Registration Form

I wish to register for the Duisburg University MMIC Design course, to be held on 4-5th October 1994

NAME .....
TITLE.....
ORGANISATION.....
ADDRESS .....
.....
.....
Tel. No. .....**Ext.**.....
Fax No. .....

Please pay the fee to our bank account (account no. 209003987) at the Sparkasse Duisburg (bank code 350 500 00) or enclose an official purchase order or cheque made payable to the Department of Electromagnetic Theory and Engineering for the course fee of DM 500 (university) or DM 750 (other). The fee includes course notes, tutorial material and refreshments.

Signature .....

Please send the completed form and fee to:-

Prof. Dr.-Ing. Adalbert Beyer
Tel.: +49/203/378-9217
Fax: +49/203/379-3218

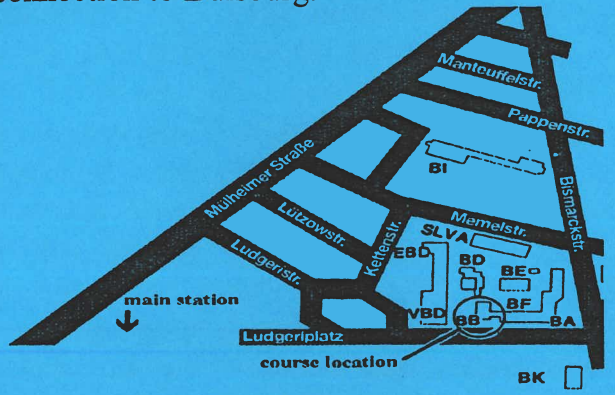
or

Dipl.-Ing. Ulf Mueller
Tel.: +49/203/379-3230
Email.: ulf@ate9.uni-duisburg.de

c/o Duisburg University
Depart. of Electrical Eng. (FB9/ATE)
Bismarckstrasse 81
47048 Duisburg,
GERMANY

VENUE

The course will be held at Duisburg University, Department of Electromagnetic Theory and Engineering. The Duisburg University is situated in the heart of Duisburg within walking distance to the main station. Duisburg can easily be reached via Duesseldorf airport using the "S-Bahn"-train connection to Duisburg.



Early registration is recommended since the number of participants is limited

Accommodation is <u>not included</u> in the registration fee but can be arranged if requested.

Announcement

Short Course

on

Optimization Technology and Applications in High Frequency and Microwave Circuit Design

October 4-5th, 1994

An intensive two day course for researchers and engineers wishing to gain a knowledge of the latest techniques in MMIC design

Duisburg University
Department of Electromagnetic Theory and Engineering
Bismarckstrasse 81
47048 Duisburg

GERMANY

Course Contents

This two-day course will cover practical aspects of state-of-the-art techniques for nonlinear optimisation with applications in computer-aided engineering. It is designed principally for engineers and scientists faced with applying serious optimisation techniques to small, medium and large-scale modelling, simulation and mathematically based design of engineering devices, circuits and systems. The course will be supported by a laboratory of sun SPARCstations.

Participants will be introduced to performance-driven, yield-driven, cost-driven and worst-case design with emphasis on predictable and low cost computation. Using the open architecture optimisation system OSA90/hope*TM*, participants will learn how to utilise their own code, compose expressions on-screen, functionally interconnect their modules, pre-, inter- and post-process variables passed to or returned from the modules.

Practical implementation of least squares, least *p*th, minimax and Huber objectives will be covered. We will focus upon statistical modelling, statistical design centring, yield optimisation and parameter extraction. An intensive tutorial and laboratory exposition features state-of-the-art applications to linear and nonlinear circuits, including filters, amplifiers and mixers, as well as device modelling. Mixed domain simulation/optimisation will be addressed, including DC, small-signal AC, large-signal harmonic balance, large-signal time domain, circuit theory based and field theory based simulation.

Recent advances in integrating electromagnetic simulations directly into the circuit design process will be described. In particular, the smart interfacing of OSA90/hope*TM* with Sonnet Software's *em*^{TM} will be discussed. Novel results of minimax microstrip filter design will be presented. Exciting work currently in progress in the electromagnetic design of high-temperature superconducting microwave filters will be reported.

Course Speakers:

Professor Dr. John Bandler
Optimization Systems Associates Inc.
P.O. Box 8083
Dundas, Ontario,
Canada, L9H 5E7

John Bandler studied at Imperial College, London. He received his Ph.D. and D.Sc.(Eng.) degrees from the University of London, in 1967 and 1976, respectively. He is recognised for his work in statistical design centring, tolerancing, tuning, yield optimisation, sensitivity analysis, least *p*th and minimax optimisation, fault diagnosis of analog circuits, optimal flow in power systems, microwave filter and multiplexer design, device modelling and parameter extraction. He is a Professor of Electrical and Computer Engineering, McMaster University, and President of Optimization Systems Associates Inc. (OSA), founded in 1983. He is author of more than 260 publications. He is a Fellow of the Royal Society of Canada, a Fellow of the IEE and a Fellow of the IEEE. He is a Member of the Electromagnetics Academy.

Dr. Shao Hua Chen
Optimization Systems Associates Inc.
P.O. Box 8083
Dundas, Ontario,
Canada, L9H 5E7

Shao Hua Chen received the Ph.D. degree in Electrical Engineering from McMaster University, Hamilton, Canada, in 1987. He then joined Optimization Systems Associates Inc., where he is currently Consulting Engineer. He is a Research Engineer in the Simulation Optimization Research Laboratory at McMaster University. Dr. Chen has been engaged in extensive research on optimisation theory, device modelling, statistical simulation and circuit design..