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1. BIOGRAFIJA

Ermin Husak rođen je 25.02.1981. godine u Bihaću. Završio je osnovnu školu Kulen Vakuf – Orašac. Srednju Mašinsko – saobraćajnu mješovitu srednju školu u Bihaću završio je 1999. godine. Akademske 1999/2000 godine upisuje se na Tehnički fakultet Univerziteta u Bihaću, gdje i diplomira 07.05.2004. godine na temu: „*Fleksibilni obradni sistemi u obradi deformisanjem*“. Poslije odbrane diplomskog rada, zasniva radni odnos u firmi „Bira“ d.d. Bihać, gdje je zaposlen na radnom mjestu Samostalni konstruktor-tehnolog. U akademskoj 2005/2006. godini upisao je postdiplomski studij na Mašinskom odsjeku Tehničkog fakulteta Univerziteta u Bihaću, smjer „Savremeno proizvodno inženjerstvo“. Magistarski rad pod nazivom „*Prostorna integracija proizvodnih procesa primjenom mehatroničkih sistema*“ odbranio je 28.04.2011. godine pod mentorstvom prof. dr. Mirana Brezočnika.

Doktorsku disertaciju pod naslovom „*Optimizacija pri proračunu složenih elastičnih sistema i uporedna analiza klasičnim i savremenim metodama*“ prijavljuje 11.10.2011. godine i brani na Mašinskom fakultetu Univerziteta „Džemal Bijedić“ 29.01.2016. godine pred komisijom:

1. Prof. dr. Safet Isić, vanredni profesor za užu naučnu oblast „Mehanika“ na Mašinskom fakultetu Univerziteta „Džemal Bijedić“ u Mostaru, predsjednik;
2. Prof. dr. Isak Karabegović, redovni profesor za užu naučnu oblast „Mehanika“ na Tehničkom fakultetu Bihać, mentor;
3. Prof. dr. Miran Brezočnik, redovni profesor za užu naučnu oblast „Proizvodne tehnologije i sistemi“ na Fakultetu za strojništvo Maribor, član;
4. Prof. dr. Daut Denjo, vanredni profesor za užu naučnu oblast „Mjerna tehnika“ na Mašinskom fakultetu Univerziteta „Džemal Bijedić“ u Mostaru, član;
5. Prof. dr. Avdo Voloder, redovni profesor za užu naučnu oblast „Mehanika“ na Mašinskom fakultetu Univerziteta u Sarajevu, član;

i stiče zvanje **doktora tehničkih nauka iz oblasti Mehanika.**

Od 02.06.2008. godine zaposlen je na Tehničkom fakultetu u Bihaću. Zvanje asistenta iz naučne oblasti Mehanika stekao je 05.01.2009. godine, Višeg asistenta iz iste oblasti 29.09.2011. godine, a Docenta iz iste oblasti 22.09.2016. godine.

Postdoktorsko istraživanje, kao gostujući istraživač, proveo je na City University of London u trajanju od šest mjeseci školske 2016/2017 godine. Tema istraživanja bila je „Numerička analiza deformacija vijčanih kompresora“. Kao gostujući predavač boravio je na Univerzitetu u Lleida, Španija 2018. godine.

Autor ili koautor je 100 radova objavljenih na međunarodnim skupovima i časopisima u zemlji i inozemstvu. Koautor je 3 univerzitetska udžbenika i pet skripti. Učesnik je 9 domaćih i međunarodnih naučno istraživačkih projekata. Govori i piše engleski jezik.

2. SPISAK OBJAVLJENIH RADOVA I PROJEKATA

Objavljene knjige

1. Isak Karabegović, Miran Brezočnik, Samir Vojić, Damir Hodžić, Husein Rošić, **Ermin Husak**: „Teorija elastičnosti i plastičnosti“ Univerzitetska knjiga, Tehnički fakultet Bihać, ISBN 978-9958-624-31-5, Bihać 2010.

Koautor

1. Edina Karabegović, Miran Brezočnik, Mehmed Mahmić i dr., **Ermin Husak**: Nove tehnologije u proizvodnim procesima – razvoj i primjena, Udžbenik – Monografija, Mostar 2014.
2. Isak Karabegović, Sead Pašić, Darko Bajić, Edina Karabegović, Samir Vojić i dr., **Ermin Husak**: „Nove tehnologije u procesima zavarivanja – razvoj i primjena“, Monografija, Mostar 2013.

