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RESEARCH INTERESTS

- Manufacturing / Characteristics of Shape Memory Alloys
- Nanocomposites
- Powder Metallurgy
- Simulation of Metallurgical Process
- Welding processes/metallurgy

POSITIONS HELD

2022-now	Materials Engineering Department, Shahid Rajaei Teacher Training University	Associate Professor
2021-now	Materials Engineering Department, Shahid Rajaei Teacher Training University	Head of Metallurgy Group
2016-2022	Materials Engineering Department, Shahid Rajaei Teacher Training University	Assistant Professor
2014-2015	Iranian Welding Research and Engineering Center (IWREC)	Training Center Manager
2012-2014	Asia Nama CNG Cylinder Co.	Head of Education Center
2008-2012	Materials Engineering Department, University of Applied Science and Technology (UAST)	Lecturer
2006-2008	Biomaterials Group, Department of New Materials, Material and Energy Research Center (MERC)	Research Assistant
2004-2006	Rapid Solidification Lab., Research Center of Development in Technology, ACECR, Sharif University of Technology	Research Assistant

EDUCATION

- 2011-2016: **PhD.**, Metallurgy Engineering
Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
Dissertation: Investigating the effect of breakage and coalescence on optimum DSD in SX process: Experimental study & CFD simulation
Advisor: A/Prof. E. Keshavarz Almadari, Co-Advisor: Prof. S. H. Hashemabadi
- 2004-2006: **MSc.**, Metallurgy Engineering
Sharif University of Technology, Tehran, Iran
Thesis: Investing in optimization methods of electrical energy consumption in an electric arc furnace
Advisor: Prof. S. K. Sadrnezhad
- 1999-2004: **BSc.**, Metallurgy Engineering
Iran University of Science and Technology (IUST), Tehran, Iran
Project: The influence of carbon, mechanical activation and carbonated additives on the direct reduction of iron oxide pellets
Advisor: Prof. J. Vahdati Khaki
- 1995-1999: **Diploma**, Mathematics and Physics
Special Talent School, Iran

AWARDS AND HONORS

- 1- Active Researcher Award, Shahid Rajaei Teacher Training University, Iran, 2021
- 2- Distinguished Researcher Award, Shahid Rajaei Teacher Training University, Iran, 2020
- 3- Excellent Teaching Award, Shahid Rajaei Teacher Training University, Iran, 2020
- 4- Active Researcher Award, Shahid Rajaei Teacher Training University, Iran, 2018
- 5- Author of two hot papers according to the web of science (WOS) report, 2018
- 6- Author of two highly cited papers according to the web of science (WOS) report, 2018
- 7- Ranked 3rd in swimming Competition, Shahid Rajaei Teacher Training University, Iran, 2016
- 8- Reviewer for eminent journal of “Ceramics International” (2016-now)

STUDENTS

Ph.D. STUDENT (Advisor)

- 1- Habibollah Kakolvand, Department of Civil Engineering, West Tehran Branch, Islamic Azad University, Tehran, Iran, 2017-2021.

M.Sc. STUDENTS (SUPERVISION)

- 1- Haniyeh Gholami, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2018-2021.
- 2- Vahid Shoorideh, Department of Metallurgy Engineering, Islamic Azad University, Tehran, Iran, 2017-2019.

M.Sc. STUDENTS (CO-SUPERVISION)

- 1- Sanaz Moein, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2020-now.
- 1- Zahra Alirezaee, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2020-now.
- 2- Mehdi ghorbani, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2019-now.
- 3- Meysam Eksiri, Department of Mechanical Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2019-2022.
- 4- Tahereh Poordehghan, Department of Physics, Shahid Rajae Teacher Training University, Tehran, Iran, 2019-2022.
- 5- Hossein Khedmati, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2019-2022.
- 6- Sepideh Mohammadali, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2019-2021.
- 7- Haniyeh Baghbani Javid, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2018-2020.
- 8- Amir Hossein Lashgari, Department of Mechanical Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2017-2019.
- 9- Fatemeh Salehi, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2017-2019.
- 10- Nafiseh Malae, Department of Metallurgy Engineering, Shahid Rajae Teacher Training University, Tehran, Iran, 2016-2018.

B.Sc. STUDENTS (SUPERVISION)

Supervision of more than 100 final projects, Shahid Rajae Teacher Training University and University of Applied Science and Technology (UAST), 2008-now.

