

10	6
	125
8	
	N

PERSONAL INFORMATION

Elvis Ahmetović, Full Professor in Chemical Engineering

- University of Tuzla, Faculty of Technology, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina
- Pnone: 00387 35 320 756; Fax: 00387 35 320 741
- k elvis.ahmetovic@untz.ba
- <u>www.tf.untz.ba/elvis.ahmetovic/</u>



 ResearcherlD:
 http://www.researcherid.com/rid/C-3659-2013

 Google Scholar ID:
 http://scholar.google.com/citations?user=3GLDIUUAAAAJ&hl=en

 SCOPUS ID:
 http://www.scopus.com/authid/detail.url?authorld=36350581300

 ResearchGate:
 https://www.researchgate.net/profile/Elvis

 ORCID ID:
 https://orcid.org/0000-0003-1837-7183

Sex: Male | Date of birth: 05/07/1973 | Nationality: Bosnian

POSITIONS Full Professor in Chemical Engineering (University of Tuzla, Faculty of Technology, B&H)

Chemical Engineering. Process Systems Engineering. Analysis, Synthesis and Design of Chemical Processes. Process Integration. Mathematical Programming and Process Optimization. Green Engineering and Sustainable Development. Rational use of Water and Energy in Industry.

WORK EXPERIENCE

OCCUPATIONAL FIELD

From 24/03/2017 - Full Professor in Chemical Engineering

University of Tuzla, Faculty of Technology, Department of Process Engineering, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina

 Teaching and Research in Process Engineering. Teaching Courses: Unit Operations, Chemical Process Design, Process Integration, and Rational Use of Energy/Energy Efficiency in Chemical Processes

Business or sector: Higher Education

 From 28/05/2014 to 23/03/2017 Associate Professor in Chemical Engineering University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, 2000 Maribor, Slovenia
 Teaching and Research in Chemical Engineering (Process Systems Engineering and Sustainable Development). Visiting Professor in framework of project "Internationalization – A Pillar of Development of the University of Maribor" (co-financed by European Social Fund and Ministry of Education, Science and Sport of the Republic of Slovenia) (01.10.2014-30.06.2015).

Business or sector: Higher Education

From 23/03/2011 to 23/03/2017 Associate Professor in Process Engineering

University of Tuzla, Faculty of Technology, Department of Process Engineering, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina

• Teaching and Research in Process Engineering. Teaching Courses: Unit Operations, Chemical Process Design, Process Integration, and Rational Use of Energy.

Business or sector: Higher Education

From 23/03/2006 to 23/03/2011 Assistant Professor in Process Engineering

University of Tuzla, Faculty of Technology, Department of Process Engineering, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina.

 Teaching and Research in Process Engineering. Teaching Courses: Unit Operations I and II, Thermal Processes in Process Engineering, Process Design I, Hydro-mechanical operations, Heat and Mass Transfer Operations, Rational Use of Energy, Chemical Process Design, Process Integration.

Business or sector: Higher Education

From 03/11/2007 to 14/09/2008 Vice Dean for Education From 14/09/2009 to 23/11/2009



University of Tuzla, Faculty of Technology, Department of Process Engineering, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina.

• Faculty management activities, work with the chairs of departments and teaching staff in order to improve education and teaching process at the Faculty of Technology (University of Tuzla).

Business or sector: Higher Education

From 02/04/2004 to 23/03/2006 Senior Teaching Assistant in Chemical Engineering

University of Tuzla, Faculty of Technology, Department of Chemical and Food Engineering, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina.

• Teaching and Research in Chemical Engineering. Teaching Courses: Unit Operations, Analysis and Simulation of Processes, Rational Use of Energy.

Business or sector: Higher Education

From 12/03/1999 to 02/04/2004 Teaching Assistant in Chemical Engineering

University of Tuzla, Faculty of Technology, Department of Chemical Engineering, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina.

• Teaching and Research in Chemical Engineering. Teaching Courses: Chemical Engineering Calculations, Unit Operations, Thermodynamics and Thermotechnics.

Business or sector: Higher Education

EDUCATION AND TRAINING

University Education

02/09/2005

Ph.D in Process Engineering

University of Tuzla, Faculty of Technology, Department of Process Engineering, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina.

• Thesis: Process simulation for concentration and crystallization of food systems by water evaporation. Department of Process Engineering, Faculty of Technology, University of Tuzla.

25/06/2002 M.Sc. in Chemical Engineering

University of Tuzla, Faculty of Technology, Department of Chemical and Food Engineering, Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina. A part of research was done at the Faculty of Chemistry and Chemical Engineering, University of Maribor, Slovenia.

- Thesis: Heat integration and retrofit of heat exchangers network using mathematical programming

14/07/1998 B.Sc. in Chemical Engineering

University of Tuzla, Faculty of Technology, Department of Chemical and Food Engineering , Univerzitetska 8, 75000 Tuzla, Bosnia and Herzegovina

• Thesis: Mathematical model of reactor balance equations in maleic-anhydride

Mobility and Training

From 23/04/2019 to 25/04/2019 Work meetings Scientific & Technological Cooperation between Austria and Bosnia Herzegovina; Project: Modeling and Simulation of Biorefinery Concepts in the Context of Water and Heat Integration Graz University of Technology, Institute of Process and Particle Engineering, Inffeldgasse 13/III, 8010 Graz, Austria Overview/Review of previous research projects; Attending work meetings and participation in discussions

From 01/04/2019 to 05/04/2019 Erasmus+ staff mobility for teaching 9th International Week Programme: "



Pamukkale University, Faculty of Engineering, Department of Chemical Engineering,
Çamlaraltı Mahallesi, Üniversite Cd. No:11, 20160 Pamukkale/Denizli, Turkey

 Teaching activities (lectures) on the topic Simulation, optimisation and heat integration of single and multiple-effect evaporation plants; Attending the 9th International week programme and participation in discussions; Presentation of the University of Tuzla.

