

# PhD Winter School on Advanced Stochastic Optimization

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This fall we organize a one-week winter school on **Advanced Stochastic Optimization** at the Norwegian University of Science and Technology (NTNU) in Trondheim, Norway. We invite PhD students both from NTNU and other universities to participate in our course.

The course is part of the **Nordic Courses in Stochastic Programming**, a cooperation between NTNU, NHH in Bergen, and UCPH in Copenhagen that provides PhD courses on stochastic programming. The course builds on the material taught in the Copenhagen School of Stochastic Programming that preceded the EURO conference in Copenhagen this year. Prior participation in that course is not mandatory, but some basic knowledge of stochastic programming models is required.

The course is taught by multiple lecturers, each teaching on their field of expertise. This provides students a unique opportunity to learn from and connect with experts in the field, as well as with other PhD students with similar interests. The following lecturers will give talks on the indicated topics:

- **Ward Romeijnders** (University of Groningen) – Mixed-integer stochastic programming
- **Bernardo Pagnoncelli** (SKEMA Business School) – Treeless sequential decision making under uncertainty
- **Peyman Mohajerin Esfahani** (TU Delft) – Distributionally robust optimization
- **Stein-Erik Fleten** (NTNU) – Applications in hydropower scheduling
- **Peter Schütz** (NTNU) – Dual decomposition
- **Ruben van Beesten** (Erasmus University Rotterdam, NTNU) – Benders' decomposition, SDDP

The course takes place at the Gløshaugen campus of NTNU from 2 – 6 December. In this week, the nice **Christmas market** on the main square in Trondheim starts, which will keep you busy during the evenings.

Participation is **free of charge**. Students that wish to receive **credits (5 EC)** should write a 10-page essay after the course related to one of the topics discussed (you can relate this to your own research project), which is graded pass/fail.

The **deadline** for registration is very soon: **15 September** (if you cannot make the deadline, email me to ask for remaining options). See the second page of this document for instructions on how to register.

For any remaining questions, contact me using the email address below.

We hope to see many of you there!

Kind regards,  
Ruben van Beesten (coordinator)

## Registration procedure

1. **Everyone:** fill out the registration form [here](#).
2. Students that wish to receive **credit** must also register officially within the NTNU system.
  - a. **NTNU students:** enroll for the courses using the regular procedure on Studentweb.
  - b. **External students:** follow the following steps:
    - i. Go to *Søknadsweb* using [this link](#)
    - ii. Choose the institution *Norwegian University of Science and Technology*, press *continue*
    - iii. At the bottom of the page, choose *Register new international applicant*
    - iv. Answer the questions. When asked if you are a current or former student at NTNU, choose *No* (i.e., do not answer *I am a PhD-Candidat*).
    - v. Once registered in *Søknadsweb*, log into your account. Follow the steps
      1. Fill out your personal details
      2. Under *Single courses*, choose *PhD courses for external candidates Autumn 2024*.
      3. In the drop-down list, select *9690 PhD courses for external candidates*. **Moreover, in the text box, write the course code of the courses you wish to follow:**  
- *IØ8404 Advanced Stochastic Optimization*  
Press *Submit your application*
      4. Upload the requested documents. Press *Next*
      5. You will see a confirmation screen. Press *Done*