PUBLICATIONS

AUTHORED BOOKS

- 1- A. Jazayeri, J. Mola, B. Binesh, M. Kiani, H. Arooni, R. Bakhtiari, M. Esfahani, S. Mirzaee, **S. Parvizi**, RAPID SOLIDIFICATION TECHNOLOGY and its application in the production of amorphous & nanocrystalline materials, ACECR-Sharif University Branch Press, 2011 [In Persian].

- 2- **S.Parvizi**, M. Moradi, WELDING (Process and Metallurgy), Shahid Rajaee Teacher Training University Press, 2nd Ed. 2022, [In Persian].

AUTHORED BOOK CHAPTERS

- 1- **Soroush Parvizi**, Sanaz Moein, Mahdi Hashemi, “NiTi-based Shape Memory Alloys”, NICKEL-TITANIUM SMART HYBRID MATERIALS, S. Thomas, A. Behera and T. A. Nguyen (Eds.), ISBN: 9780323911733, **Elsevier**, 2022, 399-426.
- 2- Fatemeh Asgarinia, **Soroush Parvizi** “Biomedical Applications of NiTi”, NICKEL-TITANIUM SMART HYBRID MATERIALS, S. Thomas, A. Behera and T. A. Nguyen (Eds.), ISBN: 9780323911733, **Elsevier**, 2022, 297-325.
- 3- Fatemeh Asgarinia, Seyed Mahdi Hashemi, **Soroush Parvizi** “Heat Treatment of NiTi Alloys”, NICKEL-TITANIUM SMART HYBRID MATERIALS, S. Thomas, A. Behera and T. A. Nguyen (Eds.), ISBN: 9780323911733, **Elsevier**, 2022, 69-101.

JOURNAL PAPERS

- 1- M. Shahedi Asl, B. Nayebi, **S. Parvizi**, Z. Ahmadi, N. Parvin, M. Shokouhimehr, M. Mohammadi, Toughening of ZrB₂-based composites with in-situ synthesized ZrC from ZrO₂ and graphite precursors, Journal of Science: Advanced Materials and Devices, Vol. 6, pp. 42-48, 2021.
- 2- N. Mollaei, **S. Parvizi**, B. Nami, S. M. Miresmaili, A. Abedi, A Comprehensive Review of Studies on Impression Creep Behavior of Magnesium-Zinc Alloys, Journal of Mechanical Engineering, Vol. 51, pp. 223-228, 2021 [In Persian].
- 3- S. M. Hashemi, **S. Parvizi**, H. Baghbanijavid, A. T. L. Tan, M. Nematollahi, A. Ramazani, N. X. Fang, M. Elahinia, Computational modelling of process–structure–property–performance relationships in metal additive manufacturing: a review, **International Materials Reviews**, pp. 1-46, 2021. (IF: 19.559)
- 4- H. Kakolvand, M. Ghazi, B. Mehrparvar, **S. Parvizi**, Experimental and Numerical Study of a New Proposed Seismic Isolator Using Steel Rings (SISR), Journal of Earthquake Engineering, pp. 1-30, 2021.
- 5- **S. Parvizi**, S. M. Hashemi, F. Asgarinia, M. Nematollahi, M. Elahinia, Effective parameters on the final properties of NiTi-based alloys manufactured by powder metallurgy methods: A review, **Progress in Materials Science**, Vol. 117, pp. 100739-100783, 2021. (IF: 39.580)
- 6- A. Sabahi Namini, S. A. Delbari, B. Nayebi, M. Shahedi Asl, **S. Parvizi**, Effect of B₄C content on sintering behavior, microstructure and mechanical properties of Ti-based composites fabricated via spark plasma sintering, Materials Chemistry and Physics, Vol. 251, pp. 1-10, 2020.
- 7- **S. Parvizi**, H. Torabian, N. Mollaei, A. Garshasbi, Experimental Investigation of Mechanical Properties of AA 6061 / SiC Nano-Composite Produced by Multistep FSP, Journal of Mechanical Engineering, Vol. 50, pp. 55-60, 2020 [In Persian].

