

The **Research Center for Pharmaceutical Engineering (RCPE)** is a global leader in pharmaceutical engineering sciences. We help our partners to create and manufacture advanced medicines for patients around the world, through optimising products and processes.



WE ARE OFFERING A

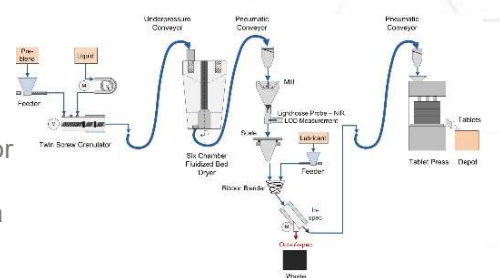
# PAID DIPLOMA/ MASTER'S THESIS

MODELING AND CONTROLLER SYNTHESIS APPLIED  
TO CONTINUOUS PHARMACEUTICAL PROCESSES  
REF. NO. DA150

To dedicated students of electrical engineering, biomedical engineering, information and computer engineering, mechanical engineering, physics, chemical and process engineering, or related disciplines, we offer an opportunity to write a paid Diploma/Master's thesis. The project is conducted in close co-operation with the institute of automation and control, TU Graz.

## OBJECTIVE:

The ConsiGma 25 (GEA) is an industrial scale pharmaceutical manufacturing line. Its purpose is to produce tablets from powders. The entire line comprises of the unit operations twin screw granulator (to produce wet granules), dryer (to dry the wet granules), mill (to break too large granules), external phase dosing (to add further powders needed for tableting), blender and tablet press. Innovative sensors have been installed and in the present master thesis, mathematical models (e.g., via the local linear model tree – LOLIMOT algorithm) of selected unit operations should be developed and used for controller synthesis (e.g., MPC). The designed controllers will then be run on the real process line.



WITHIN THE FRAMEWORK OF THIS DIPLOMA/ MASTER'S THESIS WE OFFER THE FOLLOWING:

- Extensive participation in a top-level and industrially relevant research project in an international environment
- Supervised training in the task
- Assistance of experienced staff with the implementation of innovative ideas
- Access to highly modern infrastructure on campus of Graz University of Technology
- Assistance with the publication of results
- Adequate compensation and opportunities for personal and professional development

## FINANCING:

- Compensation on the basis of a service contract

IF YOU ARE INTERESTED IN WRITING YOUR THESIS AT THE INTERFACE BETWEEN UNIVERSITY RESEARCH AND INDUSTRY/ BUSINESS AND TO CONTRIBUTE TO THE OPTIMISATION OF PRODUCT AND PROCESS DEVELOPMENT IN THE PHARMACEUTICAL INDUSTRY, PLEASE CONTACT US INDICATING THE REFERENCE NUMBER.

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