Objavljene skripte (sadržaj i struktura skripti su evaluirani i odobreni od strane partnera sa univerziteta iz Europske Unije)

1. Miran Brezočnik, Mehmed Mahmić, Edina Karabegović, **Ermin Husak**: „Rapid prototyping“, Tehnički fakultet Bihać i WUS Austria, Bihać 2010.
2. Isak Karabegović, Miran Brezočnik, Samir Vojić, Damir Hodžić, Husein Rošić, **Ermin Husak**: „Inteligentni proizvodni sistemi“, Tehnički fakultet Bihać i WUS Austria, Bihać 2010.
3. Isak Karabegović, Miran Brezočnik, Samir Vojić, Damir Hodžić, Husein Rošić, **Ermin Husak**: „Planiranje eksperimenata i eksperimentalne metode“, Tehnički fakultet Bihać i WUS Austria, Bihać 2010.
4. Isak Karabegović, Miran Brezočnik, Samir Vojić, Damir Hodžić, Husein Rošić, **Ermin Husak**: „Teorija elastičnosti i plastičnosti“, Tehnički fakultet Bihać i WUS Austria, Bihać 2009.
5. Milan Jurković, **Ermin Husak**: „Fleksibilni proizvodni sistemi“, Tehnički fakultet Bihać i WUS Austria, Bihać, 2009.

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1. Karabegovic I., Karabegovic E., Mahmic M., **Husak E.** The Role of Smart Sensors in Production Processes and the Implementation of Industry 4.0, *Journal of engineering sciences*, V6. Issu 2, 2019.
2. **E. Husak**, A. Kovacevic, I Karabegovic, Calculation of clearances in twin screw compressors, 11th International Conference on Compressors and their Systems, University of London, IOP Conf. Series: Materials Science and Engineering 604 (2019),
3. E. Karabegović, I. Karabegović, **E. Husak**, Collaborative Robots Innovate Automation in Metal and Car Industry in the World, *Journal of Scientific and Engineering Research*, 2019, 6(8):136-145.
4. I. Karabegović, E. Karabegović, M. Mahmić, **E.Husak**, Implementation of Industry 4.0 and Industrial Robots in the Manufacturing Processes, *New Technologies, Development and Applications II*, Lecture Notes in Networks and Systems Vol. 76, Springer, 2019. pp. 3-14.
5. S. Isić, S. Mehremić, I. Karabegović, **E.Husak**, Systems for Passive and Active Vibration Damping, *New Technologies, Development and Applications II*, Lecture Notes in Networks and Systems Vol. 76, Springer, 2019. pp. 96-104.
6. M. Jovanović, **E.Husak**, Optimization Based on Simulation of Ants Colony, *Development and Applications II*, Lecture Notes in Networks and Systems Vol. 76, Springer, 2019. pp. 96-10
7. Isak Karabegović, **Ermin Husak**, 2018, Industry 4.0 based on Industrial and Service Robots with Application in China, *Journal Mobility and Vehicle, Vol.44. No.4.University of Kragujevac, Fakulty of Engineering, Kragujevac, Serbia,ISSN 1450-5304*: pp. 59-71. (<http://www.mvm.fink.rs>; UDC 621- 629(05)-802.0)
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9. Isak Karabegović, Edina Karabegović, Mehmed Mahmić, **Ermin Husak**, (2018) Innovative automation of production processes in automotive industry, *International journal of engineering works*, Vol 5. Issue 11, pp. 240-247
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42. Isak Karabegović, **Ermin Husak**, Milena Đukanović: Aplikacija inteligentnih sistema – robota u proizvodnim procesima, Informacione tehnologije IT'14, Žabljak, Crna gora, pp. 177-180.
 43. Isak Karabegović, **Ermin Husak**, Milena Đukanović, Edina Karabegović, Mehmed Mahmić: Primjena senzora u mehatroničkim sistemima za održavanje vozila na kolovozu, 28. Međunarodni simpozij “Elektroinženjerski simpozij” Nove tehnologije - EIS 2014 – SONT 2014, Hrvatska, Šibenik, 06.05.2014, S3 (ISSN:1848-0772) pp.54-59.
 44. **Ermin Husak**, Isak Karabegović, Milena Đukanović, Mehmed Mahmić: Optimizacija struktura u razvoju mikro-elektro-mehaničkih sistema, 28. Međunarodni simpozij “Elektroinženjerski simpozij” Nove tehnologije - EIS 2014 – SONT 2014, Šibenik, 06.05.2014, S3 (ISSN:1848-0772) pp.60-64.
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60. Isak Karabegović, Sanel Keranović, **Ermin Husak**: Mehatronički system za transport slobodnim padom 3 metra u procesnoj industriji mlijeka, *26. Međunarodni simpozij "Elektroinženjerski simpozij" Nove tehnologije -EIS 2013*, Šibenik, 05-08.05.2013, S13 (ISSN:1848-0772) pp.38-41.
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66. **Ermin Husak**, Isak Karabegović, Safet Isić, Edina Karabegović: Application Of New Optimization Methods In Structural Desing, *2th International Scientific Conference on Engineering MAT 2012*, Antalya 22-24. November, Antalya, Turkey, ISSN 1986-9126: 2012., pp. 140-143.

