

SIXTEENTH CONFERENCE  
ON THE  
MATHEMATICS OF OPERATIONS RESEARCH



CONFERENCE CENTER 'DE BLIJE WERELT'  
LUNTEREN, THE NETHERLANDS

JANUARY 16-18, 1991

Organized by  
CWI (Centrum voor Wiskunde en Informatica),  
Amsterdam, The Netherlands

# SIXTEENTH CONFERENCE ON THE MATHEMATICS OF OPERATIONS RESEARCH

January 16-18, 1991, Lunteren, The Netherlands

## AIM AND SCOPE

The aim of the conference is to promote the research activities and the cooperation between researchers in the mathematics of operations research.

An important theme of the conference will be stochastic financial models. There will be a minicourse on this subject, which will be given by A.C.F. Vorst (EU Rotterdam), M.C.A. van Zuijlen (KU Nijmegen) and A.M. Eikeboom (Massachusetts Institute of Technology, Cambridge USA). Eikeboom will also deliver a lecture on this subject in the main program, and one of the lectures of S. Zenios will also tie in with this subject. The second lecture of Zenios will be about the use of parallel and supercomputers in Operations Research.

Furthermore, three other non-Dutch specialists have been invited to give two lectures on recent developments in their field of interest. They have been asked to present a tutorial survey of their area in the first talk and discuss their own recent work in the second lecture. I. Mitrani (Newcastle) and Ph. Nain (INRIA) will discuss subjects from the stochastic side of Operations Research, more in particular about queueing theory. Y. Greenberg (Haifa) will speak about the theory of social situations, a game-theoretic subject.

The program should give ample opportunity for informal discussions. The conference center is located in the scenic surroundings of Lunteren, in the centre of the Netherlands.

## ORGANIZATION

The conference is organized by CWI (Centrum voor Wiskunde en Informatica / Centre for Mathematics and Computer Science) in Amsterdam under the auspices of the Dutch Research Community in the Mathematics of Operations Research and System Theory, with financial support by the Dutch Mathematical Society and the Dutch Society of Operations Research.

## PROGRAM

*Invited speakers*

A.M. Eikeboom (Massachusetts Institute of Technology, Cambridge, USA):

1. Order imbalance and order dependence on the Paris Bourse

Y. Greenberg (University of Haifa, Haifa, Israel):

1. The theory of social situations: concepts
2. The theory of social situations: applications to game theory

I. Mitrani (University of Newcastle, Newcastle, U.K.):

1. Tandem queueing models of manufacturing systems
2. Asymptotic behaviour of high speed data networks

Ph. Nain (INRIA, Paris, France):

1. On the Erlang traffic model: equilibrium and transient analysis, stochastic comparisons, optimization issues and computational aspects
2. Recent results for the optimal control of simple queueing systems

S. Zenios (Wharton School, Philadelphia, USA):

1. Parallel and super-computing in Operations Research
2. Massively parallel computing for financial modeling

*Minicourse: Option pricing and optimal portfolio selection*

The last two decades have witnessed an increasing interest in the application of mathematical techniques in financial theory and practice. The best-known example is the development of the Black-Scholes-formula for the pricing of options. Among the mathematical theories that are most fruitfully applied are the theory of stochastic processes and the theory of stochastic optimal control.

The minicourse is intended to provide some introduction to the application of mathematics in financial theory, where we will focus on the impact of stochastic optimal control theory.

M.C.A. van Zuijlen (Catholic University, Nijmegen):

Option pricing and Brownian motions

A.C. F. Vorst (Erasmus University, Rotterdam):

Optimal consumption and portfolio selection

A.M. Eikeboom (Massachusetts Institute of Technology, Cambridge, USA):

Recent developments in the theory of optimal consumption and portfolio selection

## PRELIMINARY TIME SCHEDULE

## Wednesday January 16, 1991

11.30    Opening  
11.40    Mitrani (1)  
12.30    *Lunch*  
15.00    Minicourse (1): van Zuijlen  
15.50    *Tea break*  
16.20    Greenberg (1)  
17.10    Minicourse (2): Vorst  
18.30    *Dinner*

