

## THEMATIC RESEARCH TOPICS OF DOCTORAL SUPERVISORS FROM THE DOCTORAL SCHOOL OF CHEMICAL ENGINEERING

Prof. dr. eng. **Călin-Cristian CORMOȘ**

Chemical reaction engineering. Process design and integration. Mathematical modelling and simulation of chemical and thermo-chemical systems. Process retrofit. Energy conversion systems. Gasification and combustion. Clean coal technologies. Renewable energy sources. Carbon Capture and Storage (CCS) technologies. Chemical looping. Energy vectors poly-generation systems. Techno-economic and environmental evaluations.

**E-mail:** [calin.cormos@ubbcluj.ro](mailto:calin.cormos@ubbcluj.ro)

Faculty of Chemistry and Chemical Engineering, Room no. 131, Tel. +40 264 593833 ext. 5762

Prof. dr. eng. **Vasile Mircea CRISTEA**

Modelling and control of chemical processes with lumped and distributed parameters (CFD), both at laboratory and industrial scale. Development of traditional and model-based control solutions, model predictive control. Modelling and classification applications using artificial neural networks and fuzzy logic. Data mining. Waste Water Treatment and pollutant propagation in rivers.

**E-mail:** [mircea.cristea@ubbcluj.ro](mailto:mircea.cristea@ubbcluj.ro);

Faculty of Chemistry and Chemical Engineering, Room no. 154, Tel. +40 264 593833 ext. 5729

Prof. dr. eng. **Graziella – Liana TURDEAN**

Applied physical chemistry. Thermodynamics and kinetics of the chemical reaction by electrochemical methods. Nano/materials for electrodes. Supramolecular and nanostructured redox bio/systems. Electroanalytical chemistry (i.e. amperometric bio/sensors, electrochemical techniques of electrode process investigation).

**E-mail:** [graziella.turdean@ubbcluj.ro](mailto:graziella.turdean@ubbcluj.ro)

Faculty of Chemistry and Chemical Engineering, Room no. 60, Tel. +40 264 593833 ext. 5715

Prof. emeritus dr. eng. **Petru ILEA**

Electrochemical Process Technology and Engineering; Metal Recovery from Wastes studies related to: inorganic substances electrosynthesis, electrometallurgy and electrochemical technology applied in environmental remediation, protection and recycling.

**E-mail:** [pilea@chem.ubbcluj.ro](mailto:pilea@chem.ubbcluj.ro); [petru\\_ilea@yahoo.com](mailto:petru_ilea@yahoo.com)

Faculty of Chemistry and Chemical Engineering, Room no. 77, Tel. +40 264 593833 ext. 5678

Prof. emeritus dr. eng. **Paul Șerban AGACHI**

Process Modeling; Simulation; Control and Optimization; Classical and Advanced Control Systems; Computer Aided Process Engineering (CAPE) Instruments; University Management; Research Management.

**E-mail:** [agachip@biust.ac.bw](mailto:agachip@biust.ac.bw); [serban.agachi@ubbcluj.ro](mailto:serban.agachi@ubbcluj.ro)

Prof. dr. eng. **József FAZAKAS**

Oxide Materials; Sol-gel Engineering; Nanomaterials.

**E-mail:** [chemicedramic@gmail.com](mailto:chemicedramic@gmail.com)

Prof. dr. eng. **Zoltán Kálmán NAGY**

Professor of Chemical Engineering, Purdue University

Development and application of process systems engineering approaches and tools for engineered product design and optimal process operation, with applications in pharmaceutical, fine chemical, biotechnology, food and agrochemical industries.

**E-mail:** [znagy@purdue.edu](mailto:znagy@purdue.edu)