Nordic Winter School on Advanced Stochastic Optimization

We invite PhD students to a **Nordic winter school on Advanced Stochastic Optimization** at the Norwegian University of Science and Technology (NTNU) in Trondheim, Norway, from 1 – 5 December 2025.

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 introduction-level **Nordic PhD course in stochastic programming** taught in Bergen in September 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 PhD students a unique opportunity to learn from and connect with experts in the field, as well as with other students with similar interests. The following lecturers will give talks on the indicated topics:

- **Vincent Leclère** (Ecole des Ponts, Paris) – Stochastic dual dynamic programming and related methods

- **Francesca Maggioni** (University of Bergamo) – Bounding techniques in (multi-stage/-horizon) stoch. programs

- **Ward Romeijnders** (University of Groningen) – Mixed-integer stochastic programming

- **Peter Schütz** (NTNU) – Dual decomposition

- **Stein-Erik Fleten** (NTNU) – Applications in energy systems

- **Ruben van Beesten** (Erasmus University Rotterdam, NTNU) – Quick recap of basics, modeling risk aversion

The course takes place at the Gløshaugen campus in Trondheim from 1 – 5 December. During this week, the traditional **Christmas market** on the city square starts, which will keep you busy during the evenings. Lectures start Monday morning and end around 14:00 on Friday.

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), graded pass/fail.

The **deadline** for registration is **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. I hope to see many of you there!

Kind regards,
Ruben van Beesten (coordinator)

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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., <u>do not</u> answer *I am a PhD-Candidat).*
      v. Once registered in *Søknadsweb*, log into your account. Follow the following steps:
         1. Fill out your personal details
         2. Under *Single courses*, choose *PhD courses for external candidates Autumn 2025.*
         3. In the drop-down list, select *9690 PhD courses for external candidates.* **Moreover, in the text box, write the course code of the course 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*