From 04/03/2019 to 08/03/2019	Erasmus+ staff mobility for training 2 nd Erasmus+ International Credit Mobility Week: "Internationalizing Higher Education Institutions beyond the European borders" University of Valencia, Av. de Blasco Ibáñez, 13, 46010 València, Spain
	 Attending the 2nd Erasmus+ International Credit Mobility Week; Training activities related to Internationalizing Higher Education Institutions beyond the European borders; Presentation of the University of Tuzla and participation in discussions
From 15/011/2018 to 16/11/2018	HEInnovate: Train the trainers COOP Hotel, Sofia, Bulgaria
	 Training activities related to a framework for entrepreneurial and innovative higher education institutions; Participation in workshops and discussions
From 07/05/2018 to 11/05/2018	Erasmus+ staff mobility for teaching 8 th International week
	Pamukkale University, Faculty of Engineering, Department of Chemical Engineering, Çamlaraltı Mahallesi, Üniversite Cd. No:11, 20160 Pamukkale/Denizli, Turkey
	 Teaching activities (lectures) on the topic Process optimisation: Introduction and applications in chemical engineering; Attending the 8th International week and participation in discussions
From 26/02/2018 to 02/03/2018	Mobility within the project "Involvement of visiting foreign experts and university teachers in the pedagogical process as a pillar of quality development process of internationalisation of the University of Maribor" (the project is co-funded by the European Social Fund and the Ministry of Education, Science and Sport of the Republic of Slovenia)
	University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, SI-2000 Maribor, Slovenia.
	• Teaching activities (lectures/exercises) on the topic Process optimisation, modelling in GAMS, problem solving within a field of study Chemical Engineering, subject Process Optimisation.
From 07/11/2017 to 08/11/2017	Mobility within the SCOPES (Scientific Co-operation between Eastern Europe and Switzerland) project
	University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, SI-2000 Maribor, Slovenia.
	 Mobility within the SCOPES research project entitled "Computer Aided Process Engineering applied to energy, water, and waste reduction during process design and operation". Attending work meetings and dissemination of research results. Host research contact: Prof. Zdravko Kravanja.
From 14/06/2017 to 16/06/2017	Mobility within the SCOPES (Scientific Co-operation between Eastern Europe and Switzerland) project
	University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, SI-2000 Maribor, Slovenia.
	 Mobility within the SCOPES research project entitled "Computer Aided Process Engineering applied to energy, water, and waste reduction during process design and operation". Attending work meetings and dissemination of research results. Host research contact: Prof. Zdravko Kravanja.
From 17/07/2016 to 23/07/2016	Mobility within the SCOPES (Scientific Co-operation between Eastern Europe and Switzerland) project
	EPFL/Industrial Processes & Energy Systems Engineering Group (IPESE), Valais Wallis, 1951 Sion, Switzerland.
	 Mobility within the SCOPES research project entitled "Computer Aided Process Engineering applied to energy, water, and waste reduction during process design and operation". Attending work meetings and dissemination of research results. Host research contact: Prof. François Maréchal.
From 17/06/2016 to 30/06/2016	Erasmus+ staff mobility for training/teaching
	Lappeenranta University of Technology, School of Business and Management, Lappeenranta, Finland
	 Study and attending work meetings. Host research contact: Prof. Andrzej Kraslawski.



