

## curriculum vitae

### Personal information

Surname(s) / First name(s)

Official Address(es)

Telephone(s)

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Date of birth

**Cormos (maiden name Cristea) Ana-Maria**

11 Arany Janos, 400068, Cluj-Napoca, Romania

0040-264-593833, Mobil 0040-722- 854766

0040-264-590818

cani@chem.ubbcluj.ro

June 11, 1973

### Occupational field

#### Work experience

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

Dates

Occupation or position held

Main activities and responsibilities

Name and address of employer

#### Lecture

September 2002 onwards

Lecture (September 2007 onwards), Teaching Assistant (September 2002- August 2007)

- teaching the courses and laboratory work for the following academic discipline: "Programming and Using Computers", "Modeling and Simulation of Chemical Processes", "Modeling and Simulation Complex Processes", "Chemical Engineering Reactions", "Computer using in chemical research" and "Modeling and Simulation Processes" – for engineering informatics students

- research topics: Modeling and Simulation of Chemical Processes;

Computer Applications in Chemistry and Chemical Engineering;

Application of Process Engineering Tools to Medicine and Bioengineering

Faculty of Chemistry and Chemical Engineering, Babes-Bolyai, Cluj-Napoca, Romania

November 1998 - May 2005

PhD student

Modeling and Simulation of Limestone Decomposition in Vertical Lime Kiln with coke

Faculty of Chemistry and Chemical Engineering, Babes-Bolyai, Cluj-Napoca, Romania

October 1996- October 1998

Research Assistant

Modeling and Simulation of Chemical Processes; Computer Applications in Chemistry and Chemical Engineering

Faculty of Chemistry and Chemical Engineering, Babes-Bolyai University, Cluj-Napoca, Romania

### Education and training

Dates

Title of qualification awarded

Principal subjects/Occupational skills covered

Name and type of organisation

Dates

Principal subjects/Occupational skills covered

Name and type of organisation providing organisation and training

Dates

Principal subjects/Occupational skills covered

Name and type of organisation providing organisation and training

November 1, 1998 – May 11, 2005

Ph D.

Modeling and Simulation of Limestone Decomposition in Vertical Lime Kiln with coke

Babes-Bolyai University, Faculty of Chemistry and Chemical Engineering, Cluj-Napoca, Romania

May, 2005

Workshop: Creativity support tools and methods in process engineering, Prof. Andrzej Kraslawski, Lappeenranta University of Technology, Finland

Faculty of Chemistry and Chemical Engineering , Cluj-Napoca Romania and Lappeenranta University of Technology, Finland

July 20-21, 2005

Integration Process, lectures : prof Jiri Klemes and prof. Simon Perry

Centre for Technology Transfer in the Process Industries, Department of Chemical Engineering University "Politehnica" of Bucharest; Manchester University....

Dates  
Title of qualification awarded  
Principal subjects/Occupational skills covered

February 17- August 16, 2003

Research stage

Numerical approaches for population balance equations. The main objective of this work was to implement the moving pivot technique developed by Ramkrishna into a Fortran equation solver program. To test the efficiency of the solver, a barium sulfate precipitation process was chosen. ETH Zurich, Switzerland, Institute of Process Engineering , Group on Advanced Separation Processes- group of Prof. Dr. Marco Mazzotti

Name and type of organisation providing organisation and training

Dates  
Title of qualification awarded  
Principal subjects/Occupational skills covered

February 11- April 10, 2002

Research stage

Simulation of the Scrubbing Unit of Waste Incineration Plant

Name and type of organisation providing organisation and training

University of Technology in Vienna, Austria, Group of Gas-Solid Process - Prof. Dr. Anton Friedl  
Financial Support: Word Bank Project: Informatics of Chemical Systems. 1997-2002, Code 70

Dates  
Principal subjects/Occupational skills covered

December 2- December 4, 2000

Workshop: ChemCAD – a tool for modeling and simulation of chemical processes

Name and type of organisation providing organisation and training

Nor.Par.a.s and Etvos Lorant University, Budapest, Hungary

Dates  
Title of qualification awarded  
Principal subjects/Occupational skills covered

October 1997- June 1998

Master of science

Interface Process Engineering

Name and type of organisation providing organisation and training

Faculty of Chemistry and Chemical Engineering, Babes-Bolyai Univesity, Cluj-Napoca Romania

Dates  
Title of qualification awarded  
Principal subjects/Occupational skills covered

October 1991- June 1996

Bachelor of Science

Chemistry-Physical

Name and type of organisation providing organisation and training

Faculty of Chemistry and Chemical Engineering, Babes-Bolyai Univesity, Cluj-Napoca Romania

### Personal skills and competences

Self-assessment

European level (\*)

English

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
C1	C1	C1	B2	B2

(\*) Common European Framework of Reference (CEF) level

Social skills and competences

Team work: I worked in the research teams of national and international projects.

