

## OSOBNE INFORMACIJE

## Ivan Petric



 Tehnološki fakultet Univerziteta u Tuzli, Univerzitetska 8, 75000 Tuzla, Bosna i Hercegovina

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Spol muški | Datum rođenja 13.02.1970. | Državljanstvo BiH / Hrvatsko

**ZVANJE** Redovni profesor, Uža naučna oblast "Hemijsko inženjerstvo"

## RADNO ISKUSTVO

juni 2018. - **Redovni profesor**

Tehnološki fakultet Univerziteta u Tuzli

- edukacija
- istraživanje

juni 2012. – juni 2018. **Vanredni profesor**

Tehnološki fakultet Univerziteta u Tuzli

- edukacija
- istraživanje

juni 2007. - juni 2012. **Docent**

Tehnološki fakultet Univerziteta u Tuzli

- edukacija
- istraživanje

maj 2002. – maj 2007. **Viši asistent**

Tehnološki fakultet Univerziteta u Tuzli

- edukacija
- istraživanje

maj 1997. – maj 2002. **Asistent**

Tehnološki fakultet Univerziteta u Tuzli

- edukacija
- istraživanje

## OBRAZOVANJE I OSPOSOBLJAVANJE

2002. – 2007. **Doktor tehničkih nauka iz područja procesnog inženjerstva**

Tehnološki fakultet Univerziteta u Tuzli, Bosna i Herzegovina

1998. – 2001. **Magistar tehničkih nauka iz područja procesnog inženjerstva**

Tehnološki fakultet Univerziteta u Tuzli, Bosna i Herzegovina

1990. – 1996. **Diplomirani inženjer tehnologije**

Tehnološki fakultet Univerziteta u Tuzli, Bosna i Herzegovina

**OSOBNE VJEŠTINE**

Materinski jezik(ci) Hrvatski / Bosanski / Srpski

Ostali jezici	RAZUMIJEVANJE		GOVOR		PISANJE
	Slušanje	Čitanje	Govorna interakcija	Govorna produkcija	
Engleski	B2	B2	B1	B1	B2

Stupnjevi: A1/2: Početnik - B1/2: Samostalni korisnik - C1/2 Iskusni korisnik  
Zajednički europski referentni okvir za jezike

**Komunikacijske vještine**

- dobre komunikacijske vještine stečene kroz iskustvo kao voditelj istraživačkih projekata
- iskustvo u prezentacijama prema većem auditoriju

**Organizacijske / rukovoditeljske vještine**

- voditelj nekoliko naučno-istraživačkih projekata
- Voditelj studijskog odsjeka Hemski inženjerstvo i tehnologije

**Računalne vještine**

- iskusan sa Microsoft Office programima, Outlook, Internet Explorer....
- sposoban za primjenu različitih numeričkih softverskih paketa