From 01/10/2014 to 30/06/2015	Mobility within the project "Internationalization – A Pillar of Development of the University of Maribor" University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, 2000 Maribor, Slovenia
	 Teaching and Research in Chemical Engineering (Process Systems Engineering and Sustainable Development). Visiting Professor in framework of project "Internationalization – A Pillar of Development of the University of Maribor" (co-financed by European Social Fund and Ministry of Education, Science and Sport of the Republic of Slovenia). Host contact: Prof. dr. Zdravko Kravanja
From 23/06/2011 to 30/06/2013	Teaching mobility within the CEEPUS project
	University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, SI-2000 Maribor, Slovenia.
	 Realisation of the activities within the CEEPUS project entitled "PhD in Sustainable Chemistry and Chemical Engineering". Guest lecture related to Synthesis of heat-integrated process networks and applications of developed optimization models to problems of different complexity. Host contact: Prof. dr. Zdravko Kravanja
From 01/09/2012 to 30/09/2012	EM2-STEM Mobility Program
	Lappeenranta University of Technology, P.O.Box 20, 53851 Lappeenranta, Finland.
	 The staff member mobility project related to the chemical engineering curriculum study, case-base reasoning and water and energy management in process plants. Host research contact: Prof. Andrzej Kraslawski.
From 03/10/2011 to 03/08/2012	JoinEU SEE Mobility Program. Postdoctoral Research in Process Systems Engineering
	University of Maribor, Faculty of Chemistry and Chemical Engineering, Laboratory for Process Systems Engineering and Sustainable Development, Smetanova 17, 2000 Maribor, Slovenia.
	 Postdoctoral research in Process Systems Engineering within the JoinEU SEE Program (Scholarship scheme for academic exchange between EU and Western Balkan countries). Research project: Sustainable water and energy management in process industry and Synthesis of heat-integrated process water networks. Advisor: Prof. Zdravko Kravanja.
From 18/07/2011 to 18/08/2011	DAAD Program, Postdoctoral Research in Process Systems Engineering
From 18/07/2011 to 18/08/2011	DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany
From 18/07/2011 to 18/08/2011	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck.
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project Katholieke Hogeschool Sint-Lieven, Gent, Belgium
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project Katholieke Hogeschool Sint-Lieven, Gent, Belgium Study visit and training within the TEMPUS project: Creation of university-enterprise cooperation networks for education on sustainable technologies. Project ID: 158989-JPHES.
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010 From 15/09/2008 to 14/09/2009	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project Katholieke Hogeschool Sint-Lieven, Gent, Belgium Study visit and training within the TEMPUS project: Creation of university-enterprise cooperation networks for education on sustainable technologies. Project ID: 158989-JPHES. Fulbright Visiting Scholar - Postdoctoral Research in Process Systems Engineering
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010 From 15/09/2008 to 14/09/2009	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project Katholieke Hogeschool Sint-Lieven, Gent, Belgium Study visit and training within the TEMPUS project: Creation of university-enterprise cooperation networks for education on sustainable technologies. Project ID: 158989-JPHES. Fulbright Visiting Scholar - Postdoctoral Research in Process Systems Engineering Carnegie Mellon University, Center for Advanced Process Decision-making, Department of Chemical Engineering, 5000 Forbes Avenue, Pittsburgh, PA 15213-3890 USA.
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010 From 15/09/2008 to 14/09/2009	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project Katholieke Hogeschool Sint-Lieven, Gent, Belgium Study visit and training within the TEMPUS project: Creation of university-enterprise cooperation networks for education on sustainable technologies. Project ID: 158989-JPHES. Fulbright Visiting Scholar - Postdoctoral Research in Process Systems Engineering Carnegie Mellon University, Center for Advanced Process Decision-making, Department of Chemical Engineering, 5000 Forbes Avenue, Pittsburgh, PA 15213-3890 USA. Postdoctoral research in Process Systems Engineering within the Fulbright Visiting Scholar Program. Research Projects: Energy and Water Optimization of Bioprocess Systems; General Superstructure and Global Optimization for the Design of Integrated Process Water Networks. Advisor: Prof. Ignacio E. Grossmann, Rudolph R. and Florence Dean University Professor.
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010 From 15/09/2008 to 14/09/2009 From 19/04/2009 to 21/04/2009	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project Katholieke Hogeschool Sint-Lieven, Gent, Belgium Study visit and training within the TEMPUS project: Creation of university-enterprise cooperation networks for education on sustainable technologies. Project ID: 158989-JPHES. Fulbright Visiting Scholar - Postdoctoral Research in Process Systems Engineering Carnegie Mellon University, Center for Advanced Process Decision-making, Department of Chemical Engineering, 5000 Forbes Avenue, Pittsburgh, PA 15213-3890 USA. Postdoctoral research in Process Systems Engineering within the Fulbright Visiting Scholar Systems Engineering within the Fulbright Visiting Scholar Newsers, Senteral Superstructure and Global Optimization for the Design of Integrated Process Water Networks. Advisor: Prof. Ignacio E. Grossmann, Rudolph R. and Florence Dean University Professor. 2009 Fulbright Visiting Scholar Conference
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010 From 15/09/2008 to 14/09/2009 From 19/04/2009 to 21/04/2009	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project Katholieke Hogeschool Sint-Lieven, Gent, Belgium Study visit and training within the TEMPUS project: Creation of university-enterprise cooperation networks for education on sustainable technologies. Project ID: 158989-JPHES. Fulbright Visiting Scholar - Postdoctoral Research in Process Systems Engineering Carnegie Mellon University, Center for Advanced Process Decision-making, Department of Chemical Engineering, 5000 Forbes Avenue, Pittsburgh, PA 15213-3890 USA. Postdoctoral research in Process Systems Engineering within the Fulbright Visiting Scholar Program. Research Projects: Energy and Water Optimization of Bioprocess Systems; General Superstructure and Global Optimization for the Design of Integrated Process Water Networks. Advisor: Prof. Ignacio E. Grossmann, Rudolph R. and Florence Dean University Professor. 2009 Fulbright Visiting Scholar Conference The Ritz-Cartton, 1150 22nd St NW, Washington, DC
From 18/07/2011 to 18/08/2011 From 12/09/2010 to 18/09/2010 From 15/09/2008 to 14/09/2009 From 19/04/2009 to 21/04/2009	 DAAD Program, Postdoctoral Research in Process Systems Engineering Institute for Applied Material Flow Management (IfaS), Environmental Campus Birkenfeld, PO Box 1380, 55761 Birkenfeld, Germany Postdoctoral research in Process Systems Engineering within the DAAD Program (Research Stays for University Academics and Scientists). Research project: Sustainable water and energy management in the process industries. Host research contact: Prof. Peter Heck. Mobility within TEMPUS project Katholieke Hogeschool Sint-Lieven, Gent, Belgium Study visit and training within the TEMPUS project: Creation of university-enterprise cooperation networks for education on sustainable technologies. Project ID: 158989-JPHES. Fulbright Visiting Scholar - Postdoctoral Research in Process Systems Engineering Carnegie Mellon University, Center for Advanced Process Decision-making, Department of Chemical Engineering, 5000 Forbes Avenue, Pittsburgh, PA 15213-3890 USA. Postdoctoral research in Process Systems Engineering within the Fulbright Visiting Scholar Program. Research Projects: Energy and Water Optimization of Bioprocess Systems; General Superstructure and Global Optimization for the Design of Integrated Process Water Networks. Advisor: Prof. Ignacio E. Grossmann, Rudolph R. and Florence Dean University Professor. 2009 Fulbright Visiting Scholar Conference The Ritz-Carlton, 1150 22nd St NW, Washington, DC Attending plenary panels and sessions related to Access and Equity in Higher Education; Participations in discussions.