## Thursday January 17, 1991

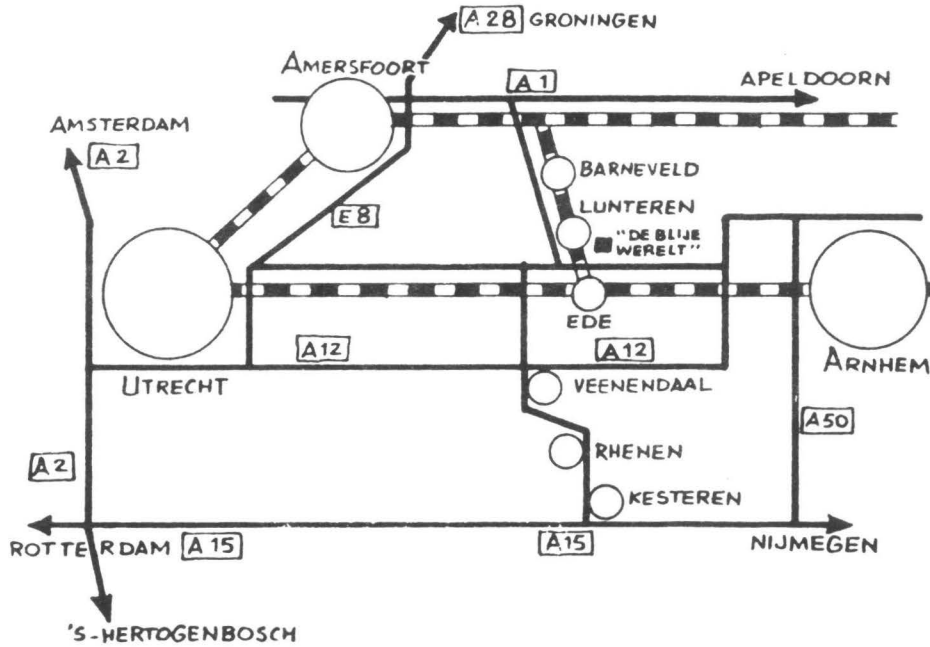
8.00    *Breakfast*  
9.00    Nain (1)  
9.50    *Coffee break*  
10.20    Minicourse (3): Eikeboom  
11.10    Greenberg (2)  
12.30    *Lunch*  
15.30    *Tea break*  
16.00    Zenios (1)  
16.50    Mitrani (2)  
18.30    *Dinner*

## Friday January 18, 1991

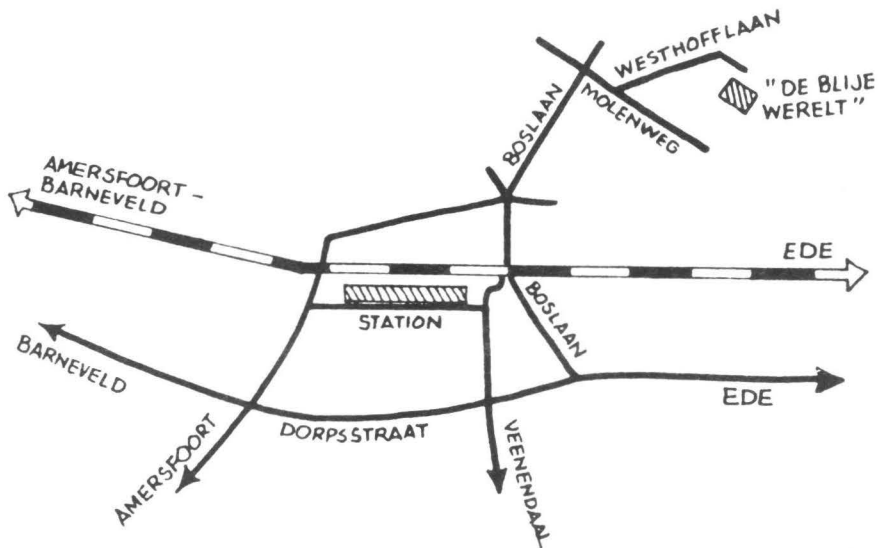
8.00    *Breakfast*  
9.00    Eikeboom (1)  
9.50    *Coffee break*  
10.20    Nain (2)  
11.10    Zenios (2)  
12.00    Closing  
12.30    *Lunch*

## LOCATION

Conference Center 'De Blijde Werelt', Westhofflaan 2, Lunteren, The Netherlands. Telephone +31-8388-4641. Lunteren can be reached by train from Amersfoort and from railway station Ede-Wageningen. The walk from the railway station in Lunteren to 'De Blijde Werelt' takes about 15 minutes. Taxi company: call 08388-2139.



The location of Lunteren



The location of 'De Blije Werelt'

#### REGISTRATION

The registration fee is Dfl. 315.00 for a single room with private shower and toilet. It is also possible to share a room (Dfl. 275.--); in this case, however, one should mention a room mate on the registration form. The price includes board and lodging from Wednesday January 16 before lunch until Friday January 18 after lunch.

Partial arrangements are possible but not encouraged. If a partial arrangement is desired please contact mrs. Gerdy Bijleveld, see the address below.

One can register until January 6, 1991 by means of the application form.

#### INFORMATION

For further information contact:

O.J. Boxma + 31-20-5924094

B.J. Lageweg + 31-20-5924091

G. Bijleveld + 31-20-5924075

CWI,

P.O. Box 4079,

1009 AB Amsterdam,

The Netherlands

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## APPLICATION FORM

I will attend the *Sixteenth Conference on the Mathematics of Operations Research*, to be held in 'De Blije Werelt', Lunteren, The Netherlands, January 16-18, 1991.

I prefer to have a single room (Dfl. 315)

I prefer to share a room with \_\_\_\_\_ (Dfl. 275)

Name : \_\_\_\_\_

Affiliation : \_\_\_\_\_

Department : \_\_\_\_\_

Address : \_\_\_\_\_

Postal code : \_\_\_\_\_

City : \_\_\_\_\_

Telephone : \_\_\_\_\_

Date : \_\_\_\_\_

Signature : \_\_\_\_\_

**Don't send any money now; we will invoice you after receiving your application.**

The completed form should be returned, *before January 6, 1991* to:

Mrs. G. Bijleveld  
CWI  
P.O. Box 4079  
1009 AB Amsterdam  
The Netherlands



