

Practical Financial Optimization

September 26-28, 2005

Vienna, Austria

Language: English

Instructors:

Prof. Hercules Vladimirov

Prof. Andrea Consiglio

Objective

The workshop will cover techniques for mathematical modeling and optimization under uncertainty, such as stochastic programming, robust optimization and risk-management methods. The primary application area will be in Financial Modeling and Optimization; examples from other areas may be included on the interests of participants.

The workshop will be a combination of presentations, computer modeling exercises, case studies, and group discussions. Presentations will include complete models and documentation. Sufficient time will be allowed for interaction and discussion.

Outline of the Workshop

Day 1: What is uncertainty and how can it be modeled? Risks, returns and relevant objectives in financial planning. Classical portfolio management models. Mean-variance model.

Day 2: Formulating and solving multi-stage Stochastic Programs. Scenario-tree representation of uncertainty. Expected utility. Alternative risk measures (MAD, VaR, CVaR). Case Study: A dynamic stochastic programming model for international portfolio management.

Day 3: Financial risk management (continued). Scenario optimization for asset-liability management. Case Study: Multi-stage scenario optimization models for asset-liability management of insurance products with guarantees and personal portfolio management.

Audience

Managers and staff with risk management functions in the area of Finance, post-doctoral fellows and graduate students in Finance, Operations Research or related areas.

Some familiarity with applied Financial Modeling and Optimization is desirable. Knowledge of modeling languages is not required.

You will take with you:

1. Copies of notes and transparencies.
2. Drafts of the new comprehensive texts "*Practical Financial Optimization*" (Zenios) and "*Library of Financial Optimization Models*" (Consiglio, Nielsen, Vladimirov, Zenios), including a Financial Model Library.
3. A full-scale PC version of the modeling system GAMS (limited-time use), including executable versions of the models covered during the course.
4. Information for follow-up

Instructors

Prof. Hercules Vladimirov is an Associate Professor of Management Science and the Director of the Center for Banking and Financial Research at the School of Economics and Management, University of Cyprus. His primary research activities are in the field of Stochastic Programming with applications in Financial Modeling and Risk Management.

Prof. Andrea Consiglio is an Associate Professor of Mathematical Finance at the University of Palermo, Italy. The focus of his research is on financial modeling and computational finance. He has also participated in projects with banks and consultancy firms.



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*"Practical Financial
Optimization"*

Prof. Hercules Vladimirov
HERMES European Center of Excellence on
Computational Finance and Economics
University of Cyprus

Prof. Andrea Consiglio
Department of Statistical and
Mathematical Science
University of Palermo



Fees

The fee for the workshop is 1200 Euro + VAT. This includes lunches, coffee breaks, and an evening dinner. There is a discount of 25% for the second and subsequent participants from the same company. A special academic rate of 900 Euro + VAT is available.

Travel and Accomodation

The course will take place at Verbund. You can book a room at the special "Verbund rate" in one of the following hotels. They are all in the city center and close to the course location:

- **K & K Palais Hotel**, Rudolfsplatz 11, kk.palais.hotel@kuk.at, (95 EUR/night)
- **Best Western Hotel Tigra**, Tiefer Graben 14-20, hotel.tigra@eunet.at, (88 EUR/night)
- **Hotel am Stephansplatz**, Stephansplatz 9, hotel@stephansplatz.co.at, (115 EUR/night)

The prices are for a single room including breakfast at the Verbund rate. Please make your own reservations promptly.

Registration Form

Name:
Address:

academic
 commercial

E-mail:

Please send / fax to:

GAMS Software GmbH, Eupener Str. 135-137, 50933 Cologne, Germany, Tel.:
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