# LabVIEW the painless way

## 1 Antragsteller/in

Lehrstuhl Chemische Verfahrenstechnik
M.Sc. Jesús González Rebordinos, Prof. Dr. David Agar

## 2 Kurzbeschreibung des Projektes

This project aims to provide an introduction to Labview for the monitoring, control and safety of experimental setups with special emphasis of the last. The objective is to familiarize students with the widely used software prior to their experimental Bachelor or Master Thesis projects and thus avoid unnecessary loss of time during the projects themselves.

This is to be accomplished through four theoretical lectures to acquaint students with the principles of Labview and three assignments of increasing complexity to evaluate the acquisition of knowledge.

## 3 Details zum Projekt

### 3.1 Projektziel und Maßnahmen

During the four lectures the following topics will be convired among other:

- LabVIEW environment basics
- Graphical programming basics
- Common tools
- Data and execution structure
- Data acquisition and processing simulation and programming.

The following topics will be used in order to transport this knowledge to the students:

- Collection of examples with application in the „real life"
- Use of practical examples „light bulb and thermocouple"
- Use of National Instruments Data Acquisition Software "myDAQ"
- Three assignments to „force" the students to practice.

### 3.2 Evaluation des Projektes

Three indicators are used for the evaluation of the project:

1) Before the course starts: the number of enrolled students will show the interest of the students on an introductory course to Lab VIEW.
2) After the course: the number of assignments submitted as well as the quality of the solution gives a good idea of how good the concepts are understood and interiorized by the students.
3) Periodically: every year a survey among the students that have used LabVIEW for their Bachelor/Master Thesis will be performed in order to know their opinion on the usefulness of the LabVIEW course.

The course will be given once per year and consists of the following activities:

- 4 weeks: 1 lecture of 90 min each week
- 4 weeks: Time to solve and submit the assignments
- 2 weeks: Correction and grading of the assignments