University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, 2000 Maribor, Slovenia.

 Postgraduate research and realization of the research activities within the bilateral project between Slovenia and Bosnia and Herzegovina. Project: Computer Aided Process Optimization. Advisor: Prof. Zdravko Kravanja.

From 11/06 to 11/07/2001 Postgraduate research in Chemical Engineering 02/10 to 11/11/2000 University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, 2000 Maribor, Slovenia. Postgraduate research and work on master thesis: Heat integration and retrofit of heat exchanger network using mathematical programming. Advisor: Prof. Zdravko Kravanja. Postgraduate training in Chemical Engineering From 07 to 18/05/2001 University Rovira and Virgili, Tarragona, Department of Chemical Engineering, Spain Postgraduate training within the international collaboration between Spain and Bosnia and Herzegovina. PERSONAL SKILLS Mother tongue(s) Rosnian Other language(s) UNDERSTANDING SPEAKING WRITING Listening Reading Spoken interaction Spoken production English B2 B2 B2 B2 **B**2 Upper Intermediate Level of English, B2 Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user Common European Framework of Reference for Languages Communication skills Excellent written and oral communication skills gained through: Teaching and research experience and dissemination of knowledge at university Presentation of research results at international conferences and publication in high impact journals Work in international research teams Organisational/managerial skills Excellent organisational and management skills. Vice dean for education at Faculty of Technology, University of Tuzla - Team leader and coordinator of several research projects (Bilateral projects between Bosnia and Herzegovina and Slovenia, CEEPUS project, etc. Team leader of Tuzla research group in the international project SCOPES (Scientific Co-operation between Eastern Europe and Switzerland), 2014-2017) Advisor of bachelor, master and doctoral thesis Excellent team work skills. Excellent ability to adapt to multicultural environments, and establish and Job-related skills maintain good working relations with people of different national and cultural backgrounds. These skills were gained through my study visits in several mobility programmes (Fulbright Visiting Scholar Program, JoinEU-SEE Program, EM2-STEM Program, DAAD Program, CEEPUS Program) and work in several international and domestic research projects. Excellent computer skills related to computer-aided tools for simulation, modelling and optimization of Computer skills chemical processes. These skills were gained through training, work and research in the field of process systems engineering. Excellent skills related to command of Microsoft Office tools (Word, Excel, PowerPoint, etc.). Driving licence categories: **Driving licence** • B, C, CE

ADDITIONAL INFORMATION



Selected journal papers in last 10 years Ahmetović, E., Ibrić, N., Kravanja, Z., Grossmann, I. E., Maréchal, F., Čuček, L., Kermani, M. (2018). Simultaneous optimisation and heat integration of evaporation systems including mechanical vapour recompression and background process. Energy, 158, 1160-1191.

Ibrić, N., Ahmetović, E., Kravanja, Z., Maréchal, F., & Kermani, M. (2017). <u>Simultaneous synthesis of</u> non-isothermal water networks integrated with process streams. Energy, 141, 2587-2612.

Ibrić, N., Ahmetović, E., Kravanja, Z., Maréchal, F., & Kermani, M. (2017). <u>Synthesis of single and interplant non-isothermal water networks</u>. Journal of Environmental Management, 203, 1095-1117.

Ibrić, N., Ahmetović, E., & Kravanja, Z. (2016). <u>Mathematical programming synthesis of non-</u> isothermal water networks by using a compact/reduced superstructure and an MINLP model. Clean Technologies and Environmental Policy, 1-35.

Ahmetović, E., Ibrić, N., Kravanja, Z., & Grossmann, I. E. (2015). <u>Water and energy integration: A</u> comprehensive literature review of non-isothermal water network synthesis. *Computers & Chemical Engineering*, 82, pp. 144-171.

Ahmetović, E., Ibrić, N., Kravanja, Z. <u>Optimal design for heat-integrated water-using and wastewater</u> <u>treatment networks</u>. Applied Energy, 2014, 135, 791-808.

Ibrić, N., Ahmetović, E., Kravanja, Z.: <u>Simultaneous optimization of water and energy within integrated</u> <u>water networks</u>. Applied Thermal Engineering, 2014, 70 (2),1097–1122.

Ahmetović, E., Kravanja, Z., <u>Simultaneous optimization of heat-integrated water networks involving</u> process-to-process streams for heat integration. Applied Thermal Engineering, 2014, 62 (1) 302–317.