- 8- Z. Ahmadi, B. Nayebi, **S. Parvizi**, M. Shahedi Asl, M. Shokouhimehr, Phase transformation in spark plasma sintered ZrB₂-V-C composites at different temperatures, *Ceramics International*, Vol. 46, pp. 9415-9420, 2020. [Hot paper & Highly cited paper]
- 9- M. Sakkaki, F. S. Moghanlou, **S. Parvizi**, H. Baghbanijavid, A. Babapoor, M. Shahedi Asl, Phase change materials as quenching media for heat treatment of 42CrMo4 steels, *Journal of Central South University*, Vol. 27, pp. 752-761, 2020.
- 10- M. Mollaei, B. Nami, **S. Parvizi**, Effect of final aging heat treatment on microstructure and mechanical properties of IN792, *Journal of Mechanical Engineering*, Vol. 49, pp. 319-325, 2019 [In Persian].
- 11- B Nayebi, Z Ahmadi, MS Asl, **S Parvizi**, M Shokouhimehr, "Influence of vanadium content on the characteristics of spark plasma sintered ZrB₂-SiC-V composites", *Journal of Alloys and Compounds*, Vol. 805, pp. 725-732, 2019. [Hot Paper]
- 12- Z. Ahmadi, M. Jaber Zamharir, M. Shahedi Asl, **S. Parvizi**, Effect of nano-graphite addition on the densification of ZrB₂-SiC composites fabricated by spark plasma sintering, *New Process in Material Engineering*, 2019 [In Persian].
- 13- M. Shahedi Asl, B. Nayebi, Z. Ahmadi, **S. Parvizi**, M. Shokouhimehr, A novel ZrB₂-VB₂-ZrC composite fabricated by reactive spark plasma sintering, *Materials Science and Engineering: A*, Vol. 731, pp. 131-139, 2018.
- 14- **S. Parvizi**, Z. Ahmadi, M. Jaber Zamharir, M. Shahedi Asl, Synergistic effects of graphite nano-flakes and submicron SiC particles on the characteristics of spark plasma sintered ZrB₂ nanocomposites, *International Journal of Refractory Metals and Hard Materials*, Vol. 75, pp. 10-17, 2018. [Highly cited paper]
- 15- M. Shahedi Asl, M. Jaber Zamharir, Z. Ahmadi, **S. Parvizi**, Effects of nano-graphite content on the characteristics of spark plasma sintered ZrB₂-SiC composites, *Materials Science and Engineering: A*, Vol. 716, pp. 99-106, 2018. [Highly cited paper]
- 16- M. Shahedi Asl, M. Jaber Zamharir, Z. Ahmadi, **S. Parvizi**, Influence of nano-graphite addition on hardness and fracture toughness of ZrB₂-SiC composites fabricated by spark plasma sintering, *Iranian Journal of Ceramic Science & Engineering*, 2018 [In Persian].
- 17- M. Shahedi Asl, Z. Ahmadi, **S. Parvizi**, Z. Balak, I. Farahbakhsh, Contribution of SiC particle size and spark plasma sintering conditions on grain growth and hardness of TiB₂ composites, *Ceramics International*, Vol. 43, No. 16, pp. 13924-13931, 2017.
- 18- **S. Parvizi**, E. Keshavarz Alamdari, S. H. Hashemabadi, M. Kavousi, A. Sattari, "Investigating factors affecting the efficiency of dynamic mixers", *Mineral Processing and Extractive Metallurgy Review*, pp. 1-27, 2016.
- 19- **S Parvizi**, EK Alamdari, SH Hashemabadi, S Aosati, "CFD Simulation and Experimental Study of Impeller Speed and Clearance Effects in the Mixer of Copper Solvent Extraction Unit", *Indian journal of science and technology*, Vol. 9(S1), pp. 1-9, 2016.

