

Curriculum Vitae

Personal Data

Name and surname: Verka Meshko

Address: **International Balkan University**
Samoilova 10, 1000 Skopje
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Education

- B. Sc. 1975, Faculty of Technology and Metallurgy, University Ss Cyril and Methodius, Skopje, Macedonia
- M. Sc. 1983, Faculty of Technology and Metallurgy, University Ss Cyril and Methodius, Skopje, Macedonia
- Ph. D. 1990, Faculty of Technology and Metallurgy, University Ss Cyril and Methodius, Skopje, Macedonia
- Post-doctoral, 1999, LSRE, Faculty of Engineering University of Porto, Portugal

Teaching Positions

- Professor, 2003 -

Professional Positions

- Vice-President of the Society of Chemists and Technologists of Macedonia, 2002-
- Member of the Organising Committee of XV Congress of Chemists and Technologists of Macedonia, 1997
- Chairman of the Organising Committee of XVIII Congress of Chemists and Technologists of Macedonia, 2004
- Secretary of Macedonian Journal of Chemistry and Chemical Engineering, 2005 – 2009
- Member of Scientific Committee of 1st South East European Congress of Chemical Engineering, 2005
- Member of Organizing Committee of the XX Congress of Chemists and Technologists of Macedonia, 2008
- Member of International Society of Adsorption. 1995 –
- Technical expert at the Institute of the Accreditation of Republic of Macedonia
- Member of Editorial board of Journal of University of Chemical Technology and Metallurgy, Bulgaria
- Member of Scientific Committee of the International Conference XENOWAC 2009, Paphos, Cyprus, 2009
- Member of Scientific Committee of 5th Conference on Sustainable Development of Energy, Water and Environment Systems, Dubrovnik 2009, Croatia
- Member of Editorial board of Macedonian Journal of Chemistry and Chemical Engineering, 2009 -

Teaching assignments

- Problem Solving Strategies ; Science and Nature; Equipment in Industry; Engineering Economy

Research Interests and Research Fields

2.09 Chemical engineering

- 20901 - Separation processes
- 20902 - Process analysis and synthesis
- 20903 - Mathematical modelling of processes
- 20904 - Transport phenomena

2.25 Environment

- 22502 – water, air, ground
- 22506 - waste materials

Stays:

- ChemEng Software & Services Ltd, Beaminster, UK, 1994;
- Post-Doctoral studies at the Laboratory of Separation and Reaction Engineering (LSRE), Faculty of Engineering, University of Porto, Portugal, 1999;
- Arizona State University, USA, 2000;
- NATO fellowship for research at LSRE, Faculty of Engineering, University of Porto, Portugal, 2002; 2003; 2004; 2006
- School of Engineering, University of Cardiff, Cardiff, UK, 2003;
- Heriot Watt University, Edinburgh, UK, 2004;
- University of Ljubljana, Ljubljana, Slovenia, 2005; 2006

1. Textbooks and books

1. Aleksandar Grizo, Vera Meshko, *Plant Design and Economics*, Nasha Kniga, Skopje, 1990 (In Macedonian); YU ISBN 86-373-0475-3
2. Vera Meshko, Liljana Markovska, *Computer aided Chemical Engineering - I Process Simulators and Data Banks*, Doger, Skopje, 1997 (In Macedonian); ISBN 9989-677-05-3
3. Liljana Markovska, Vera Meshko, *Computer Aided Chemical Engineering - II Process Development*, Doger, Skopje, 1997 (In Macedonian); ISBN 9989-677-06-3
4. Liljana Markovska and Vera Meshko, *Dynamic Process Simulation*, CD - enclosed, University "Ss Cyril and Methodius", Skopje, 2002; (In Macedonian); ISBN 9989-43-193-0

