

## Danciu Tiberiu Dinu Reader

University "POLITEHNICA" Bucharest  
Faculty of Applied Chemistry and Materials Science  
Department of Chemical and Biochemical Engineering



### Contact information

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### Education and training

Dates	1989 – 1997
Title of qualification awarded	Ph.D. in Physical Chemistry, (thesis title: „Oscillating reactions in catalytic systems”, conductor Prof. dr. doc. eng. Rodica Vilcu), diploma nr. P 1909
Principal subjects/occupational skills covered	Thermodynamics, Kinetics, Catalysis
Name and type of organisation providing education and training	Physical Chemistry Department, University of Bucharest
Level in national or international classification	6
Dates	1979 – 1984
Title of qualification awarded	Mechanical and Chemical Engineer, (diploma title: „Optimal control of chemical reactors”, conductor Prof. dr. eng. Grigore Bozga), diploma nr. B 7613
Principal subjects/occupational skills covered	Chemical Engineering
Name and type of organisation providing education and training	Faculty of Tools and Chemical Processes Engineering, University Politehnica of Bucharest
Level in national or international classification	6

### Professional experience

Dates	2003 – present
Occupation or position held	Reader, Chemical Engineering Department

Main activities and responsibilities	<ul style="list-style-type: none"> <li>o Giving lectures on: Technical Thermodynamics, Chemical Engineering Basics, Computers Utilization, Industrial Graphics, Databases, Computer Meta-languages, Unit Operations I (Heat Transfer), Transport Phenomena, Chemical Reactors (both English and Romanian)</li> <li>o Conducting seminars, labs, year projects on: Chemical Engineering Basics, Unit Operations (in Romanian, English, and French), Technical Thermodynamics, Chemical Reactors (both English and Romanian), Computers Utilization, Industrial Graphics, Databases, Computer Meta-languages, Chemical Reactors Dynamics, Mechanical Basics, Strength of Materials and Chemical Equipment Calculus, Design and Mounting of Chemical Plants</li> <li>o Conducting diplomas and dissertations (in Romanian, English, and French)</li> <li>o Admission, diploma, and dissertation commissions</li> <li>o Fundamental and contractual research (developing e-learning applications, glycerin revaluation)</li> <li>o Postgraduate lectures in Chemical Engineering, petrochemical employees from Lybia</li> </ul>
Name and address of employer	University Politehnica of Bucharest, 1 Polizu street, bldg. A, room 056, Sector 1, 011061 Bucharest, Tel +40214023916, Fax +40213185900
Type of business or sector	Didactic, research
Dates	1994 – 2000 and 2001 – 2003
Occupation or position held	Lecturer, Chemical Engineering Department
Main activities and responsibilities	<ul style="list-style-type: none"> <li>o Giving lectures on: see above, plus Programming Languages (both English and Romanian)</li> <li>o Conducting seminars, labs, year projects on: see above, plus Cryogenics and Acclimatization Plants, Computer Driving of Chemical Processes, Numerical Methods in Chemical Engineering (both English and French), Optimization of Chemical Processes, Programming Languages (both English and French), and also – as associate at Titu Maiorescu University – Medical Informatics</li> <li>o Conducting diplomas (in Romanian, English, and French)</li> <li>o Admission, diploma, and dissertation commissions</li> <li>o Fundamental and contractual research (thermo kinetic characterization of chemical oscillations, optimization of dynamic processes)</li> </ul>
Name and address of employer	University Politehnica of Bucharest, 1 Polizu street, bldg. A, room 056, Sector 1, 011061 Bucharest, Tel +40214023916, Fax +40213185900
Type of business or sector	Didactic, research
Dates	2000 – 2001
Occupation or position held	Invited researcher, post-doctoral stage
Main activities and responsibilities	Hydrocarbons oxidation in supercritical CO <sub>2</sub>
Name and address of employer	Chem/Petroleum Department, University of Pittsburgh, PA 15260, Pennsylvania, USA
Type of business or sector	Didactic, research

## Academic and research interests

Mathematical modeling of processes like vapor – liquid equilibrium, hydrocarbon pyrolysis, adiabatic expansion, chemical oscillations, chemical reactors dynamics, multi-component distillation, direct and inverse thermodynamic cycles, heat exchangers, catalytic reactions, dimensioning of chemical equipments)