- 20- **S. Parvizi**, V. Hasannaemi, E. Saebnoori, T. Shahrabi, S. K. Sadrnezhaad, "Shear punch investigation of porous NiTi shape memory alloy synthesized from mechanically alloyed powder", *Russian Journal of Non-Ferrous Metals*, Vol. 53 pp. 169-175, 2012.
- 21- F. Nematzadeh, M. R. Akbarpour, **S. Parvizi**, A. H. Kokabi, S. K. Sadrnezhaad, "Microstructural evolution and mechanical properties of gas tungsten arc welded (GTAW) Udimet 520 superalloy", *Materials and Design*, Vol. 36, pp. 94-99, 2012.
- 22- **S. Parvizi**, H.R. Hafizpour, S.K. Sadrnezhaad, M. Abbasi Gharacheh, A. Akhondzadeh, "Neural network prediction of mechanical properties of porous NiTi shape memory alloy", *Materials and design*, Vol. 54, pp. 450-454, 2011.
- 23- H.R. Hafizpour, A.Simchi, **S.Parvizi**, "Analysis of the compaction behavior of Al-SiC nanocomposites using linear and non-linear compaction equations", *Advanced Powder Technology*, Vol. 21, pp. 273-278, 2010.
- 24- **S. Parvizi**, H.R. Hafizpour, S.K. Sadrnezhaad, A. Sangghaleh, M. Abbasi Ghorcheh, and P. Mehdizade Tehrani, "An investigation on the mechanical properties of porous NiTi shape memory alloy prepared by powder metallurgical method", *Iran Wire Industries Magazine*, Vol. 24, pp. 22-28, 2010 [In Persian].
- 25- P. M. Tehrani, M. Shahedi Asl, M. R. Forouzanmehr, **S. Parvizi**, "The effect of furnace temperature and hot drying duration survey on surface roughness of manganese phosphate coating on cast iron", *Journal of Iran Foundry*, Vol. 52, pp. 52-57, 2009 [In Persian].
- 26- H. Fakhr Nabavi, **S. Parvizi**, S.K. Sadrnezhaad, M. Khoramnia, "Investigation of carbon percentage in DRI & method of carbonous materials addition on electric arc furnace steelmaking costs", *Journal of Metallurgical Engineering*, Vol. 30, pp. 9-13, 2008 [In Persian].
- 27- P. Mehdizadeh Tehrani, M. Shahedi Asl, M.R. Forouzanmehr and **S. Parvizi**, Effects of furnace temperature and hot drying duration survey on surface roughness of manganese phosphate coating on cast iron, *Journal of Iran Foundry Syndicate*, Vol. 52, pp. 52-57, 2008 [In Persian].

CONFERENCE PAPERS

- 1- F. Olfat, **S. Parvizi**, "A review of the effect of magnesium and its alloys on the characteristics of NiTi shape memory alloy", 8th International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat 2019), 7-9 Oct., Tehran, Iran.
- 2- **S. Parvizi**, V. Shourideh, M. Rajabiani, M. Moradi, "Investigating the effect of martempering temperature and time on mechanical properties of weld zone of grey cast iron", 8th International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat 2019), 7-9 Oct., Tehran, Iran.
- 3- H. Baghbanijavid, M. S. Mahdi, A. Karimzaee, **S. Parvizi**, "Investigating the effect of heat treatment temperature and time on mechanical properties of SMAW weld zone of AA6061", 8th International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat 2019), 7-9 Oct., Tehran, Iran.

- 4- Z. Zare ee, **S. Parvizi**, "The effect of time and temperature on microstructure and mechanical properties of HAZ and weld zone of ST37", 8th International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat 2019), 7-9 Oct., Tehran, Iran.
- 5- N. Molaee, B. Nami, **S. Parvizi**, S.M. Miresmaeeli, I. Khoobroo, "Investigating the microstructure and impression creep behavior of as-cast and heat-treated ZC63", 8th International Conference & Exhibition on Materials Science & Metallurgical Engineering (iMat 2019), 7-9 Oct., Tehran, Iran.
- 6- V. Shourideh, **S. Parvizi**, "Investigating the effect of the rotational and linear speed of FSW joint between Al6061 and AZ31", 7th International Conference on Materials Engineering and Metallurgy (iMat 2018), 9-10 Oct., Tehran, Iran.
- 7- F. Asgarinia, **S. Parvizi**, "Affecting parameters on properties of NiTi alloys produced from novel methods of powder technology-A review", 6th International Conference on Materials Engineering and Metallurgy (iMat 2017), 28-29 Oct., Olympic Hotel, Tehran, Iran.
- 8- H.R. Hafizpour, S. Hosseinpour, **S. Parvizi**, S.M. Seyed Reihani, "Prediction of the mechanical properties of porous NiTi shape memory alloy using an artificial Neural Network", The third joint conference of Iranian metallurgical engineers' society and Iranian foundry society, 2009, 17-18 November, Kerman, Iran.
- 9- H.R. Hafizpour, A. Simchi, **S. Parvizi**, "Effect of lubricant on the densification mechanisms of Al-SiC composite powders under cold and warm uniaxial pressure", The third joint conference of Iranian metallurgical engineers' society and Iranian foundry society, 2009, 17-18 November, Kerman, Iran.
- 10- F. Nematzadeh, **S. Parvizi**, S.K. Sadrnezhaad, "Investigation of martensitic transformation, shape memory properties and mechanical properties of porous NiTi shape memory alloy prepared by powder metallurgical method", The second joint conference of Iranian metallurgical engineers' society and Iranian foundry society, 2008, 18-19 November, Azad University-Karaj branch, Karaj, Iran.
- 11- A. Ferdowsi, H. Fakhrnabavi, **S. Parvizi**, S.K. Sadrnezhaad, M. Khoramnia, D. Khamisi, D.Soltani "Energy and mass balance in steelmaking electric arc furnaces", Fuel, energy and environment national conference, 2008, 27-29 May, Material and Energy Research Center, Karaj, Iran.
- 12- **S. Parvizi**, H.R. Hafizpour, S.K. Sadrnezhaad, A. Sangghaleh, M. Abbasi Ghorcheh, and P. Mehdizade Tehrani, "An investigation on the mechanical properties of porous NiTi shape memory alloy prepared by powder metallurgical method", The first joint conference of Iranian metallurgical engineers' society and Iranian foundry society, 2007, 23-25 October, Esfahan Steel Company, Isfahan, Iran.
- 13- H. Fakhrnabavi, **S. Parvizi**, S.K. Sadrnezhaad, and M. Khoramnia, "Effect of sponge iron carbon content on energy consumption in Electric Arc Furnace", The first joint conference of Iranian metallurgical engineers' society and Iranian foundry society, 2007, 23-25 October, Esfahan Steel Company, Isfahan, Iran.
- 14- **S. Parvizi**, H. Fakhrnabavi, S.K. Sadrnezhaad, M. Khoramnia, and M. Rasti, "Effect of charging of hot materials and molten iron on reduction of electric-energy consumption and increasing of efficiency in Electric Arc Furnaces", 85 Steel Symposium, 2007, 27-28 February, Amirkabir University of Technology, Tehran, Iran.