2. Papers in referred journals

- *Original scientific papers in international journals*

1. V.Meshko and M.Brajovic, *Studies of Carbon Dioxide Adsorption on Molecular Sieves*, *Hem.Ind.* 38(12) (1984), 352
2. F.Poposka, B.Bliznakovska, V.Meshko, A.Grizo and A.Tolic, *Aromatics Extraction with Different Solvents*, *J.Serb.Chem.Soc.* 52(10)(1987), 601
3. F.A.Poposka, A.N.Grizo and V.D.Meshko, *Adsorption of n-paraffins on Molecular sieve 5A. I. Adsorption Equilibria*, *J.Serb.Chem.Soc.*, 55(7) (1990) 407-413

4. F.A.Poposka, B.Bliznakovska, V.Meshko, S.Aleksovski and R.Velinovska Extraction of aromatics from reformed naphtha .Characterization of phase equilibrium in the systems reformed naphtha-sulpholane/ DMSO, *J.Serb. Chem.Soc.* 56(8-9) (1991) 489-498
5. F.A.Poposka, V.D.Meshko, C.B.Kuzmanovska and A.N.Grizo, Adsorption n-Paraffins on Molecular Sieve 5A.II.Adsorption kinetics, *J.Serb.Chem.Soc.* 57(7) (1992) 421-431
6. V.Meshko, F.Poposka and A.Grizo, Adsorption of n-paraffins of Molecular Sieve 5A.III.Dinamic of Adsorption, *J.Serb.Chem.Soc.* 58(6) (1993) 419-428
7. V.Meshko, F.Poposka, C.Kuzmanovska and A.Grizo, Model Simulation of Liquid n-Paraffins on Zeolite 5A.IV, *J.Serb.Chem.Soc.* 58(6) (1993) 429-437
8. V.Cibulic, K.Nikolovski, V.Meshko, F.Poposka, Purufication of Waste Water From Textile Fibres Colouring by Natural Zeolite, Equilibrium and kinetic studies.I. *Voda i sanitarna tehnika*, 24(4) (1994) 39-44
9. V.Meshko, V.Cibulic, K.Nikolovski, F.Poposka, Purufication of Waste Water From Textile Fibres Colouring by Natural Zeolite, Dynamic Study II. *Voda i sanitarna tehnika*, 24(3) (1994) 65-68
10. L.Markovska, V.Meshko, Modelling of Microporous Diffusion in Zeolite, *J.Serb.Chem.Soc.* 63(4) (1998) 265-277
11. V.Meshko, L.Markovska, M.Mincheva, V.Cibulic, Modelling of a Fixed Bed Adsorption Column for Waste Water Treatment, *J.Serb.Chem.Soc.* 63(11) (1998),891
12. V.Meshko, L.Markovska, M.Minceva and A.Rodrigues, Adsorption behavior of basic dyes on granular activated carbon and natural zeolite, *Wat.Res.* 35(14) 2001, 3357-3366
13. L.Markovska, V.Meshko,V.Noveski, Adsiorption of basic dyes in fixed bed column, *KJChE* 18(2)(2000)
14. K.Zafirova, V.Mesko, L.Markovska, Dynamic Simulation of Carpet Compression, *Tekstilec*, 3-4 (43)(2000) 83-85
15. L.Markovska, V.Meshko, V.Noveski, M.Marinkovski, Solid Diffusion Control of Basic Dyes Adsorption on Granular Activated Carbon and Natural Zeolite in Fixed Bed Column *J.Ser. Chem. Soc* 66 (7),2001, 463-475
16. Mirko Marinkovski, Vera Meshko, Liljana Markovska, Equilibrium studies of Zn(II), Cd(II) and Pb(II) ions onto Granular activated carbon and Natural Zeolite, in Chemicals as Intentional and Accidental Global Environmental Threats, *NATO Book Series, Environmental Security C*, Eds. Lubomir Simeonov and Elisabeta Chirila, Springer, 2006, 475-484
17. Vera Meshko, Liljana Markovska and Mirko Marinkovski, Experimental study and modelling of Zinc adsorption by granular activated carbon and natural zeolite, *International Joulnal of Environment and Pollution, IJEP*, 27(4), (2006) 285-299
18. Liljana Markovska, Vera Meshko and Mirko Marinkovski, Modeling of Adsorption Kinetic of Zinc Onto Granular Activated Carbon and Natural Zeolite, *J.Serb.Chem.Soc.*, 71(8-9), (2006), 957-967
19. Katerina Petrusavska, Mikhail A. Kuznetsov, Knut Gedicke, Vera Meshko, Sergey M. Staroverov, Andreas Seidel-Morgenstern, Chromatographic enantioseparation of amino acids using a new chiral stationary phase based on a macrocyclic glycopeptide antibiotic, *Journal of Separation Science*, 29, (2006) 1447-1457

