

ELEVENTH CONFERENCE
ON THE MATHEMATICS OF
OPERATIONS RESEARCH AND SYSTEM THEORY



BENELUX MEETING
ON SYSTEMS AND CONTROL 1986

CONFERENCE CENTER "DE BLIJE WERELT"
LUNTEREN, THE NETHERLANDS

JANUARY 15-17, 1986

Organized by the
Centre for Mathematics and Computer Science,
Amsterdam, The Netherlands

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Eleventh Conference on the Mathematics of Operations Research and System Theory

including the

Benelux Meeting on Systems and Control 1986

January 15-17, 1986, 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 and system theory.

The program of the conference consists of a plenary part, and parallel sessions of operations research and systems and control. The plenary part of the program contains

- a lecture on operations research by P. Whittle,
- a lecture on systems and control by J.P. Quadrat,
- a three-hour minicourse on networks of queues organized by J. Wessels.

In addition there will be

- seven lectures on operations research

in parallel with

- three lectures on systems and control,
- and 29 short presentations on this subject by Benelux researchers.

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

ORGANIZATION

The conference is organized by the 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, the Dutch Research Community in the Engineering of System and Control Theory, the NFWO-FNRS contactgroup Automatica-Automatique, and the BIRA-Werkgroep Systeemtheorie, with financial support by the Dutch Mathematical Society and the Dutch Society of Operations Research.

PROGRAM

Invited speakers

A.R. Conn (Waterloo/Grenoble): Nonlinear programming, exact penalty functions and projection techniques for non-smooth functions; On numerical methods for continuous location problems, including the handling of degeneracy.

G. Cornuéjols (Carnegie-Mellon/Grenoble): New developments in facility location theory; Two algorithms for weighted matroid intersection.

R.P. Guidorzi (Bologna): System identification using canonical forms and overlapping models; Application of identification techniques to the management of natural resources.

T.J. Ott (Holmdel): State dependent routing of telephone traffic and the use of separable routing schemes; Numerical methods for the single server queue.

J.P. Quadrat (Paris): Identification and control of diffusion processes: an expert system; A theoretic system approach of timed discrete event systems.

P. Whittle (Cambridge, UK): Tractable modes of interaction in multi-component systems; Queueing networks, communication networks and optimal routing.

Minicourse: Networks of queues

The minicourse will be used to give an overview of techniques to analyse networks of queues. Particular attention will be given to numerical analysis of large complex systems and to control in networks of queues. The course is organized by J. Wessels (Eindhoven).

Contributed short lectures in Systems and Control

T. Backx, A. Damen, P. Janssen, P. van den Hof, A. van den Boom (Eindhoven): Equation error and output error methods in multivariable process identification; modelling of a glass tube production process

P. Boekhoudt (Enschede): Comparison of H^∞ -optimal feedback control system design methods

J. Bontsema (Groningen): Comparison of some PDE models for flexible structures

F.M. Callier (Namur): On the factorization of row-column-reduced polynomial matrices

B. de Moor, J. Vandewalle (Leuven): The use of non-conventional matrix calculus in linear system theory

J. Engwerda (Eindhoven): On the set of obtainable reference trajectories using minimum variance control

C. Heij (Groningen): Linear finite time systems

J. Katupitiya, H. van Brussel (Leuven): Time-optimal control of a robot using time-varying switching lines

M. Kinnaert (Brussels): Modified discrete time computed torque methods for high precision robot control

D.F. Kuiper (Delft): Effects of structural flexibility on space-manipulator control system design

E.J. Meerwaldt, J. de Goede, A. Berkenbosch (Delft/Leiden): On the parameter estimation of the respiratory control system

C. Merckx (Namur): Identification of a spatially varying parameter in a time-periodic parabolic system

H.E. Nusse (Groningen): Complicated dynamics in simple processes

G.J. Olsder (Delft): On minimal realizations of discrete-event dynamic systems

P.O. Passenier, H.R. van Nauta Lemke (Delft): Design of an optimal vision-based classification system for robots