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Učešće u projektima

1. COST Action CA16222, Wider Impacts and Scenario Evaluation of Autonomous and Connected Transport, MC Substitute, 2017-2021.
2. COST Action CA16226, COST Association, Indoor living space improvement: Smart Habitat for the Elderly, MC Substitute, 2017-2021.
3. Razvoj i primjena industrijskih i servisnih robota u proizvodnim procesima, Naučno-tehnološka saradnja između BiH i R. Slovenije, Federalno ministarstvo obrazovanja i nauke, Mostar, 2016-2017.
4. Razvoj servisne robotike i njena aplikacija u proizvodnim procesima i neproizvodnim uslugama, Naučno-tehnološka saradnja između BiH i Crne Gore, Federalno ministarstvo obrazovanja i nauke, Mostar, 2016-2017.
5. Mehatroničke komponente u mehatroničkim sistemima – razvoj i primjena senzora, Zajedničko naučni istraživački projekt u okviru naučne i tehnološke saradnje između BiH i Crne Gore, Federalno ministarstvo za obrazovanje i nauku, Mostar, 2014-2016
6. Razvoj i primjena inteligentnih sistema u proizvodnim procesima zavarivanja, Zajedničko naučni istraživački projekt u okviru naučne i tehnološke saradnje između BiH i Crne Gore, Federalno ministarstvo za obrazovanje i nauku, Mostar, 2011-2013.
7. Razvoj i primjena modernih tehnologija i metoda za izradu proizvoda, Naučno tehnološka saradnja između BIH i R Slovenije, Federalno ministarstvo za obrazovanje i nauku, Mostar, 2011-2013.
8. Inteligentni sistemi pri upravljanju industrijskim robotima u procesu zavarivanja, Federalno ministarsvo obrazovanja i nauke, sarajevo, 2008-2010.
9. U realizaciji projekta u saradnji sa WUS Austrija «RAZVOJ MAGISTARSKOG STUDIJA IZ MAŠINSTVA» kao asistent. 2009-2011.

Učešće u seminarima

1. Ermin Husak, Ahmed Kovacevic, Isak Karabegović: Numerical Analysis of Screw Compressor Deformations, Akademija nauka i umjetnosti Bosne i Hercegovine Sarajevo, Prošireni tematski sastanak KOMPJUTERSKA DINAMIKA FLUIDA (CFD) U BiH: stanje i perspektive u energetici, procesnoj i prerađivačkoj industriji, okolišu i drugim relevantnim oblastima, 12. decembra 2018.
2. Isak Karabegović, Ermin Husak: „*Upravljanje robotima*“, prezentacija, Seminar: Transfer novih tehnologija, Bihać, novembar 2009.
3. Isak Karabegović, Ermin Husak: „*Programiranje robota*“, prezentacija, Seminar: Transfer novih tehnologija, Bihać, novembar 2009.

4. Ermin Husak: „Upravljanje i programiranje u robotici“, Seminar: Mala škola robotike (za osnovne škole) I ciklus, Bihać, juli 2010.
5. Ermin Husak: „Primjena Z Corp 3D tehnologija na Tehničkom fakultetu Bihać“, prezentacija, Seminar: Kako odabrati odgovarajući Rapid Prototyping sistem?, Bihać, 21. novembar 2010.
6. Ermin Husak: Programiranje malog petoosnog simulacijskog robota Staudinger, Seminar „Mala škola robotike“ (za osnovne škole) II ciklus, Bihać, Oktobar 2010.
7. Ermin Husak: Model i radni prostor industrijskog robota, Seminar „Mala škola robotike“ (za osnovne škole) III ciklus, Bihać, Novembar 2010.