20. Mirjana Minceva, Julija Taparcevska, Liljana Markovska, Bogdana Koumanova, Vera Meshko, Adsorption kinetics of Pb^{2+} onto natural zeolite, *Journal UCTM*, 43 (1) (2008), 93-100
21. Mirjana Minceva, Pedro Sa Gomes, Vera Meshko, Alirio E Rodrigues, Simulated Moving Bed Reactor for Isomerization and Separation of p-Xylene, *Chemical Engineering Journal*, 140 (2008) 305-323
22. Mirjana Minceva, R.Fajger Liljana Markovska and Vera Meshko, Comparative study of Zn^{2+} , Cd^{2+} and Pb^{2+} removal from water solution using natural clinoptilolitic zeolite and commercial granulated activated carbon. Equilibrium of adsorption, *Separation Science and Technology* 43 (8)(2008) 2117-2143
23. Z. Yaneva, B. Koumanova, V. Meshko, Mass transfer mechanism of nitrophenols sorption in a fixed bed column. *Journal UCTM*, 44 (2) (2009), 151-156
24. P.Raskovic, A. Anastasovski, L.Markovska, V.Meshko, Process Integration in Bioprocess Industry-Case Study Yeast and Ethyl Alcohol Plant, *Energy* 35(2) (2010), 704-711.

• **Professional papers in international journals**

25. A.Grizo, F.Poposka, V.Meshko and K.Nikolovski, *Quick Method for Investment Cost Estimating at Lack of Sufficient Data*, Hem.Ind. 42(12) (1988) 464
26. L.Markovska, V.Mesko, R.Kiprijanova, *Simulation of Reactor Models Using ChemEng Software*, Hem. Ind., 50 (2) (1996) 60-64

• **Original scientific papers in Macedonian journals**

27. V.Meshko, M.Brajovic and D.Burevski, *Determination of Parametar of Microporouse Structure on Molecular Sieves 4A, 5A and 13X*, Bull.Technol. Fac. 4(1984),20
28. V.Meshko, F.Poposka and A.Grizo, *Separation of n-Paraffins from Kerozine Fraction in Fixed Bed Zeolite 5A*, Bull. Chem.Technol.Macedonia, 11(1-2) (1992), 41
29. Kostadin Nikolovski, Filimena Poposka, Verka Meshko, *The adsorption of nitrogen on calcium oxide*, Bull.Chem.Technol.Macedonia , 12,(1-2) (1993) 23-30
30. L.Markovska, R.Kiprijanova, V.Meshko, *Mathematical Modeling and Optimization of Heat Exchanger Network*, Bull.Chem.Technol. Macedonia, 14(2)(1995) 107-111
31. L.Markovska, V.Meshko, R.Kiprijanova, A.Grizo, *Optimum Design of Shell-and-Tube Heat Exchanger*, Bull.Chem.Technol. Macedonia ,15(1) (1996) 39-44
32. V.Meshko, L.Markovska, M.Mincheva, *Two Resistance Mass Transfer Model for Adsorption of Basic Dyes From Aqueous Solution on Natural Zeolite*, Bull.Chem.Technol. Macedonia, 18(2) (1999), 161-169
33. V.Meshko, L.Markovska, M.Minceva and D.Burevski *Equilibrium isotherms for adsorption of basic dyes from aqueous solutions on different adsorbents* Bull.Chem.Technol. Macedonia, 20(2) (2001),143-150
34. Aleksandar Anastasovski, Liljana Markovska, Vera Meshko, Heat integration of ethanol and yeast manufacture, *Maced.J.Chem.Chem.Eng.* 26(2)(2007) 135-146
35. Mirjana Minceva, Liljana Markovska and Vera Meshko, Removal of Zn^{2+} , Cd^{2+} and Pb^{2+} from binary aqueous solution by natural zeolite and granulated activated carbon, *Maced.J.Chem.Chem.Eng.* 26(2)(2007) 125-134
36. Zvezdelina Yaneva, Mirko Marinkovski, Liljana Markovska, Vera Meshko, Bogdana Koumanova, Dynamic studies of Nitrophenols sorption on perfil in a fixed bed column, *Maced. J.Chem.Chem. Eng.*, 27 (2), (2008), 123-132