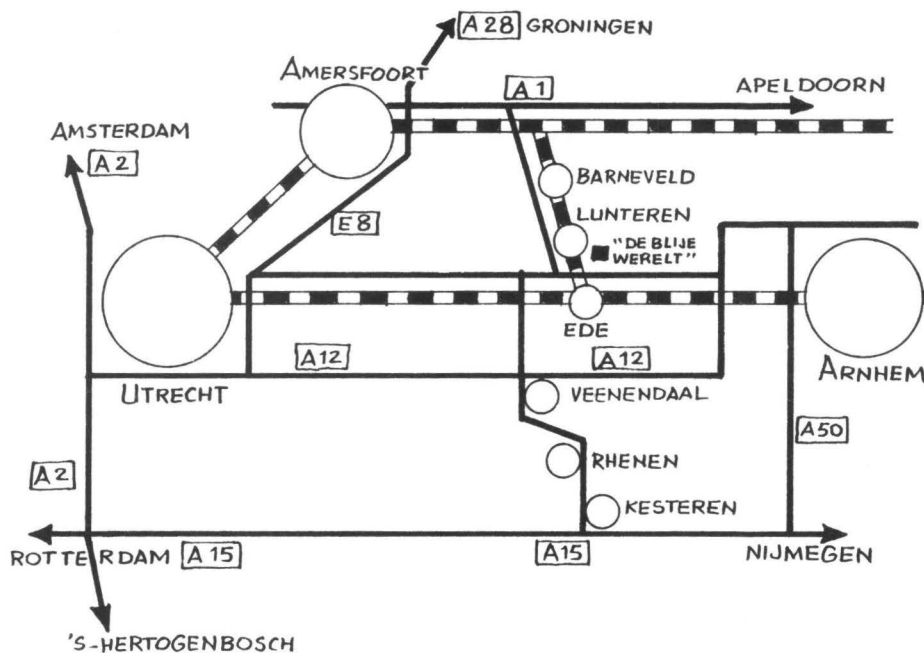
J.W. Polderman (Amsterdam): On two subsets of the parameter space in adaptive control problems

S.A. Smulders (Amsterdam): Avoiding the development of congestion on a freeway: modeling and prediction of traffic flow

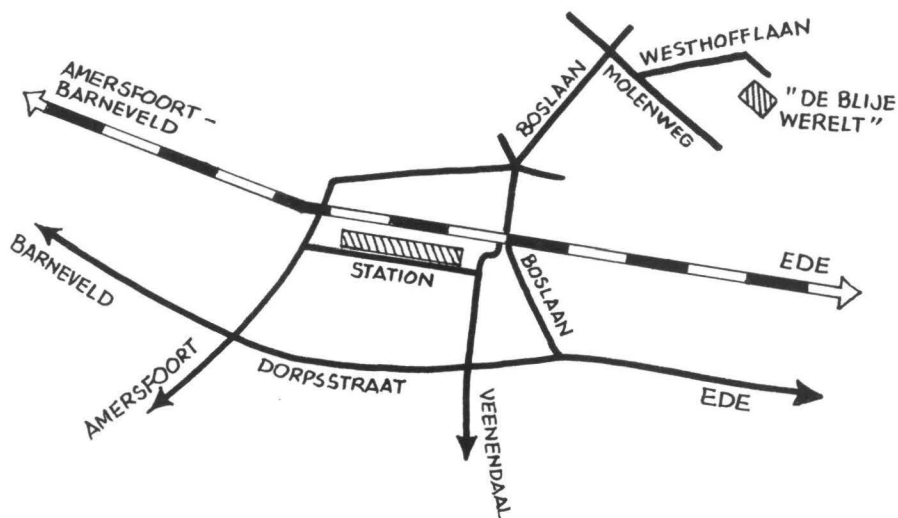
F.B. Sperling (Delft): Piecewise linear robot servo control, a feasible approach

LOCATION

Conference Center "De Blije 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 Blije 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 260.00 for a single room and f 225.00 for a double room. The price includes board and lodging from Wednesday January 15 before lunch until Friday January 17 after lunch. A limited number of participants may have to share a room. If necessary some participants will be located in hotels in Lunteren outside the conference center. Partial arrangements are possible but not encouraged. If a partial arrangement is desired please contact ms. Van den Berg, see the address below. One can register until December 21, 1985 by means of the application form and simultaneous remittance of the required amount of Dfl 260.00. If a double room has been assigned the participant can expect a rebate of Dfl 35.00.