Ibrić, N., Ahmetović, E., Kravanja, Z. <u>Two-step mathematical programming synthesis of pinched and threshold heat-integrated water networks</u>. Journal of Cleaner Production, 2014, 77, 116-139.

Ahmetović, E., Kravanja, Z., <u>Simultaneous synthesis of process water and heat exchanger networks</u>. Energy. 2013, 57: 236-250.

Suljkanović, M., Jotanović, M., Ahmetović, E., Tadić, G., Ibrić, N., <u>Formalized methodology for the separation of three component electrolytic systems</u>. Partial separation of the system, Chemical Industry. 2013, 67, 4, 569-583.

Ibrić, N., Ahmetović, E., Suljkanović, M., <u>Optimization model for the design of distributed wastewater</u> treatment networks. Chemical Industry. 2012, 66 (2) 263–275.

Ahmetović, E., Grossmann, I. E., <u>Global superstructure optimization for the design of integrated process water networks</u>. The AIChE Journal. 2011, 57, 2: 434-457. <u>Top cited AIChE Journal paper from 2011.</u>

Martin M., Ahmetović, E., Grossmann, I. E., <u>Optimization of Water Consumption in Second Generation</u> <u>Bioethanol Plants</u>. Ind. Eng. Chem. Res. 2011, 50, 3705–3721

Ahmetović, E., Martin, M., Grossmann, I. E., <u>Optimization of energy and water consumption in combased ethanol plants</u>. Ind. Eng. Chem. Res. 2010, 49 (17), pp 7972–7982.



Ahmetović, E., Ibrić, N., Kravanja, (2017). Recent Developments in Synthesis of Multiple-Effect Evaporation Plants. The SPIL Scientific Conference: Energy, Water, Emissions & Waste in Industry and Cities. December 6-7, 2017, Brno, Czech Republic.

Ahmetović, E., Suljkanović, M., Kravanja, Z., Maréchal, F., Ibrić, N., Kermani, M., Bogataj, M., & Čuček, L. (2017). <u>Simultaneous Optimisation of Multiple-Effect Evaporation Systems and Heat</u> <u>Exchanger Network</u>. The 20th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction. August 21-24, 2017, Tianjin, China. Chemical Engineering Transactions, 61, 1399-1404.

Ahmetović, E., Suljkanović, M., Kravanja, Z., Maréchal, F., Ibrić, N., Mustafić, N., Kermani, M., & Bogataj, M. (2016). <u>Analysis, Synthesis and Optimization of Multiple-Effect Evaporation Systems</u> <u>Using Mathematical Programming</u>. In 2016 AIChE Annual Meeting. November 13-18, 2016, San Francisco, CA.

Ahmetović, E., Kravanja, Z., Maréchal, F., Ibrić, N., Kermani, M. <u>Applications of Pinch Analysis and</u> <u>Mathematical Programming Methods for Synthesizing Non-Isothermal Water Networks</u>, AIChE 2015 Annual meeting, November 8-13, 2015, Salt Lake City, UT (U.S).

Ahmetović, E., Ibrić, N., Kravanja, Z., Grossmann, I. E. <u>Recent developments in synthesis of non-isothermal water networks</u>, The 10th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference, September 27 - October 2, 2015, Dubrovnik, Croatia.

Ibrić, N., Ahmetović, E., Kravanja, Z. <u>A compact superstructure for the synthesis of non-isothermal process water networks</u>, The 10th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference, September 27 - October 2, 2015, Dubrovnik, Croatia. Pintarič, N., Kravanja, Z., Ibrić, N., Ahmetović, E., Grossmann, I. E. (2014). <u>Designing Optimal Water Networks for the Appropriate Economic Criteria</u>. The <u>17th Conference on Process Integration</u>, <u>Modelling and Optimisation for Energy Saving and Pollution Reduction (PRES 214)</u>, August 23-27,

2014, Prague, CZ. Chemical Engineering Transactions, Vol. 39, 1021-1026. <u>Keynote Lecture</u> Ibrić, N., Ahmetović, E., Kravanja, Z. (2014). <u>Synthesis of Water, Wastewater Treatment, and Heat-Exchanger Networks</u>. The <u>24th European Symposium on Computer Aided Process Engineering –</u> <u>ESCAPE 24</u>, June 15-18, 2014, Budapest, Hungary. Computer Aided Chemical Engineering, Vol. 33, 2014, 1843–1848

Ahmetović, E., Kravanja, Z., Ibrić, N. (2013). Simultaneous Optimization Model for the Synthesis of Heat-Integrated Process Water Networks. SDEWES 2013-The 8th Conference on Sustainable Development of Energy, Water and Environment Systems, September 22-27, 2013, Dubrovnik, Croatia (Paper published in Conference Proceeding). Keynote Lecture

Ibrić N., Ahmetović E., Kravanja Z. (2013), <u>A two-step solution strategy for the synthesis of pinched</u> and threshold heat-integrated process water networks. PRES 2013-16th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction, September 29-October 2, 2013, Rhodes, Greece. In Chemical Engineering Transactions, Volume 35, pp 43-48.
Ibrić, N., Ahmetović, E., Kravanja, Z. (2013). Synthesis of heat-integrated water networks including wastewater regeneration, Slovenian Chemical Days, Maribor, Slovenia. (Paper published in Conference Proceeding).

