

Curriculum Vitae



Name: DR. CHANDAN CHOUDHARY

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ACADEMIC CREDENTIALS

Class/ Degree	Specialization	Institute/ University	Year	CGPA/Perce ntage	Class/ Division
B.E	Mechanical & Production	Sathyabama University	2011	77.0%	1st
M.Tech	Met. & Mat.	N.I.T Durgapur	2014	8.47	1st
Ph. D	Met. & Mat.	N.I.T Durgapur	2020	Awarded in Dec. 2020	

ACADEMIC PROJECT WORKS

B.E.:

Title of Dissertation/Thesis	Supervisor/Guide	Institute/University
Fabrication of Compact Plate Fin Heat Exchanger for I.C. Engine and Performance Study of I.C. Engine.	Dr. S. Mahalingam	Sathyabama University, Chennai

M.Tech:

Title of Dissertation/Thesis	Supervisor/Guide	Institute/University
Development of aluminum-silicon (Al-Si) alloy through modified strain-induced melt activation process.	Prof. S.K. Mitra, Dr. Sukomal Ghosh and Dr. Durbadal Mandal	NIT Durgapur & CSIR-NML Jamshedpur

Ph. D:

Title of Dissertation/Thesis	Supervisor/Guide	Institute/University
Processing of aluminium-silicon alloys through strain-induced melt activation process and its characterization.	Dr. Durbadal Mandal & Dr. Kanai Lal Sahoo	NIT Durgapur & CSIR-NML Jamshedpur

KEY RESEARCH AREAS

Alloy Development, Materials Processing & Characterization, Materials Property Evaluation, Structure-Property Correlation, Manufacturing Technology, Fluid & Hydraulic Machinery.

EXPERIENCE

Sl. No.	Organization	Post	From	To	No. of Years
1	CSIR-National Metallurgical Laboratory, Jamshedpur, Jharkhand, India	M.Tech Trainee	April 2013	June 2014	1 year & 2 months
2	Netaji Subhas Institute of Technology, Bihta, Patna, Bihar, India	Assistant Professor	August 2014	July 2015	1 year
3	CSIR-National Metallurgical Laboratory, Jamshedpur, Jharkhand, India	PhD Trainee	August 2015	August 2020	5 years & 1 months
4	The Automotive Research Association of India, Pune, Maharashtra, India	Research Engineer	Sept. 2020	March 2021	7 months
5	Maharashtra Institute of Technology, Aurangabad	Assistant Professor	April 2021	Till Date	

HANDS ON MACHINE EXPERIENCE:

1. X-ray diffractometer (XRD)
2. Electron probe micro-analyzer (EPMA)
3. Optical microscope (OM)
4. Instron 50T tension-torsion testing machine (UTM)
5. Hot dip process simulator (HDPS)
6. Micro hardness testing machine
7. Dry sliding wear testing machine
8. Melting furnace
9. Heat treatment furnace
10. Bulk hardness testing machine

SOFTWARE SKILLS:

1. Microsoft office
2. Origin
3. FactSage
4. X'pert highscore plus
5. MatCalc Simulation Software

MEMBERSHIP OF PROFESIONAL BOADIES

Sl. No	Name of Professional bodies	Grade of	Membership no.
1	The Indian Institute of Metal	Associate Member	ASM-01-55696

WORKSHOP/SEMINAR ATTENDED

1. Short term course on Mechanical Behaviour and Materials Modelling of Materials, Organized by Metallurgical and Materials Engineering Department, NIT Durgapur, 06th – 10th February 2017.
2. Short term course on Processing, Characterization and Applications of Advanced Materials, Organized by Metallurgical and Materials Engineering Department, NIT Durgapur, 27th February – 3rd March 2017.
3. Two days' workshop programme on Hot Dip Galvanizing of Steels, Organized by CSIR-National Metallurgical Laboratory Jamshedpur, 21st – 22nd August 2017.
4. Short term course on Indian Iron and Steel Technologies: Challenges & Remedies, Organized by Metallurgical and Materials Engineering Department, NIT Durgapur, 09th – 13th December 2019.
5. ATAL Academy Faculty Development Programme on Recent Advances in Fluid and Thermal Engineering, Organized by Mechanical Engineering Department, NIT Durgapur, 17th – 21st December 2019.
6. Short term course on Computational Materials Modelling and Simulation, Organized by Metallurgical and Materials Engineering Department, NIT Durgapur, 17th - 21st February 2020.

7. One Week Faculty Development Programme on Research and Development in Materials Behaviour, Processing and Characterization Techniques, Organized by Mechanical Engineering Department, GLA University Mathura & IIM Mathura Chapter, 09th – 14th June 2020.