- **Professional papers in Macedonian journals**

37. V.Meshko, L.Markovska, *ChemEng Software - Tools and Simulator in Process Engineering*, Informa, 1 (7-8) (1994) 47
38. V.Meshko, L.Markovska, *Flowsheet Simulator Features and Application in Chemical Engineering*, Bull.Chem.Technol. Macedonia 14(1)(1995) 55-59
39. V.Meshko, L.Markovska, *Computer Aided Process Simulation*, Informa, 2 (15) (1995) 14
40. V.Meshko, L.Markovska, *Computer aided Chemical Engineering - investment cost estimation*, Ekonomski magazin, 4 (71), 26 (1996)
41. V.Meshko, L.Markovska, R.Kiprijanova, *Optimum Monochlorebenzene Plant Flowsheet*, Engineering, 2(4) (1997), 175
42. V.Meshko, L.Markovska, *Physical Properties Data Banks*, Bull.Chem.Technol. Macedonia, 18(1), 65-74 (1999)

3. Congresses Proceedings:

- **International congresses**

1. F.Poposka, B.Bliznakovska, V.Meshko and A.Grizo, *Extraction of Aromatics with Different Solvents*, ISEC 86, Munchen, Proceedings, vol.III,p. 481-489
2. F.Poposka, B.Bliznakovska, V.Meshko and A.Grizo, *Aromatics Extraction with Different Solvents*, 5th Yugoslavian-Austrian-Italian Chemical Engineering Confefence, Portoroz 1986, Proceedings,p.649-658
3. A.Grizo, F.Poposka and V.Meshko, *Estimation of the Investment Cost*, Technoekonomika v kemici in procesnih industrijah, Maribor, 1986, Proceedings p.16-30
4. F.Poposka, B.Bliznakovska, V.Mesko and A.Grizo, II Yugoslavian Symposium of Hydrocarbons, Beograd 1986, p. 44-45 (Extented Abstarct)
5. A.Grizo, F.Poposka, V.Meshko and B.Bliznakovska, *Adsorption of n-paraffins on zeolite 5A*, II Jugoslovenski kongres za hemisko inzenerstvo i procesnu tehniku, Dubrovnik 1987, Proceedings vol.II,p.195-199
6. F.Poposka, B.Bliznakovska, V.Meshko and A.Grizo, *Characterization of Phase Equilibrium in Liquid-Liquid Systems:Paraffins-Aromatics- Sulfolane*, ISEC 88, Moskow, Proceedings, vol.III,p.354-358
7. L.Despotovski, K.Nikolovski and V.Meshko, *Dimenzioniranje na reaktor za proizvodstvo na karbamid*, Beograd 1988, Proceeding,p.56-65
8. V.Cibulic, K.Nikolovski, V.Meshko, F.Poposka, *Purufication of Waste Water From Textile Fibres Colouring by Natural Zeolite, Equilibrium and kinetic studies*, Proceedings, International conference "Otpadne vode i cvrsti otpad - prerada i odlaganje", Manastir Prohor Pcinski, 22-24.06.1994
9. V.Cibulic, K.Nikolovski, V.Mesko, F.Poposka, I Regional Symposium "Chemistry and the Enviroment", Vrnjacka Banja, Yugoslavia, 1995, Extented Abstarct
10. V.Meshko, L.Markovska, M.Minceva, V.Cibulic, *"Fixed Bed Adsorption Column Design For Purification of Waste Water from Textile Fibres Colouring"*, IACHEMA 97 - International Meeting on Chemical Engineering, Environmental Protection and Biotechnology, Frankfurt am Main, 9-14 June 1997, Extented Abstarct
11. L.Markovska, M.Minceva, V.Meshko, *Models for adsorption of dyes from aqueous solutions on natural zeolite as adsorbent*, Proceedings of the Second