Ahmetović, E., Ibrić, N., Kravanja, Z. (2013). Sustainable Water, Wastewater, and Energy Management in the Process Industries. International Scientific Conference. Proceedings of "10th Conference of Chemists, Technologists and Environmentalists of RS", 150-165. Banja Luka, B&H. Invited Session Lecture.

Ahmetović, E., Kravanja, Z. (2012). Effects of the Different Stages of Superstructure Development On the Efficiencies and Designs of Heat-Integrated Process-Water Networks. The AIChE 2012 Annual meeting, October 28-November 2, 2012, Pittsburgh PA, USA.

Ahmetović, E., Kravanja, Z. (2012). <u>Solution Strategies for the Synthesis of Heat-Integrated Process</u> <u>Water Networks</u>. PRES 2012-15th <u>Conference on Process Integration, Modelling and Optimisation for</u> <u>Energy Saving and Pollution Reduction</u>, August 25-29, 2012, Prague, CZ. In Chemical Engineering Transactions, Volume 29, pp 1015-1020. <u>Keynote Lecture</u>

Ahmetović, E., Kravanja, Z. (2012). Simultaneous Optimization Model for the Synthesis of Heat-Integrated Process Water Networks. SDEWES 2012-The 7th Conference on Sustainable Development of Energy, Water and Environment Systems, July 1-7, 2012, Ohrid, Macedonia (Paper published in conference proceedings). <u>Best Paper Award</u>

Ibrić, N., Ahmetović, E., Kravanja, Z. (2012). A sequential approach for the synthesis of heat-integrated water networks. The 18th Slovenian Chemical Days 2012, September 12-14, Portorož, Slovenia. (Paper published in conference proceedings).



	 Ahmetović, E., Ibrić, N. (2011). Synthesis and design of environmentally sustainable processes. International Scientific Conference "Renewable energy sources and sustainable development", Paneuropean University APEIRON, Banja Luka. (Paper published in conference proceedings). Ahmetović, E., Grossmann, I. E. (2010). Optimization of water consumption in process industry. "The 16th Slovenian Chemical Days", 23-24 September, 2010, Maribor, Slovenia. (Paper published in conference proceedings). Ahmetović, E., Grossmann, I. E. (2010). <u>Strategies for the global optimization of integrated process</u> <u>water networks</u>. "European Symposium on Computer Aided Process Engineering (ESCAPE-20), June 6-9, 2010, Ischia, Naples, Italy. Printed in Computer-Aided Chemical Engineering 28, 901-906, Elsevier. Martin M., Ahmetović, E., Grossmann, I. E. (2010). Optimization of water consumption in Bioethanol plants. The AIChE 2010 Annual meeting, November 7-12, 2010, Salt Lake City, UT (USA).
CMU-IBM Cyber-Infrastructure for MINLP collaborative site	Ahmetović, E., Grossmann, I. E., (2010). Integrated Process Water Networks Design Problem, Available from Cyber-Infrastructure for MINLP [A collaboration of CMU and IBM Research] at <u>http://www.minlp.org/library/problem/index.php?i=101</u> .
Chair and Co-Chair at Conferences	Section: Energy Saving Technology (Chair). The 20th Conference on Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction. August 21-24, 2017, Tianjin, China. Section: Energy 1 (Chair) The 10th Conference on Sustainable Development of Energy Water and
	Environment Systems – SDEWES Conference, September 27-October 2, 2015, Dubrovnik, Croatia.
	Development of Energy, Water and Environment Systems – SDEWES Conference, September 22- 27, 2013, Dubrovnik, Croatia.
	Section: Sustainable Biofuel Production (Co-chair). 16th Conference Process Integration, Modelling and Optimisation for Energy Saving and Pollution Reduction. 29 September - 2 October, 2013, Rhodes, Greece.
	Member of Poster Evaluation Committee. The 10th Conference on Sustainable Development of Energy, Water and Environment Systems – SDEWES Conference, September 27-October 2, 2015, Dubrovnik, Croatia.
BOOKS & MONOGRAPHIES & BOOK CHAPTERS	Ahmetović, E., Grossmann, I.E., Kravanja, Z., Ibrić, N. (2017). " <u>Water Optimization in Process</u> <u>Industries</u> ", 487-512 (in book: Sustainable Utilization of Natural Resources (eds. P. Mondal and A.K. Dalai). Ahmetović, E. (2016). Selected Chapters of Chemical-Process Engineering. University of Tuzla, Faculty of Technology, Tuzla.
	Suljkanović, M., Ahmetović, E. (2016). Concentration and Crystallization of Electrolyte Systems, Design and Exploitation Analysis, C.P.A, Tojšići. Ahmetović, E. (2010). Heat Transfer Operations in Process Engineering, OFF-SET, Tuzla. Suljkanović, M., Ahmetović, E. (2007). Analysis and simulation of chemical processes-situation approach, IHI. Tuzla. Suljkanović, M., Ahmetović, E. (2006). Computer simulation of industrial crystallization processes- electrolyte systems. IHI. Tuzla (Monography).
ADVISOR OF THESES	Ibrić, N. (2014). Synthesis and Optimisation of Process Water Networks. Doctoral dissertation. Faculty
Master theses	of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Associate Professor). Mustafić, N. (2014). Synthesis and Optimisation of Heat Exchanger Networks. Master thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović,, Associate Professor). Mujkić, Z. (2014). Synthesis and Optimisation of Heat Exchanger Networks. Master thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović,, Associate Professor).
	Ibrić, N. (2010). Development of optimization model for the design of integrated process water networks in process industry. Master thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Assistant Professor)
Bachelor theses	Piro, N. (2018). Application of Pinch Technology for Heat Integration. Bachelor thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Full Professor).
	Porić, A. (2017). Systematic Methods for Water Integration in the Process Industry. Bachelor thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Full Professor).
	Okanović, M. (2016). Application of Computers for Solving Heat Transfer Operation Problems, Bachelor thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Associate Professor).
	Aljić, A. (2016). Conceptual Design of Multiple-Effect Evaporation. Bachelor thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Associate Professor).
	Mujanović, M. (2014). Heat Exchanger Network Synthesis. Bachelor thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Associate Professor).