**Vozačka dozvola**

- B

**DODATNE INFORMACIJE**

1. **Petric, I.**, Karić, E. (2019): Simulation of commercial fixed-bed reactor for maleic anhydride synthesis: Application of different kinetic models and industrial process data, *Reaction Kinetics, Mechanisms and Catalysis* 126(2), 1027-1054.
2. Karić, E., **Petric, I.**, Mičić, V. (2019): Determination and Application of Improved Kinetic Parameters for Simulation of Maleic Anhydride Synthesis in Industrial Fixed-Bed Reactor, *Journal of Engineering & Processing Management* 11(1), 8-17.
3. Karić E., **Petric I.**, Mustafić, N. (2017): Composting kinetics for mixture of poultry manure and wheat straw based on volatile solids content, *Journal of Engineering & Processing Management* 9(1), 36-41.
4. Mustafić, N., **Petric I.**, Karić E. (2017): Application of validated mathematical model of composting process for study the effect of air flow rate on process performance, *Journal of Engineering & Processing Management* 9(1), 62-68.
5. **Petric, I.**, Mustafić, N. (2016). Application of microbial kinetics to modeling the composting process. *Technologica Acta* 9(1), 5-14.
6. **Petric I.**, Karić, E. (2016). Development and validation of the mathematical model for synthesis of maleic anhydride from n-butane in a fixed bed reactor. *Bulletin of the Chemists and Technologists of Bosnia and Herzegovina*, 47(2), 49-58.
7. Papračanin, E., **Petric, I.** (2016): Mathematical modeling and simulation of the composting process in a pilot reactor. *Bulletin of the Chemists and Technologists of Bosnia and Herzegovina*, 47(2) 2016, 39-48.
8. **Petric, I.**, Karić, E. (2015). Comparison of first-order and nth-order kinetics of co-composting poultry manure with wheat straw. *Technologica Acta* 8(2) 2015, 17-23.
9. **Petric, I.**, Husanović, A. (2015): Comparison of different kinetic models for the chlorohydrin process using real data from an industrial tubular reactor. *The Canadian Journal of Chemical Engineering*, 93(1), 78-87.
10. **Petric, I.**, Avdihodžić, E., Ibrić, N. (2015): Numerical simulation of composting process for organic fraction of municipal solid waste and poultry manure. *Ecological Engineering*, 75, 242-249.
11. **Petric, I.**, Mustafić, N. (2015): Dynamic modeling the composting process of the mixture of poultry manure and wheat straw. *Journal of Environmental Management*, 161, 392-401.
12. **Petric, I.**, Helić, A., Avdihodžić Avdić, E. (2012): Evolution of process parameters and determination of kinetics for co-composting of organic fraction of municipal solid waste with poultry manure. *Bioresource Technology* 117, 107-116.
13. Selimbašić, V., Marić, S., **Petric, I.**, Đozić, A. (2012): Anaerobic batch fermentation of cattle manure: effect of ammonia. *Journal of Environmental Protection and Ecology* 13(1), 211-218.
14. **Petric, I.**, Šestan, A., Šestan, I. (2009): Influence of initial moisture content on the composting of poultry manure with wheat straw, *Biosystems Engineering* 104 (1), 125-134.
15. **Petric, I.**, Šestan, A., Šestan, I. (2009): Influence of wheat straw addition on composting of poultry manure, *Process Safety and Environmental Protection* 87(3), 206-212.
16. **Petric, I.** (2008): Aerobic Composting Poultry Manure and Wheat Straw-Kinetic and Reactor Model, *International Journal of Chemical Reactor Engineering* Volume 6, A95, 1-43.
17. **Petric, I.**, Selimbašić, V. (2008): Composting of poultry manure and wheat straw in a closed reactor: optimum mixture ratio and evolution of parameters, *Biodegradation* 19(1), 53-63.
18. **Petric, I.**, Selimbašić, V. (2008): Development and validation of mathematical model for aerobic composting process, *Chemical Engineering Journal* 139(2), 304-317.

#### Izabrani naučni radovi objavljeni u indeksiranim internacionalnim naučnim časopisima

#### Objavljeni univerzitetski udžbenici

1. **Petric, I.** „Osnove hemijsko-inženjerske kinetike i reakcijskog inženjerstva“, OFF-SET Tuzla, 2014.
2. **Petric, I.** „Osnove bioreakcijskog inženjerstva“, IN SCAN Tuzla, 2018.
3. **Petric, I.** „Uvod u hemijsko inženjerstvo“, IN SCAN Tuzla, 2018.

