sapienza University of Rome, Italy.*
- Francesca Maggioni (**Chair**), *University of Bergamo, Italy.*
- Diana Barro, *University of Venice, Italy.*
- Patrizia Beraldi, *University of Calabria, Italy.*
- Jörgen Blomvall, *Linköping University, Sweden.*
- Raffaele Cerulli, (President of AIRO) *University of Salerno, Italy.*
- Csaba Fabian, *John von Neumann University, Kecskemet, Hungary.*
- Milos Kopa, *Charles University, Prague, Czech Republic.*
- Dario Pacciarelli, *Roma Tre University, Italy.*
- Georg Pflug, *University of Vienna, Austria.*
- Alois Pichler, *Technical University of Chemnitz, Germany.*
- Wim Van Ackooij, *EDF, Paris, France.*

Organizing Committee

- Rita Laura D'Ecclesia (**Chair**), *Sapienza University of Rome, Italy.*
- Francesca Maggioni (**Chair**), *Università degli Studi di Bergamo, Italy.*
- Stefania Corsaro, *Università di Napoli Parthenope, Italy.*
- Zeldia Marino, *Università di Napoli Parthenope, Italy.*
- Claudio Sterle, *Università degli studi di Napoli Federico II, Italy.*