INFORMATION

For further information contact:

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Centre for Mathematics and Computer Science,
P.O. Box 4079, 1009 AB Amsterdam,
The Netherlands

D. ten Hove (Enschede): Collision avoidance of aircraft: an application of stochastic control theory

M.J.L. Tierneho (Enschede): Control of an elastic servo system

H.L. Trentelman (Eindhoven): Families of linear quadratic problems: continuity properties

A.J. Udink ten Cate (Wageningen): Continuous-time constrained least-squares algorithms for recursive parameter estimation of stochastic linear systems by a stabilized output error method

P. van den Hof, T. Backx, A. Damen, P. Janssen, A. van den Boom (Eindhoven): Equation error and output error methods in multivariable process identification; models and criteria

A.J. van der Schaft (Enschede): Nonlinear control theory and robot manipulator control

J.W. van der Woude (Eindhoven): Disturbance decoupling and output stabilization by measurement feedback

J.H. van Schuppen (Amsterdam): Stochastic realization and factor analysis

P.Th.L.M. van Woerkom (Amsterdam): Mathematical model order reduction for the control of flexible spacecraft: a discussion of approaches

J. Winkin, F.M. Callier (Namur): The graph metric for SISO linear distributed systems

H.J. Zwart (Groningen): Invariance concepts for infinite-dimensional systems

PRELIMINARY TIME SCHEDULE

| Time | Plenair | OR | SC1 | SC2 |
|----------------------------|------------------|----------------|----------------|----------------|
| Wednesday January 15, 1986 | | | | |
| 11:25 | Opening | | | |
| 11:30 | Whittle (1) | | | |
| 12:30 | Lunch break | | | |
| 14:00 | | | Van Woerkom | Meerwaldt |
| 14:30 | | | Bontsema | Udink ten Cate |
| 15:00 | | | Kuiper | Merckx |
| 15:30 | Tea break | | | |
| 16:00 | | Cornuéjols (1) | Guidorzi (1) | |
| 16:30 | | " | " | |
| 17:00 | | Conn (1) | Boekhoudt | Van den Hof |
| 17:30 | | " | Polderman | Backx |
| 18:00 | End | | | |
| Thursday January 16, 1985 | | | | |
| 09:00 | J.P. Quadrat (1) | | | |
| 10:00 | Coffee break | | | |
| 10:30 | Minicourse (1) | | | |
| 11:30 | | Conn (2) | Guidorzi (2) | |
| 12:00 | | " | " | |
| 12:30 | Lunch break | | | |
| 14:00 | Minicourse (2) | | | |
| 15:00 | Tea break | | | |
| 15:30 | | Ott (1) | Olsder | Van der Woude |
| 16:00 | | " | Nusse | Zwart |
| 16:30 | | Whittle (2) | Heij | Winkin |
| 17:00 | | " | Van Schuppen | |
| 17:45 | Vergadering | | | |
| Friday January 17, 1985 | | | | |
| 09:00 | Minicourse (3) | | | |
| 10:00 | Coffee break | | | |
| 10:30 | | Cornuéjols (2) | Van der Schaft | Callier |
| 11:00 | | " | Katupitiya | De Moor |
| 11:30 | | Ott (2) | Tiernego | Engwerda |
| 12:00 | | " | Passenier | Trentelman |
| 12:30 | Lunch break | | | |
| 13:30 | | | Sperling | Ten Hove |
| 14:00 | | | Kinnaert | Smulders |
| 14:30 | | | Quadrat (2) | |
| 15:30 | Tea | | | |

APPLICATION FORM

I will attend the *Eleventh Conference of the Mathematics of Operations Research and System Theory*, to be held in "De Blije Werelt", Lunteren, The Netherlands, January 15-17, 1986.

- ☐ I have transferred Dfl. 260.00 to account 462890 at the Dutch Postal Giro, The Hague, in favor of the Stichting Mathematisch Centrum, Amsterdam, mentioning "Lunteren 1986".
- ☐ I have transferred Dfl. 260.00 to account 43.60.53.705 at the AMRO-Bank, Sarphatistraat, Amsterdam, in favor of the Stichting Mathematisch Centrum, Amsterdam, mentioning "Lunteren 1986".
- ☐ I enclose a cheque of Dfl. 260.00 payable to the Stichting Mathematisch Centrum, Amsterdam, mentioning "Lunteren 1986".

Please indicate your preference:

- ☐ I am willing to share a room, possibly with;
- ☐ I prefer not to share a room.

Name:

Institute or firm:

Mailing address:

Telephone:

Date:

Signature:

The completed form should be sent, *before December 21, 1985*, to:

Ms. A.K. van den Berg
Centre for Mathematics and Computer Science
P.O. Box 4079
1009 AB Amsterdam
The Netherlands