#### Naučno-istraživački projekti

1. „Kompostiranje kao efikasan i koristan postupak zbrinjavanja čvrstog biorazgradljivog organskog otpada u BiH“, finansiralo Federalno ministarstvo obrazovanja i nauke (2003.-2005.)
2. „Primjena reaktorskog sistema za proces kompostiranja (sa prinudnom aeracijom) peradarskog gnoja i pšenične slame“, finansiralo Ministarstvo obrazovanja, nauke, kulture i sporta (2007.)
3. „Mogućnosti primjene procesa kompostiranja komunalnog otpada sa različitim dodacima u reaktorskom sistemu“, finansiralo Federalno ministarstvo obrazovanja i nauke (2009.-2011.)
4. „Istraživanje aerobnog kompostiranja komunalnog krutog organskog otpada“, finansiralo Ministarstvo obrazovanja, nauke, kulture i sporta (2009.-2010.)
5. „Optimizacija procesa aerobnog kompostiranja komunalnog krutog otpada“, finansiralo Ministarstvo obrazovanja, nauke, kulture i sporta (2012.-2013.)
6. „Optimizacija kinetičkih i procesnih parametara za process kompotiranja organske frakcije komunalnog krutog otpada sa različitim dodacima“, finansiralo Federalno ministarstvo obrazovanja i nauke (2013.-2014.)
7. „Optimizacija sinteze anhidrida maleinske kiseline iz n-butana u industrijskom cijevnom reaktoru sa nepokretnim slojem katalizatora“, finansiralo Federalno ministarstvo obrazovanja i nauke (2017.-2018.)
8. „Eksperimentalno istraživanje i matematičko modeliranje procesa kompostiranja procesa kompostiranja biorazgradivog otpada u bioreaktoru“, finansiralo Federalno ministarstvo obrazovanja i nauke (2021.-2022.)