- 15- P. Mehdizadeh Tehrani, M. Shahedi Asl, M. R. Forouzanmehr, **S. Parvizi**, "The effect of furnace temperature and hot drying duration survey on surface roughness of manganese phosphate coating on cast iron", 8th Iranian national seminar on surface engineering & heat treatment, 2007, 8-9 May, Shahid Bahonar University, Kerman, Iran.
- 16- S. K. Sadrnezhaad, **S. Parvizi**, "Optimization of energy consumption in Electric Arc Furnace", Sharif University Research Proceedings, 2006-2007, Sharif University of Technology, Tehran, Iran.
- 17- H. Fakhrnabavi, **S. Parvizi**, S. K. Sadrnezhaad, Effect of hot charge on the consumption of electricity and cost of production in Electric Arc Furnace, 10th Annual congress of Iranian metallurgical engineers' society, Mashhad University, 2006, 14-15 November, Ferdowsi University of Mashhad, Mashhad, Iran.

CERTIFICATES

- Fundamental of **CFD simulation**, Issued by professional CFD center of Iran university of science and technology, 08/2013
- **ANSYS-FLUENT** educational course, AmirKabir university of technology, 2013
- Attendance in the 4th National Conference on **CFD Applications in Chemical & Petroleum Industries**, Petroleum University of Technology, 05/2012
- **TOEFL (PBT, 2011)**: Total score:**527**, TWE (writing):**3**
- Nondestructive Testing, **NDT Level II in the Method of Visual Testing (VT)**, According to the American Society for Nondestructive Testing (ASNT), Issued by Iranian Welding Research & Engineering Center, 01/2010
- Nondestructive Testing, **NDT Level II in the Method of Ultrasonic Testing (UT)**, According to the American Society for Nondestructive Testing (ASNT), Issued by Iranian Welding Research & Engineering Center, 01/2010
- Nondestructive Testing, **NDT Level II in the Method of Magnetic Testing (MT)**, According to the American Society for Nondestructive Testing (ASNT), Issued by Iranian Welding Research & Engineering Center, 03/2010
- Nondestructive Testing, **NDT Level II in the Method of Radiographic Testing Interpretation (RTI)**, According to the American Society for Nondestructive Testing (ASNT), Issued by Iranian Welding Research & Engineering Center, 09/2010
- **Educational workshop in evaluation and supervision system** in University of Applied Science & Technology (UAST), Issued by University of Applied Science & Technology, 05/2010
- **Quality Management System** in accordance with **ISO 9001: 2008** Series, Issued by TUV Academy (Iran-Germany), 06/2010
- **Basic Hydraulic**, Issued by FESTO Didactic Iran, 02/2010

- **Public Quality Control**, Issued by Industrial Research and Training Center of Iran (IRTCI), 11/2009
- **Welding Quality Control**, Sharif Center for Technical and Applied Education, 09/2008