Model Based Control Training Course

A course for practitioners with basic control knowledge
to achieve top control performance with the most powerful control technology
plus the experience of the leading users - in a surprisingly simple way!

Increasing pressures on cost, quality, energy consumption, emission etc. demand increased controller performance. Model Based Control (MBC) combines excellent performance with robustness and helps to master the most difficult situations like long deadtime, multiple influences or constraints etc. in a relatively easy way – depending on the approach used. **AMC, ACT**'s own proprietary MBC technology, e.g. uses simple, easy to build process models based on the standard process parameters like gain, deadtime and time constants. It delivers tight and stable control plus extra information on the condition of the process.

To apply MBC successfully in practice, skills and know-how is required which typically is not taught in traditional education: Most approaches presented there are much too complicated and have led to the widely found - though wrong - perception that MBC is too complex and difficult for practical use.

ACT's courses show that top results can be achieved with relatively little effort and provide the necessary know-how to locate operations improvement opportunities and to develop high performing and robust applications. This enables participants to master tough challenges, to exploit opportunities so far out of reach and thus to increase the plant's profitability and also their own recognition**.** Our courses deliver exceptional know-how with **emphasis on practical implementation** in easy understandable way**.** Theory is only given to the extent necessary. **ACT's** courses stand out because of

- **Selected, fully practice oriented material,** including **c**ontroller and technology selection criteria, implementation aspects, tricks and secrets for top performance, trouble-shooting, many examples of successful applications but also pitfalls
- **Coverage of special, little known techniques –** simple, easy but powerful
- **Many realistic demos/exercises** with our award-winning PC tool TOPAS for deeper understanding, experience in troubleshooting and handling of situations which cannot be practiced on the plant
- **Intensive work in small groups**, questions are answered in depth, actual problems discussed
- **An exceptionally experienced instructor** with over 30 years in practical application and management.

Target participants

Process control practitioners with basic control knowledge, plant supervisors and operations support.

Agenda:

- *Motivation for Model Based Control:* Definition, benefits, criteria for use, application areas
- *Model types and Selection Criteria*: Main types and approaches
- *The Main Approaches:* IMC, DMC, Hiecon, Monoreg, AMC
- *Plant Test*: Test types, selection criteria, evaluation of the results
- *Identification:* Estimation of the dynamic process parameters
- *Feedback Control*: Handling of process changes, model errors, non-linearities, tuning
- *MBC Feed-forward Control*: Objective and concepts, additive / multiplicative FFW
- *MBC Constraint Control*: Objective, concepts, comparison with PID
- *MBC Multivariable Control:* Objective, concepts, comparison with PID
- *MBC Optimization - Introduction:* LP based Optimization
- *Applications Design and Implementation:* Design criteria, user interface, documentation
- *Performance Assessment and Monitoring*: Key success factors for applications, economics.

The students' verdict: *"Best course I ever had - an important course for every control professional - the most practice oriented training I ever had - excellent course, could go on much longer - very good integration of different requirements and backgrounds".*
The most typical reaction: *"I did not believe that I could learn so much more".*

Course lecturer: Hans H. Eder, is a former senior control expert and CIM Advisor with EXXON with over 25 years experience in application and management of advanced control (speciality MBPC) and production optimisation. He has achieved outstanding results (measured in hard $ figures), often with surprisingly simple means, and has also earned a reputation for locating untapped opportunities for cost savings and profit improvement. He is a key contributor to the *Handboek Procesautomatisering* (published by Kluwer Wolters), has given many speeches and presentations on APC and MBPC, held numerous courses and seminars in Europe, America and Asia and is also a registered expert with the European Commission.

The company: ACT offers outstanding know-how, technology and software for process control and operations optimization – with the objective to deliver maximum benefits with minimum cost and effort. Two examples: **TOPAS** is our award winning PC toolkit for controller selection / tuning / optimization and troubleshooting. **AMC** is our model based predictive controller, extremely simple, yet powerful and robust - for use right in the DCS. Furthermore, **ACT** offers also several technologies especially for energy savings.

COURSE REGISTRATION

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http://www.act-control.com/

NAME..... POSITION ……..
COMPANY…..... ..DEPT……
ADDRESS……
VAT number (if within EU) ……
PHONE.....FAX……..
E-Mail……
DATE..... SIGNATURE……

I register for the following training course:

MODEL BASED CONTROL - MBC
to be given in Horgau / Augsburg, Germany
from June 3 to June 5, 2019
Course fee: Euro 1850.00 / 1950.00 (EU / non-EU participants)

Important:

To ensure the enrolment, payment must be received two weeks prior to the course start. Course fees include handout material, lunches and beverages during the day, but not VAT. A charge of Euro 350 will apply for cancellations up to one week before course start. After that, the full course fee will be charged. For optimum results, the number of participants is limited to 12, slots are reserved on a "first-come-first-serve" basis.

Courses can also be given at a place and date convenient for you, also in German. Contact us!