- Pacific Basin Conference on Adsorption Science and Technology, p.406-410, Ed.D.Do, Brisbane, Australia, 14-18 May, 2000
12. A. Anastasovski, L. Markovska, V. Meško, P. Rašković "Pinch analiza postrojenju za fermentaciju kvascem, 13 Simpozium termicara, 16-19 Oktober, 2007, Soko Banja, Srbija
 13. P. Rašković, A. Anastasovski, L. Markovska, V. Meško, Process integration of yeast fermentation plant, 21 International Conference on Efficiency, Cost, Optimization, Simulation and Environmental Impact of Energy Systems, ECOS 2008, Krakow Gliwice, Poland, June 24-27, 2008,
 14. Julija Taparcevska, Liljana Markovska, Bogdana Koumanova, Vera Meshko, Diffusion models for adsorption kinetics of Zn^{2+} , Cd^{2+} Pb^{2+} onto natural zeolite, International Conference XENOWC 2009, Paphos, Cyprus, 2009
 15. Yaneva Z., Koumanova B., Meshko V. Dynamic Studies of Nitrophenols Adsorption on Perfil in a Fixed-bed Column, International Conference XENOWAC 2009, Paphos, Cyprus, 2009
- **Macedonian congresses**
14. F. Puposka, V. Meshko, Lj. Stojanovska and A. Grizo, *Mathematical Model of n-Paraffins adsorption process by Equation of Continuity*, X Simpozium of Chemists and Technologists of Macedonia, Skopje, 1987, 26-28 (extended abstract)
 15. L. Markovska, V. Meshko, R. Kiprijanova, *Computer Simulation of Reactor Models*, 1 st Macedonian-German Seminar on Materials Science and Development, Proceedings, Ohrid, (1995), 170-176
 16. T. Rikalovska, L. Markovska, V. Meshko, *Process Flowsheet Simulation of Gases and Liquid Fraction Fractionation*, International conference on production and application of oil products, Proceedings, Book 2, Ohrid, Macedonia, September, 1999, 288-297
 17. T. Rikalovska, L. Markovska, V. Meshko, F. Puposka, *Simulation and Calculation of Three Reactor System for Catalytic Reforming*, International conference on production and application of oil products, Proceedings, Book 2, Ohrid, Macedonia, September, 1999, 277-287
 18. K. Zafirova, V. Meshko, L. Markovska, *Modelling and Simulation of Carpet Compression Using ISIM Dynamic Simulator*, XVI Congress of Chemists and Technologists of Macedonia, Book of papers, Skopje, Macedonia, 28-30 October, 1999, 503-506
 19. M. Minceva, L. Markovska, V. Meshko, *Application of Two Mass Transfer Resistance Model for Adsorption of Basic Dyes Onto Granular Activated Carbon*, XVI Congress of Chemists and Technologists of Macedonia, Book of papers, Skopje, Macedonia, 28-30 October, 1999, 571-574
 20. L. Markovska, M. Minceva, V. Meshko, *Solid Diffusion Model for Adsorption of Basic Dyes Onto Granular Activated Carbon*, XVI Congress of Chemists and Technologists of Macedonia, Book of papers, , Skopje, Macedonia, 28-30 October, 1999, 579-582
 21. T. Rikalovska, L. Markovska, V. Meshko, F. Puposka, *Dynamic Simulation of Isothermal Reactor System for Catalytic Reforming*, XVI Congress of Chemists and Technologists of Macedonia, Book of papers, Skopje, Macedonia, 28-30 October, 1999, 575-578