Đonlić, D. (2014). Water reuse and recycling within process industries. Bachelor thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Associate Professor).

Čikarić, E. (2008). Simulation of classical multiple-effect evaporation and evaporation with thermal vapour recompression. Bachelor thesis. Faculty of Technology, University of Tuzla. (Advisor: Elvis Ahmetović, Assistant Professor)

RESEARCH PROJECTS	
International Projects	
From 2019-2020	Synthesis of evaporation systems using mathematical programming
	Scientific and technological collaboration between Bosnia and Herzegovina (University of Tuzla, Faculty of Technology) and Slovenia (University of Maribor, Faculty of Chemistry and Chemical Engineering).
From 2019-2020	Modeling and Simulation of Biorefinery Concepts in the Context of Water and Heat Integration
	Scientific and technological cooperation between Bosnia and Herzegovina (University of Tuzla, Faculty of Technology) and Austria (Graz University of Technology, Institute of Process and Particle Engineering)
From 2014-2017	Computer Aided Process Engineering applied to energy, water, and waste reduction during process design and operation
	Scientific-research project between Switzerland (EPFL, Industrial Process and Energy Systems Engineering), Bosnia and Herzegovina (University of Tuzla, Faculty of Technology) and Slovenia (University of Maribor, Faculty of Chemistry and Chemical Engineering) funded within the scientific co- operation between Eastern Europe and Switzerland (<u>SCOPES</u>) for the period 2014-2017.
From 2014 to 2015	Synthesis of sustainable water, wastewater and energy networks within the process industries
	Scientific and technological collaboration between Bosnia and Herzegovina (University of Tuzla, Faculty of Technology) and Slovenia (University of Maribor, Faculty of Chemistry and Chemical Engineering).
From 2011 to 2012	Sustainable water and energy management in process industry - Synthesis of heat-integrated process water networks.
	University of Maribor, Faculty of Chemistry and Chemical Engineering, Laboratory for Process Systems Engineering and Sustainable Development, Smetanova 17, 2000 Maribor, Slovenia.
From 2010 to 2011	Development and Application of an Optimization Model for the Reduction of Water Consumption in Process Industry.
	Scientific and technological collaboration between Bosnia and Herzegovina (University of Tuzla, Faculty of Technology) and Slovenia (University of Maribor, Faculty of Chemistry and Chemical Engineering).
From 2008 to 2009	Energy and Water Optimization of Bioprocess Systems. Global Optimization for the Design of Integrated Process Water Networks.
	Carnegie Mellon University, Center for Advanced Process Decision-making, Department of Chemical Engineering, 5000 Forbes Avenue, Pittsburgh, PA 15213-3890 USA. (Fulbright Visiting Scholar Program)
From 2002 to 2003	Computer Aided Process Optimization.
	Scientific and technological collaboration between Bosnia and Herzegovina (University of Tuzla, Faculty of Technology) and Slovenia (University of Maribor, Faculty of Chemistry and Chemical Engineering).
Projects in Bosnia and	
Herzegovina	Simulation and Ontimisation of Evanoration/Crystalication Separation Processes, Eaculty of
2010	Technology, University of Tuzla. Project supported by Federal Ministry of Education and Science, Bosnia and Herzegovina
2011	Automated Synthesis and Design of Sustainable Processes. Faculty of Technology, University of Tuzla. Project supported by Federal Ministry of Education and Science, Bosnia and Herzegovina
2010	Efficient Use of Water and Energy in Process Industry.
	Faculty of Technology, University of Tuzla. Project supported by Ministry of education, science, culture and sport of the Tuzla Canton.
2007	Simulation of Salt Production by Vacuum-Evaporation in Solana d.d. Tuzla. Institute for Chemical Engineering, Tuzla



- 2006 Design of distillation column condensation system. Project between GIKIL Lukavac and Faculty of Technology, University of Tuzla.
- Simulation and Verification of De-sorption Column Functionality for Ammonium Waters in GIKIL from an Old Plant of Ammonia Combustion.
 Project between GIKIL Lukavac and Faculty of Technology, University of Tuzla.