1. Karić, E. Petrić, I., (2019): Determination and application of improved kinetic parameters for simulation of maleic anhydride synthesis in industrial fixed-bed reactor. VI International Congress "Engineering, Environment and Materials in Processing Industry", March 11-13, Jahorina, Proceedings at CD
2. Papračanin, E., **Petric, I.**, (2017): Sensitivity analysis of the parameters for the mathematical model and statistical analysis of composting process. 5th Scientific symposium with international participation „Environmental resources, sustainable development and food production“ OPORPH November 16-17, 2017, Tuzla, Bosnia and Herzegovina (Oral presentation) Book of abstracts (ISSN 2566-3364)
3. Karić, E., **Petric, I.**, (2017): Process simulator of distillation column for separation of binary system. 5th Scientific symposium with international participation „Environmental resources, sustainable development and food production“ OPORPH November 16-17, 2017, Tuzla, Bosnia and Herzegovina (Poster presentation) Book of abstracts (ISSN 2566-3364)
4. Karić, E., **Petric, I.**, (2017): Mixed inductive-deductive strategy in modeling the composting kinetics. 5th Scientific symposium with international participation „Environmental resources, sustainable development and food production“ OPORPH November 16-17, 2017, Tuzla, Bosnia and Herzegovina (Poster presentation) Book of abstracts (ISSN 2566-3364)
5. Karić E., **Petric I.**, (2016): Uticaj ulaznih procesnih parametara na izvedbu industrijskog cijevnog reaktora sa nepokretnim slojem katalizatora, at the International Scientific Conference „XI Conference of Chemists, Technologists and Environmentalists of Republic of Srpska“, 17-18. November, 2016, Teslić, Bosna i Hercegovina (Poster presentation) Proceedings (ISBN 978-99938-54-67-8)
6. Mustafić, N., **Petric, I.** (2013): Application of microbial kinetics for modelling of composting process of poultry manure and wheat straw, 3. Scientific Symposium with International Participation, „Environmental resources, sustainable development and food production“, OPORPH-2013, November 14-15, 2013 Tuzla (Oral Presentation)
7. Karić, E., **Petric, I.** (2013): Kinetics of organic matter degradation for co-composting poultry manure with wheat straw with application of correction factors, 3. Scientific Symposium with International Participation, „Environmental resources, sustainable development and food production“, OPORPH-2013, November 14-15, 2013 Tuzla (Oral Presentation)
8. Elezović, S., **Petric, I.**, Avdić Avdihodžić, E., Ibrić, N., Topčagić, M. (2012): Modelling Of Aerobic Composting Process Based On Simplified Microbial Kinetics. International Conference on Green Technology & Ecosystems for Global Sustainable Development, 28-30 May 2012, Tuzla, Bosnia and Herzegovina. (Oral Presentation)
9. Topčagić, M. **Petric, I.**, Avdihodžić, E., Ibrić, N., Elezović, S. (2012): Effect of poultry manure addition on the process of aerobic composting of organic fraction of municipal solid waste, 2. Scientific Symposium with International Participation, „Environmental resources, sustainable development and food production“, OPORPH-2012, November 8-9, 2012, Tuzla, (Oral Presentation)
10. Helić A., **Petric, I.**, Avdihodžić Avdić, E. (2011): Kinetic models for degradation of organic fraction of municipal solid waste with different additives. *Zbornik radova Tehnološkog fakulteta u Leskovcu*, sveska 20, 52-60. Presented at 9<sup>th</sup> Symposium "Novel Technologies and Economic Development" with international participation, 21-22 October 2011, Leskovac, Serbia, Book of Abstracts, pp. 135, ISBN 978-86-82367-92-5)
11. Avdihodžić Avdić, E., **Petric, I.**, Ibrić, N. (2011): Verification of the mathematical model and optimization of the municipal solid waste composting process. *Zbornik radova Tehnološkog fakulteta u Leskovcu*, sveska 20, 61-70. Presented at 9<sup>th</sup> Symposium "Novel Technologies and Economic Development" with international participation, 21-22 October 2011, Leskovac, Serbia, Book of Abstracts, pp. 136, ISBN 978-86-82367-92-5)
12. Avdihodžić Avdić, E., **Petric, I.** (2011): Development of mathematical model and determination of parameters for composting of municipal solid waste. 24. Congress o process industry Procesing 2011, 01-03.06.2011. godine, Fruška gora, Serbia, Proceedings, 1-10. (Oral Presentation)
13. **Petric, I.**, Šestan, A., Šestan, I. (2009): Effect of reactor size on composting of agricultural waste, Proceedings of 37<sup>th</sup>International Symposium "Actual Tasks on Agricultural Engineering" 10<sup>th</sup>-13<sup>th</sup> of February 2009 in Opatija, Croatia, pp. 279-289. (Oral Presentation)
14. **Petric, I.**, Šestan, A., Alibašić, I. (2008): Effect of initial moisture content on aerobic composting of poultry manure with wheat straw, Proceedings of 36<sup>th</sup>International Symposium "Actual Tasks on Agricultural Engineering" 11<sup>th</sup>-15<sup>th</sup> of February 2008 in Opatija, Croatia, pp. 393-404. (Oral Presentation)
15. **Petric, I.**, Bijedić M., Selimbašić, V. (2006): Optimum Ratio of Chicken Manure and Wheat Straw for Aerobic Composting Process, *Proceedings of the 34. International Symposium on Agricultural Engineering, Opatija, Croatia*, 21.-25. February 2006, pp. 307-318. (Oral Presentation)
16. **Petric, I.**, Bijedić M., Selimbašić, V. (2005): Mathematical Model and Dynamic Simulation of Aerobic Composting Process, *Proceedings of the 33. International Symposium on Agricultural Engineering, Opatija, Croatia*, 21.-25. February 2005, (Oral Presentation)
17. **Petric, I.**, Bijedić M., Selimbašić, V. (2004): Simulation model for Aerobic Composting Process and Its Preliminary Validation. Congress Proceedings of the 1<sup>st</sup> International and 18<sup>th</sup> Croatian Congress of Technologists for Post-Harvest Technology «ZRNKO '04», November 17<sup>th</sup>-18<sup>th</sup>, 2004, Stubičke Toplice, Croatia, pp. 174-187. (Oral Presentation)