22. V.Meshko, L.Markovska, M.Marinkovski, *Modelling of adsorption kinetic of zinc onto granular activated carbon and natural zeolite*, XVIII Congress of Chemists and Technologists of Macedonia, Ohrid, 2004 (CD extended abstract)
23. A.Anastasovski, L.Markovska, V.Meshko, *Simulation and design of adsorption columns for dehydration of azeotropic ethanol-water mixture with MATLAB*, XVIII Congress of Chemists and Technologists of Macedonia, Ohrid, 2004 (CD extended abstract)
24. L.Markovska, M.Minceva, K.Petrushevska, V.Meshko, *Concentration dependent diffusion of basic dyes onto granular activated carbon and natural zeolite*, XVIII Congress of Chemists and Technologists of Macedonia, Ohrid, 2004 (CD extended abstract)
25. Mirjana Minceva, Julija Taparcevska, Liljana Markovska, Vera Meshko, *Single component adsorption of by Pb²⁺ natural zeolite*, XX Congress of Chemists and Technologists of Macedonia, Ohrid, 2004 (CD extended abstract)
26. Mirjana Minceva, Julija Taparcevska, Liljana Markovska, Vera Meshko, *Diffusion model for adsorption kinetics of Pb²⁺ onto natural zeolite*, XX Congress of Chemists and Technologists of Macedonia, Ohrid, 2004 (CD extended abstract)

4. Scientific Projects

- **Principal Investigator**

1. *"Integrated Methods for Process Synthesis and Design With Process Simulator and Project Data Base"*, Financing fund: Ministry of Science of Macedonia, 1996-1998.
2. *Modeling, Simulation and Control of Adsorption Plant for Purification of Waste Water from Textile Fibres Colouring*. .S. - Macedonian Joint Fund, 1997-1999.
3. *"Modeling and Simulation of Simulated Moving Bed Reactor – Application in the Process of Xylene Isomerization and Separation"*, Bilateral Project with LSRE, FEUP, University of Porto, Portugal, 2001-2003
4. *Adsorptive removal of toxic organic compounds and heavy metals from wastewaters by natural and low cost sorbents*, Bilateral Project with University of Chemical technology nad Metallurgy, Sofia, Bulgaria. Financing Fund: Ministry of Education and Science of Macedonia and Ministry of Science of Bulgaria, 2005-2007.

- **Member of the team**

5. *"Developing of the Programme for Controlling of the Processes"* 1979-1983, Principal Investigator: Dr.Miodrag Brajovic, full professor, Financing fund: Ministry of Science of Macedonia
6. *"Kinetic and Dynamic studies of Extraction processes"*, 1982-1985, Principal Investigator: Dr.Aleksandar Grizo, full professor, Financing fund: Ministry of Science of Macedonia
7. *"Separation of n-Paraffins with Molekular Sieves"*, 1984-1987, Principal Investigator: Dr.Aleksandar Grizo, full professor, Financing fund: Ministry of Science of Macedonia
8. *"Extraction of Aromatics from Reformed Benzene"* 1988-1990, Principal Investigator: Dr.Filimena Poposka, Full professor, Financing fund: Ministry of Science of Macedonia

9. *"Obtaining the Adsorbents and Catalyzators with Zeolite Structure"*, 1988-1990, Principal Investigator: Dr.Josif Tanevski, Financing fund: Ministry of Science of Macedonia.
10. *"Aplication of Extractive Technology for Production of Hydroxycarboxylic Acids"* 1992-1994, Principal Investigator: Dr.Filimena Poposka, Full professor, Financing fund: Ministry of Science of Macedonia.
11. *"New Extraction Methods for Recovery of Tartaric Acid and Grapeseed Oil: Reactive Liquid-Liquid Extraction and Supercritical Fluid Extraction with Carbon Dioxide"* 1995-1998 Principal Investigator: Dr.Filimena Poposka, Full professor, Financing fund: Ministry of Science of Macedonia.
12. *"Extraction of Hydroxycarboxylic Acids (tartaric, malic,citric). Supercritical Fluid Extraction of Natural Extracts from Different Plant Matherials"* 1995-1998, Bilateral Project, Faculty of Technology and Metallurgy and Academy of Sciences of the Czech Republic, 1998 Principal Investigator: Dr.Filimena Poposka, Full professor.
13. *"Modeling and Simulation of Heavy Metal Adsorption Onto Natural Adsorbents"*, Financing fund: Ministry of Science of Macedonia, 2002-2004
14. Separation/reaction in simulated moving bed - application to xylenes, Financing fund Ministry of Science and Technology of Portugal, Principal Investigator Alirio Rodrigues, 2003-2005
15. Cost Action 636 "Xenobiotics in Urban Water Cycle" 2005-2009, Раководител Anna Ledin, професор на Техничкиот универзитет на Данска, DTU
16. Modelisation at simulation de problemes couples en technologies innovates, 2008-2009