Computer skills and competences

Microsoft Office, Corel Draw, ChemWin  
MATLAB/SIMULYNK, C, COMSOL Multiphysics, Fortran, ChemCAD, HYSYS

### Additional information

#### Publications

32 scientific papers (11 -ISI indexed journals, 17-conferences proceedings and 4 other journals) and 2 books (1 in the field of university and research management and 1 for Matlab program using for engineers)

Publications list ( 7 representative)

1. D.Bratfalean, R.Suharoschi, C. Muresan, S.P. Agachi, M.V. Cristrea, A.M. Cormos, J. Villa i Freixa, A. G. Garrido, M.H. Sanchez, Normalization for cDNA microarray data of gene expression profiles from the human prostate cancer cell lines from the human prostate cancer cell lines (PC3) by Pre-Processing Two-Color, Data Computer-Aided Chemical Engineerig Journal 27, proceeding of European Symposion on Computer Aided Process Engineering 2009, Krakow, Poland, 14-17

June 2009;

2. R.Suharoschi, C. Muresan, D.Bratfalean, *A.M. Cormos*, S.P. Agachi, Genistein modulation of intricate signaling pathways underlying PC3 cells treatment, 20th Meeting of the European Association for Cancer Research, European Journal of Cancer Supplements Volume, 2008, Ed. Elsevier Ltd
3. A. Padurean, C.C. Cormos, *A.M. Cormos*, P.S. Agachi, Multicriterial analysis of post-combustion carbon dioxide capture using alkanolamines, International Journal of Greenhouse Gas Control, 5, 2011, 676-685
4. J. Gaspar, *A. M. Cormos*, Dynamic modeling and validation of absorber and desorber columns for post-combustion CO<sub>2</sub> capture, Computers and Chemical Engineering, 35(10), 2011, 2044-2052.
5. *A.M. Cormos*, J. Gaspar, P.S. Agachi, Evaluation of CO<sub>2</sub> absorption-desorption cycle by dynamic modeling and simulation, European Symposium on Computer Aided Process Engineering – ESCAPE 21, Porto Carras, Greece, 2011
6. V. Dejeu, R. Barabas, E Bogya, *A.M. Cormos*, S.P. Agachi, Growth rate of hydroxyapatite obtained by precipitation, Studia Universitatis Babes-Bolyai, Chemia, LV,2, 179-188, 2010
7. C.C. Cormos, *A.M. Cormos*, S. Agachi, Power generation from coal and biomass based on IGCC concept with pre and post-combustion carbon capture methods, Asia – Pacific Journal of Chemical Engineering, 4, 2009, 870 – 877

### Main Projects

Project manager:

- The improving of the technical- economical performance and reduction of environmental impact of chemical processes using mathematical modeling and simulation of the processes using computers (member of research teams), CNCSIS AT 2006 – Tema 3 , COD 7

Member of research teams:

- Innovative systems for poly-generation of energy vectors with carbon dioxide capture and storage based on co-gasification processes of coal and renewable energy sources (biomass) or solid waste, CNCSIS IDEAS – Exploratory research, National research project 2009 - 2011

Conceptual design of typical power plant configurations for the estimation of reference capital costs including material, Research project done for European Commission, DG Joint Research Centre, Institute for Energy, The Netherlands, 2010-2011

MOLPAT - Development of a System Biology Approach for Understanding the Molecular and Signaling Patterns Involved in the Human Prostate – CEEX 2006-2008/Project 180

- The improving of the technical- economical performance of limestone thermal decomposition process in a vertical lime kiln by mathematical modeling and simulation. 2005-2006, Code CNCSIS AT 2/34

- Development and Implementation of Model Predictive Control Technique for a Distillation Column, 2001-2002, Code CNSIS 17

- Application of artificial neural networks in chemistry and chemical engineering, 1998-2000, Code CNCSU 732.

- Informatics of Chemical Systems. 1997-2002, Word Bank Project, Code 70.

- Modeling of Gas-Solid Process, 1999-2000, Code CNSIS 290

- Modeling and Simulation of Limestone Decomposition, beneficiary Soda Ash Plant, Ocna-Mures, Romania, 1997-1999

*A. Cormos*