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Dr. Amin Jafari Ramiani

Assistant Professor

Department of Materials and Metallurgical
Engineering

Material Synthesis and Manufacturing

Supervised MSc Theses

#	Thesis title	By	Date
1	coating of polycaprolactone/hydroxyapatite composite with carbon nanotubes to improve mechanical properties and cell adhesion of bone tissue engineering scaffolds	Samane Mohammadpour & Amin Jafari Ramiani	September 2020
2	Investigation of contribution of particle shape and size to strength and reducibility of iron ore pellets	Aliakbar Haji Zeynali Biyoki & Amin Jafari Ramiani	August 2020
3	Modeling of conner -block section for eliminating of shrinkage in the grey iron casting	Sina Balouti & Amin Jafari Ramiani	July 2019
4	Numerical Simulation of heat transfer and prediction of thermal efficiency in direct reduction of iron in tunnel kiln	Sohrab Salimi Bani & Amin Jafari Ramiani	July 2019
5	Modeling of Welding Plasma Arc and its contribution to Heat and Flow of the TIG Weld pool of Stainless Steel	Ramin Ebadi Aghmiuni & Amin Jafari Ramiani	May 2019
6	Numerical simulation of melt flow and distribution of the oxide particles in A-TIG weld pool of 304L stainless steel	Sara Pourmand & Amin Jafari Ramiani	February 2019

Journal Papers

Portal Records


- 1 Amin Jafari Ramiani, Dorsa Yousefi, Mahdiye Sadat Mohajeri, "Iterative Standard Strategy for Non-Linear Optimization in Melting Furnace Charge Calculations", INTERNATIONAL JOURNAL OF METALCASTING, October 2021 Vol. 0, Num. 0, Page 1-10, October 2021,
- 2 Mina Salehi, Seyed Mohammad H. Mirbagheri, Amin Jafari Ramiani, "Efficient energy absorption of functionally-graded metallic foam-filled tubes under impact loading", TRANSACTIONS OF NONFERROUS METALS SOCIETY OF CHINA, January 2021 Vol. 31, Num. 1, Page 92-110, January 2021,
- 3 Amin Jafari Ramiani, "Phase change modelling with flexible source-based kinetics for non-equilibrium transitions", INTERNATIONAL JOURNAL OF THERMAL SCIENCES, September 2020 Vol. 159, Num. 106608, Page 1-15, September 2020,
- 4 Sara Pourmand, Amin Jafari Ramiani, Alireza Ebrahimi, "Numerical investigation of heat, flow and particle trajectory in A-TIG welding pool of 304L-SS", Welding in the World, August 2020 Vol. 0, Num. 0, Page 1-13, August 2020,
- 5 Seyed Mohammad H. Mirbagheri, Mina Salehi, Amin Jafari Ramiani, "Plastic deformation modeling of foam-filled tubes with multi-layer foams during compression loading", Iranian journal of Materials Forming, October 2019 Vol. 6, Num. 2, Page 62-81, October 2019,








Conference Papers

Portal Records

- 1 Amin Jafari Ramiani, Dorsa Yousefi, "Furnace Charge Calculation Model Considering Losses of Materials and Elements, Case Study: Melting of Manganese Steel ", Iranian Steel Symposium 98, February 2020
- 2 Sohrab Salimi Bani, Amin Jafari Ramiani, Sadegh Firoozi, "Simulation of heat transfer and prediction of direct reduction of hematite in Sponge Iron Production in tunnel kiln ", 8th INTERNATIONAL CONFERENCE ON MATERIALS ENGINEERING AND METALLURGY, October 2019
- 3 Ramin Ebadi Aghmiani, Amin Jafari Ramiani, Alireza Ebrahimi, "Numerical Simulation of Plasma Arc in A-TIG Welding of Stainless Steel ", IMAT 98 - 8th International Conference on Materials Engineering and Metallurgy, October 2019
- 4 Delaram Mansourian, M.R. Aboutalebi, S.H. Seyedein, Amin Jafari Ramiani, "Numerical Simulation of Fluid flow in Columnar Mixer-Settler of Solvent Extraction Process ", IMAT 98 - 8th International Conference on Materials Engineering and Metallurgy, October 2019
- 5 Soroor Sarvarian, Amin Jafari Ramiani, Davoud Haghshenas, "MODELING AND SIMULATION OF REACTION KINETICS OF DIRECT REDUCTION OF IRON ", Iranian Steel Symposium 97, February 2019
- 6 Sara Pourmand, Amin Jafari Ramiani, Alireza Ebrahimi, "Numerical Simulation of Melt flow and Particle distribution in Weld Pool of 304L Stainless Steel ", 7th International Conference on Materials Engineering and Metallurgy, October 2018
- 7 Amin Jafari Ramiani, Seyed Mohammad H. Mirbagheri, Mohammad Mahdi Izadi, Javad Zarei, "NUMERICAL CALCULATION OF CHARGE WEIGHT FOR MELTING STEEL IN INDUCTION FURNACE: COMPARISON OF OPTIMIZATION FOR MINIMUM PRICE AND CLASSICAL MASS BALANCE ", Iran Steel Symposium, February 2018
- 8 Amin Jafari Ramiani, S. H. Seyedein, M. R. Aboutalebi, D. G. Eskin, L. Katgerman, "Numerical Modeling of Macrosegregation in Direct-Chill Casting of Al-Cu Billets ", Iran International Aluminum Conference - IIAC2016, May 2016

Taught Courses

#	Course title	Description	Headlines	Date
1	Casting	(1) To get familiar with the literature of casting, (2) To get familiar with the technology of casting, (3) To know how to design a casting practice		Fall 2021

2	Engineering Calculations Workshop	(1) To get experience in engineering calculations, data processing and problem solving (2) To get skill with engineering calculation tools like spread sheet and MATLAB (3) To get familiar with CAD, CAE and post processing software		Fall 2021
3	INTRODUCTION TO METALLURGY AND MATERIALS ENGINEERING	(1) Identification of the national and international industrial opportunities in materials science and engineering, (2) To encourage and support students to be persuaded for their educations and career in MSE, (3) Introduction to Materials Science an		Fall 2021
4	Engineering Calculations Workshop	(1) To get experience in engineering calculations, data processing and problem solving (2) To get skill with engineering calculation tools like spread sheet and MATLAB (3) To get familiar with CAD, CAE and post processing software		Spring 2021
5	Fundamentals of Simulation of Metallurgical Processes	1. To introduce the principles of mathematical and physical modeling 2.To be introduced with Computational Fluid Dynamics (Finite Volume Method) 3.To get experienced with numerical simulation using a computational code 4. To be introduced with the ma		Spring 2021
6	Casting	(1) To get familiar with the literature of casting, (2) To get familiar with the technology of casting, (3) To know how to design a casting practice		Fall 2020
7	Engineering Calculations Workshop	(1) To get experience in engineering calculations, data processing and problem solving (2) To get skill with engineering calculation tools like spread sheet and MATLAB (3) To get familiar with CAD, CAE and post processing software		Fall 2020
8	INTRODUCTION TO METALLURGY AND MATERIALS ENGINEERING	(1) Identification of the national and international industrial opportunities in materials science and engineering, (2) To encourage and support students to be persuaded for their educations and career in MSE, (3) Introduction to Materials Science an		Fall 2020