- **Tempus- projects**

17. *"Restructuring of graduate and postgraduate studies in engineering and technology- covering biotechnology"*, 1998-2000. TEMPUS JEP Project, Contact Person: Dr.Slobodanka Kuzmanova full professor, Department of Food and Biotechnology, Dr.Alan Debourg, Coordinator of the project, Institut des Industries de Fermentation - Institut Maurice Chimie-Department of Brewing Science and Technology, Bruxelles, Belgium.
18. *"Developing a System for Quality Assessment of Educational Performance to be Introduced in Macedonian Universities"*, TEMPUS Compact Measures Project, 1998-1999. Coordinator Dr.Bozin Donevski, full professor
19. *"Technology Transfer Center for Chemical and Textile Engineering"* TEMPUS JEP Project CD-JEP 16045-2001, 2002-2004. Coordinator Dr.Liljana Markovska, Associate, Professor
20. *"Creating e-Library Integrated in Faculty Information System"* TEMPUS UM-JEP Project UM_JEP 18027-2003, 2004-2006. Coordinator Dr.Liljana Markovska, Professor

5. Proffesional work

1. K. Nikolovski, V.Meshko, F.Poposka, Vine destilery - Lozovo, Fisibility study investor, Vinarska vizba - Lozovo 1992 (Project documentation).
2. TV Program; Computer aided in Process engineering, April 1995, Scientific Program at MTV.

3. “*Copper sulphate production from waste copper*”, Preliminary project and feasibility study, Investor Gradinar Loza A.D., Skopje, 1996. Project Coordinator: d-r Vera Meshko
4. Report, Part 1 and 2 of PostDoc study “Simulated Moving Bed Reactors-Application to isomerization and separation of xylene”, LSRE, Porto, December, 1999, pp 44
5. Report for NATO fellowship “Adsorptive reactor for xylene isomerization and separation”, LSRE, Porto, September 2002, pp 40
6. Vera Meshko, Lijana Markovska, Engineering Village 2 Database, Faculty of Technology and Metallurgy, Skopje, 2006 (in Macedonian)
7. Vera Meshko, Lijana Markovska, SCOPUS Database, Faculty of Technology and Metallurgy, Skopje, 2006 (in Macedonian)
8. Lijana Markovska, Vera Meshko, Digitalizing, Faculty of Technology and Metallurgy, Skopje, 2006 (in Macedonian)
9. Lijana Markovska, Vera Meshko, Koleta Zafirova, Preparing Templates in Microsoft Word, Faculty of Technology and Metallurgy, Skopje, 2006, (in Macedonian)
10. Koleta Zafirova, Vera Meshko, Lijana Markovska, Integration of IT and Library Services at the Faculty, Faculty of Technology and Metallurgy, Skopje, 2006 (in Macedonian)

6. Reviewer

- *Journals:*

Adsorption, Kluwer Academic Publishers; Biotechnology Progress, ACS Publications; Water Research, Elsevier Publishers; International Journal of Environment and Pollution (IJEP), Elsevier Publishers; Bulletin of the Chemists and Technologists of Macedonia; Journal of the Serbian Chemical Society; Journal of Colloid and Interface Science, Water Science and Technology