ONLINE WEBINAR ATTENDED

1. One day webinar on Machine Learning Guided Multi Scale Modelling, Organized by Metallurgical and Materials Engineering Department, NIT Durgapur in association with Centre of Alumni Affairs and International Relations (CAAIR) on 25.07.2020.
2. One day International webinar on “Global Steel Industry Sustainability (GSIS-2020)” organized by the Department of Metallurgical and Materials Engineering, National Institute of Technology, Durgapur in association with IIM Students Chapter at NIT Durgapur on 02.08.2020.
3. Eminent Alumni Lecture (EAL) ONLINE on ‘Open house interaction with students and research scholars of NIT Durgapur’ conducted by the Department of Metallurgical and Materials Engineering, National Institute of Technology, Durgapur in association with Centre of Alumni Affairs and International Relations (CAAIR) on 29.08.2020.
4. Eminent Alumni Lecture (EAL) ONLINE on ‘Exponential Technology: Building Better Planet’ conducted by the Department of Metallurgical and Materials Engineering, National Institute of Technology, Durgapur in association with Centre of Alumni Affairs and International Relations (CAAIR) on 04.09.2020.
5. ONLINE webinar on ‘Sintering Process and Technology under Indian Conditions’ conducted by the Department of Metallurgical and Materials Engineering, National Institute of Technology, Durgapur in association with IIM Student Chapter, NIT Durgapur on 13.09.2020.
6. ONLINE webinar on ‘Tough high-carbon martensite’ conducted by the Department of Metallurgical and Materials Engineering, National Institute of Technology, Durgapur in association with IIM Students’ Chapter, NIT Durgapur on 03.11.2020.
7. ONLINE webinar on ‘Accelerated development of high-performance magnetic materials for emerging technologies’ conducted by the Department of Metallurgical

- and Materials Engineering, National Institute of Technology, Durgapur in association with IIM Students' Chapter, NIT Durgapur on 06.11.2020.
8. ONLINE webinar on 'Multiscale and multi-physics simulations of chemo-mechanical crystal plasticity problems for complex engineering materials using DAMASK' conducted by the Department of Metallurgical and Materials Engineering, National Institute of Technology, Durgapur in association with IIM Students' Chapter, NIT Durgapur on 24.11.2020.
 9. ONLINE webinar on 'Processing, Properties, and Applications of different Classes of Titanium Alloys' conducted by the Department of Metallurgical and Materials Engineering, National Institute of Technology, Durgapur in association with IIM Students' Chapter, NIT Durgapur on 19.12.2020.
 10. ONLINE webinar on 'Ceramic Integration using Active Brazing and Diffusion Bonding' conducted by the Department of Metallurgical and Materials Engineering, National Institute of Technology, Durgapur in association with IIM Students' Chapter, NIT Durgapur on 09.01.2021.

PUBLICATIONS

SCI/Scopus:

1. D. Mandal, **Chandan Choudhary**, S.K. Mitra and Sukomal Ghosh "Microstructure and Mechanical Properties of Al-7Si alloy: Conventional and Modified Strain Induced Mechanical Activation (SIMA): A Comparative study" Indian Foundry Journal, 60 (9) (2014) 21-27
2. **Chandan Choudhary**, K. L. Sahoo and D. Mandal, Microstructure and Mechanical Properties of Al-Si alloys processed by strain induced melt activation, Materials Today: Proceedings 5 (2018) 27107-27111
3. D. Mandal, Laxmi Murmu, **Chandan Choudhary**, K.L Sahoo, Influence of Alloying Elements and Grain Refiner on Microstructure, Mechanical and Wear Properties of Mg-Al-Zn Alloys, Canadian Metallurgical Quarterly, 58 (2) (2019) 241-251

4. **Chandan Choudhary**, Kanai Lal Sahoo, Durbadal Mandal, Processing and characterization of modified strain-induced melt activation processed Al-Si alloys, *Materials Science & Technology*, 36 (2) (2020), 181-193
5. **Chandan Choudhary**, Kanai Lal Sahoo, Durbadal Mandal, The influence of modified SIMA process on the microstructure and mechanical properties of Sr modified Al-7Si alloys, Communicated.
6. **Chandan Choudhary**, Kanai Lal Sahoo, Durbadal Mandal, Evaluation of microstructure and mechanical properties of modified strain induced melt activated Al-7Si alloy, Communicated.
7. **Chandan Choudhary**, Yogesh Amhore, PK Ajeet Babu, U.S. Karle, Role of temperature and strain in hot compression and hot forging on microstructure of wrought AZ80A Mg alloy, Communicated.

Conference presentation/ Publication:

1. Chandan Choudhary, "Recent trends in Manufacturing," Institute of Engineers Chennai, 12th-13th February 2010.
2. D.Mandal, S.K. Sharma, **Chandan Choudhary**, K.L. Sahoo, "Effect of Processing Routes and Process Parameters on the Microstructure and Mechanical Properties Al-Cu-Mg alloy" The 4th International Conference on Advances in Materials & Materials Processing (ICAMMP-IV), IIT Kharagpur, 5-7th Nov 2016.
- 3.
4. **Chandan Choudhary**, K.L Sahoo, D. Mandal, "The effect of modified SIMA process on the microstructure and mechanical properties of Al-7Si alloy" 54th NMD and 70th ATM, IIT Kanpur, 11-14th Nov 2016 (Poster).
5. **Chandan Choudhary**, K.L Sahoo, D. Mandal, "Microstructure and mechanical properties of Al-Si alloys processed by Strain Induced Melt Activation" International Conference on Advance in Materials and Manufacturing (ICAMM-2016), Hyderabad, India, 08-10th Dec 2016 (full Paper)
6. **Chandan Choudhary**, K.L Sahoo, D. Mandal, "The Effect of Time on the Microstructure and Mechanical Properties of Modified SIMA Treated Al-7Si Alloy" International Conference on Advance in Materials and Manufacturing (ICAMM-2017), NIFFT, Ranchi, India, 19-21st Jan 2017 (full Paper)
7. **Chandan Choudhary**, D. Mandal, K.L. Sahoo, Effect of Grain Refiner and Modifier on Microstructure and Mechanical Properties of hypoeutectic Al-7Si alloy, 55th NMD and 71st ATM,2017, BITS Pilani, Goa 11-14th Nov 2017

8. Sk. Md. Arif, **Chandan Choudhary**, D. Mandal, K. L. Sahoo, Study on Microstructure and Mechanical Properties of Al-14Si alloy Processed by Modified SIMA, 55th NMD and 71st ATM,2017, BITS Pilani, Goa 11-14th Nov 2017.
9. **Chandan Choudhary**, K.L. Sahoo, D. Mandal, Influence of grain refiner on Microstructure and Mechanical Properties of Al-7Si alloy, International Conference on Advances in Materials & Processing: Challenges & Opportunity at IIT Roorkee, 30th Nov-2nd Dec 2017
10. **Chandan Choudhary**, K.L. Sahoo, D. Mandal, Microstructure and Mechanical Properties of Al-14Si alloy produced by Modified SIMA Processed, International Conference on Sustainable Manufacturing, Automation and Robotics Technologies (IC-SMART) at CSIR-CMERI, Durgapur, 15th -16th Dec 2017.
11. **Chandan Choudhary**, K.L. Sahoo, D. Mandal, Effect of modified SIMA process on Sr modified Al-7Si alloy, 56th NMD and 72nd ATM,2018, Kolkata, 14th -16th Nov 2018.
12. **Chandan Choudhary**, K.L Sahoo, D. Mandal "The Effect of Thermo-Mechanical Processing on the Microstructure and Mechanical Properties of Modified SIMA Treated Al-7Si Alloy": C. Chesonis (ed.) Light Metals 2019, The Metals & Materials Society 2019, San Antonio, Texas, USA 10th - 14th March 2019 https://doi.org/10.1007/978-3-030-05864-7_32 (TMS, Full Paper)
13. **Chandan Choudhary**, K. L. Sahoo, D. Mandal, Structure-Property correlation of Al- 7Si alloy processed by Modified Strain Induced Melt Activation (M-SIMA) Process, 57th NMD and 73rd ATM,2019, Kovalam, 14th -16th Nov 2019.
14. **Chandan Choudhary**, K.L. Sahoo, D. Mandal, A Novel Microstructure in Modified Strain Induced Melt Activation Process of Al Si-7wt% alloy, 57th NMD and 73rd ATM, 2019, Kovalam, 14th -16th Nov 2019.
15. **Chandan Choudhary**, K.L Sahoo, D. Mandal " The Effect of Modified Strain-Induced Melt Activation (Modified SIMA) Process on the Microstructure and Mechanical Properties of Al-7Si Alloy": Tomsett A. (eds) Light Metals 2020. The Minerals, Metals & Materials Series. Springer, Cham, San Diego, California, USA 23rd – 27th February 2020. https://doi.org/10.1007/978-3-030-36408-3_40 (TMS, Full Paper)
16. **Chandan Choudhary**, K.L. Sahoo, D. Mandal, Strain-Induced Melt Activation (SIMA): Benefits of air cooling over water quenching, National conference of Advancement in Materials Processing Technology, NIT Jamshedpur, 31st Oct.-02nd

Nov 2020.

HONORS/AWARDS:

1. **Chandan Choudhary**, K.L. Sahoo, D. Mandal, Enhancement of Mechanical Properties of Al-7Si alloy through Strain Induced Melt activation (SIMA) Process, CoE award on oral presentation, Student seminars on Behind the Teacher Desk (BTDD-2014) at CSIR-NML, Jamshedpur, 09-10th June 2016.
2. Gate qualified in the year 2011, 2012 and 2014 (Mechanical Engineering)
3. Won 3rd and 5th rank prize during B.E. semester Examination.
4. Ministry of Human Resource Development, Government of India, Fellowship for pursuing PhD (2015-2020).
5. Ministry of Human Resource Development, Government of India, Fellowship for pursuing M. Tech (2012-2014).
6. Received CSIR-Travel grant in the year 2020 to attend TMS meeting & Exhibition Conference 2020 at San Diego, California, USA.
7. Active article reviewer of International Journal of Metal Casting, Springer.

Date: 08th April 2021

Place: Aurangabad