Pohađanje seminara

- **Razvoj magistarskih studija – WUS Austria (Banja Luka),**
- **Razvoj doktorskih studija-WUS Austria (Mostar),**
- **Evaluacija studijskih programa 2010 (Mostar).**
- Pohađao kurs iz Catia
- Pohađao kurs iz Simufact
- Pohađao kurs iz 3D printer Zprint 510
- Pohađao kurs iz Festo Didactic – pneumatika
- Pohađao kurs iz Festo Didactic – hidraulika
- Pohađao kurs iz Festo MPS 500
- Pohađao kurs iz programiranja Kuka Robot
- Pohađao kurs za simulaciju Kuka.Sim
- Pohađao kurs za Esprit – tokarenje i glodanje.
- **Rad u AutoCad.**

Ostale aktivnosti

- Član organizacionog odbora naučne konferencije RIM 2009.
- Član organizacionog odbora naučne konferencije RIM 2011.
- Tehnička obrada knjige „Servisni roboti“ autora Isaka Karabegovića i Vlatka Dolečeka, Izdavač: Društvo za robotiku Bosne i Hercegovine, Bihać, 2012.
- Tehnička obrada monografije: „Nove tehnologije u procesima zavarivanja“, Izdavač: Mašinski fakultet Mostar, Mostar 2013.
- Tehnički urednik zbornika radova „Nove Tehnologije“ sa prve naučne konferencije NT 2014. 25 april 2014.
- Tehnička obrada udžbenika- monografije: Nove tehnologije u proizvodnim procesima, Izdavač: Mašinski fakultet Mostar, Mostar 2014.
- Tehnički urednik zbornika radova „Nove Tehnologije“ sa druge naučne konferencije NT 2015, 24-25 april 2015.
- Član programskog odbora naučne konferencije NT 2015.
- Član Međunarodnog organizacionog odbora SONT 2015 – Dani Josipa Lončara Zagreb 11. – 12. 05. 2015. Zagreb.
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- Tehnički urednik knjige abstrakata naučne konferencije NT 2015
- Tehnički urednik knjige abstrakata naučne konferencije NT 2016
- Član programskog odbora naučne konferencije NT 2016.
- Član organizacionog odbora naučne konferencije NT 2018.

- Tehnički urednik knjige abstrakata naučne konferencije NT 2018

Naučni odbori:

- Član naučnog odbora (scientific committee) International Conference on Compressors and their Systems 2017, London 2017.
- Član naučnog odbora konferencije RIM 2017.
- Član naučnog odbora konferencije New Technologies, Development and Application NT2018
- Član naučnog i organizacionog odbora The International Symposium on Robotics and Biomedical Engineering – ISRBE 2018, 10th days of BHAAAS in Bosnia and Herzegovina
- Član naučnog odbora konferencije New Technologies, Development and Application NT2019
- Član naučnog odbora konferencije RIM 2019.

Recenzent:

- International Conference on Compressors and their Systems 2017, London 2017.
- New Technologies, Development and Application (NT2018). Springer.
- New Technologies, Development and Application II (NT2019). Springer.
- Handbook of Research on Integrating Industry 4.0 in Business and Manufacturing, IGI Global.

Diplomski radovi:

Mentor:

1. Hrnjica Sanela: „Uvijanje štapova nekružnih poprečnih presjeka“, 12.04.2018.
2. Haskić Eržad: „Analiza torzionih vibracija vratila“, 21.02.2018.

Član:

1. Malkoč Zuhdija, Primjena drveta u izradi krovnih konstrukcija, 6.12.2019.
2. Dervišević Alaga, Projekat niskoenergetskog porodičnog stambenog objekta, 29.10.2018.
3. Karabegović Đulaga: „Programiranje robota Kuka KR 16-2 u procesu zavarivanja“, 22.02.2018.
4. Begić Aladin: „Analiza deformacija i napona kod statički neodređenih greda“, 8.01.2018.

Dr. sc. Ermin Husak

Bihać, 11.01.2020. godine