Numerical analysis (data fitting, variational calculus, optimal control)

Experiments (studies of catalytic activity, explosive domain of gaseous mixtures, metallic corrosion and decontamination, high pressure reactions, green chemistry)

Lab analysis techniques (colorimetry, refractometry, ebulliometry, calorimetry, microgravimetry, spectrophotometry, gas chromatography)

## Teaching activity

*Se completeaza conform indicatiilor din tabel*

Ciclu (Master/licenta)	studii Denumire specializare	Cod disciplina din planul de invatamant	Titlu disciplina	Tip (curs/proiect/laborator etc)	activitate
Licenta	IIPCB	UPB.11.S.06.O.518	Operatii de	Curs	transfer termic

**Publication (selective):****Books**

- "Programming and Computer Handling", BREN PROD, Bucharest, ISBN 973-9427-17-0;
- "Programming Exercises", BREN PROD, Bucharest, ISBN 973-9493-20-3 (both in Romanian);
- "Programmation en Turbo Pascal – Travaux pratiques destinées aux étudiants en Génie Chimique" (in French);
- "Chemical Engineering Basics", Fair Partners, Bucharest, ISBN 973-8470-31-5 (in Romanian).

**Articles (eventual cu link-uri care lucrarile publicate on-line)**

- "Overall Kinetic Model for Oscillating Catalytic Oxidation of Methanol", N. I. Ionescu and T. Danciu, *Reaction Kinetics & Catalysis Letters*, **47**, 1992, 105 - 110.
- "Parametric Analysis of Oscillatory Oxidation Reactions", N. I. Ionescu and T. Danciu, *Reaction Kinetics & Catalysis Letters*, **54**, 1995, 121 - 129.
- "Transitory Regime Optimisation for the Continuous Stirred Tank Reactor Using the Second Order Variational Calculus", T. Danciu and G. Bozga, *Rev. de Chimie*, **46**, 1995, 259 - 266 (rom).
- "The Study of *Bray-Liebhafsky* Reaction over a Wide Range of Temperatures. I. Experimental Contributions", R. Vilcu, T. Danciu, and D. Bala, *Discrete Dynamics in Nature and Society*, **2**, 1998, 195 - 201.
- "Kinetic Model for Heterogeneous Oscillating Processes", T. Danciu and N. I. Ionescu, *Revue Roumaine de Chimie*, **44**, 1999, 181 - 184.
- "The Study of *Bray-Liebhafsky* Reaction over a Wide Range of Temperatures. II. Modelling", R. Vilcu, T. Danciu, and D. Bala, *Discrete Dynamics in Nature and Society*, **4**, 2000, 55 - 62.
- "Direct Synthesis of Propylene Oxide Using CO<sub>2</sub> as the Solvent", T. D. Danciu, E. J. Beckman, D. Hâncu, R. N. Cochran, R. Grey, D. M. Hajnik, and J. Jewson, *Angewandte Chem. Int. Ed.*, **42**, 2003, 1140 - 1142.
- "Separation of heterogeneous mixtures. VII. Electrostatic sedimentation: algorithms for dimensioning and simulation", T. D. Danciu, *Rev. de Chimie*, **54**, 2003, 344 - 347 (rom).
- "Liquid - vapor equilibrium. IX. Set-up for experiments with binary mixtures of monomers and experimental data for vinyl-acetate - benzene system", E. Danciu, A. M. Dumitrescu, and T. D. Danciu, *Rev. de Chimie*, **56**, 2005, 28 - 35 (rom).
- "Simulation of Transport Processes of Antibiotics", P. Postelnicescu, A.M. Dumitrescu, T.D. Danciu, *Rev. de Chimie*, **58**, 2007, 557 - 560.
- "Implementation and Development of an e-Learning System for Chemical Engineering Education in the Faculty of Applied Chemistry and Material Science", A.M. Joşceanu, P. Postelnicescu, A.M. Dumitrescu, T.D. Danciu, *8th European Conference E-COMM-LINE 2007, Bucharest, CD-ROM of full texts*.

**Research projects (eventual cu link-uri care paginile web daca exista)****Other information**