JOIN THE EXPERT COURSE ON: Hyperspectral imaging, data processing and multivariate image analysis using matlab scripts (VU 771003)



universität des lebens

Dr. Ferenc FIRTHA Szent István University Budapest, Faculty of Food Science, Physics-Control Department DI Dr. Andreas ZITEK, MSc University of Natural Resources and Life Sciences, Department of Chemistry

14., 15., 16. November 2017 **BOKU-UFT, SEM 16**

limited number of participants! Konrad-Lorenz-Straße 24, 3430 Tulln a.d. Donau contact: andreas.zitek@boku.ac.at

- Characteristics of light, colour systems, image processing, spectroscopy, hyperspectral imaging
- Data formats and files (hypercubes), numerical methods for data processing and statistical chemometric models
- Software development tools, basics of languages (C#, VB samples), MATLAB (and Octave, Scilab freeware alternatives), GUI

TUESDAY 14.11.2017

09:30-12:30 Characteristics of light, colour systems, image processing, spectroscopy, hyperspectral imaging; exercise: programming in C

13:30-15:30 Calibration and measurement with hyperspectral imaging equipment of Dept. of Material Sciences and Process Engineering; exercise: Arduino, sensor, PC

WEDNESDAY 15.11.2017

09:30-12:30 Data formats and files (hypercubes), numerical methods for data processing and statistical chemometric models; exercise: Matlab overview, plot regression etc.

13:30-15:30 Exercise: Cubrowser, Excel VBA, Matlab tools (DA, PLS with sample data)

THURSDAY 16.11.2017

09:30-12:30 Exercise: Image processing with Matlab tools (DA, PLS with sample data), discussion of promising future HSI ideas

13:30-15:30 Training on sample data with Matlab tools

The course is hosted by the BOKU and coorganized by the Dept. of Chemistry (ao. Prof. Dr. Thomas Prohaska) and the Dept. of Material Sciences and Process Engineering (ao. Prof. Dr. Barbara Hinterstoisser) The course is held within the frame of **the FFOQSI academy**.

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