- *Books*

Engineering Education in the Balkan Countries, State-of-Art, Directions of Development and international Incorporation, Editor: Bozin Donevski, University "St Climent Ohridski", Bitola, 1996, ISBN 9989-786-00-3

- *Projects*

Development projects at the Ministry of Education and Science of the Republic of Macedonia

7. Member of the team:

1. Specialization study program: *Computer application in process industry*, Skopje 1995
2. Establishment of computer laboratory at the department of Chemical and Control Engineering, Faculty of Technology and Metallurgy, 1997
3. Information system of the Faculty of Technology and Metallurgy 1999
4. Establishment of Technology Transfer Center at the Faculty of Technology and Metallurgy, 2002
5. Self-evaluation report of the Faculty of Technology and Metallurgy, Skopje, 2002;
6. Classification of scientific areas, fields and branches of research, Skopje, May 2001, Coordinator: Bozin Donevski, ISBN 9989-786-23-2

7. Catalogue of the Faculty of Technology and Metallurgy, Skopje, 2003, ISBN 9989-650-23-3;
8. Web page of the Faculty of Technology and Metallurgy, Skopje, 2000 and 2003;
9. CD – extended abstracts of the XVIII Congress of Chemists and technologists of Macedonia, Editorial Committee: Vera Meshko i Liljana Markovska, Ohrid, 2004, ISBN 9989-760-05-5
10. Upgrading of the web site of the Faculty of Technology and Metallurgy including Library, 2006
11. Creation of WEB site of the Bulletin of the Chemists and Technologists of Macedonia and digitalizing of the issues of the Bulletin of the Chemists and Technologists of Macedonia backward to 1990

8. Lectures:

1. *Process Simulators and Databases*, Seminar: Management staff and information technology, Makpetrol computer education, Skopje, 1995,
2. "*Process Simulators: Uniopt i AspenPlus*", Faculty of Technology and Metallurgy, Skopje, October, 1998
3. L.Markovska, V.Meshko, *Modelling, Simulation and Control of Adsorption Plant for Purification of Wastewater form Textile Fibres Colouring, Part I*, The Special Seminar, January 28, 2000, Arizona State University, Tempe, USA
4. "*Technology Transfer Center in Chemical and textile Engineering*", TEMPUS PROJECT CD_JEP-16045-2001, Faculty of Technology and Metallurgy, Skopje, 2002
5. Lectures within the project CD-JEP 16045 CD_JEP TEMPUS PROJECT Course: *Computer Aided Process Synthesis*, September, 2003
6. Lectures within the project CD-JEP 16045 CD_JEP TEMPUS PROJECT Course: *Computer Aided Equipment Design*, February, 2004
7. Lectures within the project TEMPUS PROJECT UM_JEP-18027-2003, *Databases*, Ohrid, November, 2005
8. Lectures within the project TEMPUS PROJECT UM_JEP-18027-2003: *Activities in the Frame of the Project*, Faculty of Technology and Metallurgy, Skopje, January 2006
9. Vera Meshko "*Adsorption for wastewater treatment*" in COST Action 636, "*Xenobiotics in the Urban Cycle*", 25-28 September, Vienna, 2006,

9. Treaning courses and seminars:

1. Process Simulation with ASPEN PLUS, Brussels, 10-11 March 1998
2. Physical Properties, AspenTech , Brussels 12-13 March, 1998
3. Self – evaluation of the High Education Institutions in the Republic of Macedonia, 20-22 May 2002, Skopje
4. Evaluation of the High Education Institutions in the Republic of Macedonia, 11-12 June 2002, Skopje
5. Training Course: "Laboratory management- Role of the Quality Manager and Technical Management" 7-8 Mrch, 2005, Skopje, Republic of Macedonia
6. "Assessors Training –Laboratories", 30-31 May, 2005, Skopje, Republic of Macedonia
7. Assessor Training Course (ISO/IEC 17025, ISO/IEC 17020, ISO/IEC 17021) 22-29 September 2009, Skopje, Republic of Macedonia