Izabrani radovi predstavljeni na internacionalnim naučnim konferencijama

## Mentorstva pri izradi doktorskih disertacija

1. Edisa Avdihodžić Avdić, „Optimizacija kinetičkih i procesnih parametara za proces kompostiranja komunalnog krutog otpada“ (doktorska disertacija je odbranjena 29.03.2016. godine na Tehnološkom fakultetu Univerziteta u Tuzli)
2. Ervin Karić, „Optimizacija sinteze anhidrida maleinske kiseline iz n-butana u industrijskom cijevnom reaktoru sa nepokretnim slojem katalizatora“ (doktorska disertacija je odbranjena 11.06.2021. godine na Tehnološkom fakultetu Univerziteta u Tuzli)

## Mentorstva pri izradi magistarskih radova

1. Azra Helić, „Kinetički modeli za proces aerobnog kompostiranja organske frakcije komunalnog krutog otpada sa različitim dodacima“ (završni magistarski rad je odbranjen 23.09.2015. godine na Tehnološkom fakultetu Univerziteta u Tuzli).
2. Ervin Karić, „Modeliranje sinteze anhidrida maleinske kiseline iz n-butana u industrijskom cijevnom reaktoru sa nepokretnim slojem katalizatora“ (završni magistarski rad je odbranjen 14.04.2016. godine na Tehnološkom fakultetu Univerziteta u Tuzli).
3. Edisa Avdihodžić Avdić, „Laboratorijska i numerička simulacija procesa kompostiranja komunalnog krutog otpada sa prisilnom aeracijom u reaktoru“ (rad je odbranjen 25.03.2011. godine na Tehnološkom fakultetu Univerziteta u Tuzli).

## Recenzije u internacionalnim indeksiranim naučnim časopisima

1. Waste Management
2. Biodegradation
3. Chemical Engineering Journal
4. Journal of Environmental Management
5. Frontiers of Environmental Science & Engineering in China
6. Environmental Technology
7. Science of the Total Environment
8. Biosystems Engineering
9. Environmental Engineering and Management Journal
10. African Journal of Biotechnology
11. Chemical and Biochemical Engineering Quarterly
12. Chemosphere
13. Journal of Agricultural Science and Technology
14. International Journal of Recycling of Organic Waste in Agriculture
15. The Korean Journal of Chemical Engineering
16. Environmental Engineering Research
17. Compost Science & Utilization
18. International Food Research Journal
19. International Journal of Heat and Mass Transfer
20. Journal of the Air & Waste Management Association
21. Environmental Science and Pollution Research
22. Arabian Journal for Science and Engineering
23. Glasnik hemičara, tehologa i ekologa Republike Srpske
24. Waste and Biomass Valorization

## Studijski boravci

1. Period od 08.10. do 06.11.2000. godine, Univerzitet u Ljubljani (Slovenija), Fakultet hemije i hemijske tehnologije, Katedra za hemijsko inženjerstvo.
2. Period od 13.01. do 10.03.2001. godine, Univerzitet u Lleidi (Španija), Fakultet za poljoprivredno inženjerstvo, Katedra za hranu.
3. Period od 06.05. do 20.05.2001. godine, Univerzitet Rovira i Virgili u Tarragoni (Španija), Katedra za hemijsko inženjerstvo.
4. Period od 13.10. do 09.11.2002. godine, Univerzitet u Lleidi (Španija), Fakultet za poljoprivredno inženjerstvo, Katedra za okoliš i tlo, Laboratorija za inženjerstvo okoliša.
5. Period od 11.10. do 01.11.2003. godine Univerzitet u Lleidi (Španija), Fakultet za poljoprivredno inženjerstvo, Katedra za okoliš i tlo, Laboratorija za inženjerstvo okoliša.
6. Period od 18.01. do 21.02.2004. godine, Univerzitet u Lleidi (Španija), Fakultet za poljoprivredno inženjerstvo, Katedra za okoliš i tlo, Laboratorija za inženjerstvo okoliša.

## Priznanja i nagrade

Top Recenzent za 2012. godinu u internacionalnom indeksiranom naučnom časopisu "Waste Management" (Elsevier)