Coordinator of the CEEPUS (Central European Exchange Program for University Studies) project

Coordinator of the CEEPUS project 2012-2018 Selected Guest & Invited Lectures & Seminars & Trainings

Honours

EPUS project 2012-2018 Guest & Invited Lectures & Seminars & Trainings	Training: HEInnovate Train the Trainers, Sofia (Bulgaria), November 15-16, 2018. Active participation in training, workshops and discussions.
	Seminar/Workshop organized within the 22th Summer University of Tuzla: Application of computer aided process engineering for reducing water/energy consumption and waste generation in technological processes. Tuzla, Bosnia and Herzegovina, July 4, 2017. Seminar held within the SCOPES (Scientific Co-operation between Eastern Europe and Switzerland) research project.
	Plenary lecture: Water and heat integration in the process industry, 5tf Environmental Resources, Sustainable Development and Food Production-OPORPH 2017, November 16-17, Tuzla, Bosnia and Herzegovina
	CEEPUS Lecture: Synthesis of Heat-Integrated Water Networks. Faculty of Chemistry and Chemical Engineering, University of Maribor, Maribor, Slovenia, June 2013.
	Invited Session Lecture: Sustainable Water, Wastewater, and Energy Management in the Process Industries. "10th Conference of Chemists, Technologists and Environmentalists of RS". November 15-16, 2013, Banja Luka.
	Guest Lecture: Process Integration: Water and Energy Optimization in Process Industry, Lappeenranta University of Technology, Lappeenranta, Finland, September 21, 2012.
	Invited Lecture: Water Network Synthesis in Process Industry. IX Meeting of Young Chemical Engineers, "New Technologies & Knowledge Transfer, University of Zagreb, Croatia, February 16-17, 2012.
	Seminar: "Fulbright Visiting Scholar Program 2008-2009" organized on the occasion of the 50th anniversary of the Faculty of Technology in Tuzla. October 23.10.2009.
	Process Systems Engineering Seminar: General superstructure and global optimization for the design of integrated process water networks. Carnegie Mellon University, Department of Chemical Engineering. Pittsburgh, PA, USA. August 28, 2009.
	Guest Lecture: Unit operations in food industry. Thermal properties of food. Heat-exchangers, Evaporation. Agriculture-Food Faculty. University of Sarajevo. May, 2005.
& Awards & Scholarships & Grants	Erasmus + mobility for teaching, 2018
	SCOPES research project grant 2014-2017
	Federal Ministry of Education and Science research project grant. 2016/2017
	Best paper award, SDEWES 2012 Conference.
	The EM2-STEM Scholarship, 2012.
	The JoinEU SEE Scholarship, 2011/2012
	DAAD Scholarship, 2011.
	The Fulbright Visiting Scholar Program Scholarship, 2008/2009
	Award of Rector of the University of Tuzla for excellent work results at the Faculty of Technology, 2007
	Award of Cantonal Ministry of Education, Science, Culture and Sport for PhD study, 2005
	Scholarship for postgraduate training (Collaboration between University of Rovira and Virgili, Spain, and University of Tuzla, Bosnia and Herzegovina), 2001
	Scholarships for postgraduate training. Ministry of Science and Technology of Slovenia, 2000/2001 Postgraduate Student Grants (Supported by Austrian Federal Chancellery), 2000.



Reviewer for Journals	AIChE Journal Chemical Engineering Research and Design Computers and Chemical Engineering Chemical Engineering Science Industrial & Engineering Chemistry Research Chemical Engineering Transactions Applied Energy Energy Journal of Cleaner Production Journal of Cleaner Production Journal of Environmental Management Latin American Applied Research - An International Journal Journal of Sustainable Development of Energy, Water and Environment Systems Chemical and Biochemical Engineering Quarterly
	Thermal Science and Technology
Book Reviewer	Introduction to Software for Chemical Engineers (2014). Editor: Mariano Martín Martín. Boca Raton, Florida, CRC Press.
Memberships	Member of International advisory committee of the 10th International Conference on Sustainable Energy & Environmental Protection (SEEP), 2017 Member of International advisory committee of the 25th Croatian conference of Chemists and Chemical Engineers with International Participation (25. HRVATSKI SKUP KEMIČARA I KEMIJSKIH INŽENJERA's međunarodnim sudjelovanjem), 2017 Member of International scientific committee of the 26th European Symposium on Computer-Aided Process Engineering (ESCAPE), 2016, 2019 Member of Scientific Advisory Board, Conference on Sustainable Development of Energy, Water and Environment Systems (SDEWES), 2012 – present Member of Steering Committee of University Sport Society, University of Tuzla, 2016 – present Member of American Institute of Chemical Engineers (AIChE), 2009 – present Senior Member of American Institute of Chemical Engineers (AIChE), 2016 – present Member of Croatian Society of Chemical Engineering (HDKI), 2002 – present
Mentors and Advisors	Midhat Suljkanović, Full Professor, University of Tuzla, Faculty of Technology, Univerzitetska 8, 75000 Tuzla, Phone: +387 35 320 749; Fax: ++ 387 35 320 741; E-mail: <u>midhat.suljkanovic@untz.ba</u> ; Bosnia and Herzegovina. Zdravko Kravanja, Full Professor, Vice dean for education, University of Maribor, Faculty of Chemistry and Chemical Engineering, Smetanova 17, 2000 Maribor, Phone: +386 2 2294 481; Fax: + 386 2 252 7774; E-mail: <u>zdravko.kravanja@uni-mb.si</u> ; Slovenija. Ignacio Grossmann, Full Professor, Rudolph R. and Florence Dean University Professor, Carnegie Mellon University, Department of Chemical Engineering, 5000 Forbes Avenue, Pittsburgh, Phone: (412) 268-3642; Fax: (412) 268-7139; E-mail: <u>grossmann@cmu.edu</u> ; Pennsylvania (USA).
ANNEXES	

More information about my educational and research work can be found at the following web page: www.tf.untz.ba/elvis.ahmetovic/ or can be supplied on request.