

List of Publications & Patents

JOURNAL ARTICLES

1. Authors: **Dhamsi HS**, Panda PR, Saikiran P, Garg R, Viswanathan K.
Title: "A sensing integrated metal additive manufacturing platform for exploring the use of non-standard powders".
Journal: *Journal of Manufacturing Science and Engineering* (IF = 3.9, Q2) (2024),146(3),
[\[doi.org/10.1115/1.4064157\]](https://doi.org/10.1115/1.4064157)
2. Authors: **Dhamsi HS**, Viswanathan K.
Title: "Investigating particle morphology, quality, flowability and performance of abrasive-grinding based powders for directed energy deposition."
Journal: *Powder Technology* (IF = 5.2, Q1) (2024),p.119533. [\[doi.org/10.1016/j.powtec.2024.119533\]](https://doi.org/10.1016/j.powtec.2024.119533)
3. Authors: **Dhamsi HS**, Panda PR, Puneeth S, Viswanathan K.
Title: "Of fiery sparks and glittering spots: melting-resolidification and spherical particle formation in abrasion".
Journal: *Proceedings of the Royal Society A* (IF = 3.5, Q1) 479, 2271(2023), 20220629.,
[\[doi.org/10.1098/rspa.2022.0629\]](https://doi.org/10.1098/rspa.2022.0629)
4. Authors: **Dhamsi HS**, Panda PR, Mohanty DP, Viswanathan K.
Title: "An Analytical Method for Predicting Temperature Rise Due to Multi-body Thermal Interaction in Deformation Processing."
Journal: *JOM* (IF = 2.59, Q2) 74, 513–525 (2022). [\[doi.org/10.1007/s11837-021-05088-w\]](https://doi.org/10.1007/s11837-021-05088-w)
5. Authors: **Dhamsi HS**, Panda PR, Viswanathan K.
Title: "Production of powders for metal additive manufacturing applications using surface grinding".
Journal: *Manufacturing Letters* (IF = 3.9, Q2) 32 (2022): 54-58. [\[doi.org/10.1016/j.mfglet.2022.02.004\]](https://doi.org/10.1016/j.mfglet.2022.02.004)
6. Authors: **Dhamsi HS**, Chakravarthy P, Kumar ND, Tharian T.
Title: "Microstructural Characterization and Mechanical Property Evaluation of High Nitrogen Martensitic Stainless Steel Subjected to Heat Treatment".
Journal: *Metallography, Microstructure, and Analysis* (IF = 1.5, Q3), (2024): pp 1-10.
[\[doi.org/10.1007/s13632-024-01041-w\]](https://doi.org/10.1007/s13632-024-01041-w)
7. Authors: Garg, R*, **Dhamsi HS***, Panda PR, Viswanathan K. (*equal contribution),
Title: "Evaluating gas-driven flow mechanics of non-spherical powders for direct energy deposition".
Journal: *Journal of Manufacturing Processes*. (IF= 6.1, Q1) 99 (2023): 260-271.
[\[doi.org/10.1016/j.jmapro.2023.04.057\]](https://doi.org/10.1016/j.jmapro.2023.04.057)
8. Authors: Singh A, **Dhamsi HS**, Sinha MK, Kumar R.
Title: "Evaluation and comparison of mineralogical, micromeritics and rheological properties of waste machining chips, coal fly ash particulates with metal and ceramic powders."
Journal: *Powder Technology* (IF = 5.2, Q1) 408 (2022): 117696.
[\[doi.org/10.1016/j.powtec.2022.117696\]](https://doi.org/10.1016/j.powtec.2022.117696)
9. Authors: Singh A, Singh J, **Dhamsi HS**, Sinha MK, Kumar R.
Title: "Quantifying the influences of coal fly ash on rheological and compaction behaviour of iron powder and mild steel machining chips".
Journal: *Advanced Powder Technology* (IF = 5.2, Q2), 33(11) (2022), 103819.

doi.org/10.1016/j.apr.2022.103819

10. Authors: Dawara V, Bajantri A, **Dhami HS**, Murty SVSN., & Viswanathan K.
Title: "Design of a low-velocity impact framework for evaluating space-grade materials".
Journal: *Acta Astronautica* (IF = 3.1, Q1) 212 (2023): 606-616.
[\[doi.org/10.1016/j.actaastro.2023.07.040\]](https://doi.org/10.1016/j.actaastro.2023.07.040)
11. Authors: Singh, A, **Dhami HS** *et al.*
Title: "Modeling, deposition, and mechanical characterizations of single-step surface coating using high-speed grinding."
Journal: *The International Journal of Advanced Manufacturing Technology* (I.F. = 2.9, Q2) (1-11 (2024))
<https://doi.org/10.1007/s00170-024-14220-4>

CONFERENCE PROCEEDINGS (peer-reviewed articles)
12. Authors: **Dhami HS**, Viswanathan, K.
Title: "On the Formation of Spherical Particles in Surface Grinding."
Proceedings of the *ASME 2020 MSEC*. Vol1:Sep, 2020. V001T05A005. [\[doi.org/10.1115/MSEC2020-8278\]](https://doi.org/10.1115/MSEC2020-8278)
13. Authors: **Dhami HS**, Panda PR, Monhanty DP, Mann J, Charasekar S, Viswanatha K.
Title: "Unified Analysis of Temperature Fields Arising from Large Strain Deformation and Friction in Manufacturing Processes." *TMS 2021 150th Annual Meeting Springer Int. Pub. & ESP*(pp. 921-931).
[\[https://doi.org/10.1007/978-3-030-65261-6_82\]](https://doi.org/10.1007/978-3-030-65261-6_82)
14. Authors: **Dhami HS**, Panda PR, Saikiran P, Viswanatha K.
Title: "Metal powders via surface grinding: Applicability and performance evaluation for laser sintering", *ASME MSEC 2022-85120*, V002T05A018; 5 pages [\[doi.org/10.1115/MSEC2022-85120\]](https://doi.org/10.1115/MSEC2022-85120)
15. Authors: Garg, R, **Dhami HS**, Panda PR, Viswanatha K. (2022). "Directed energy deposition using non-spherical metal powder", *ASME MSEC 2022-84945*, V002T05A011; 8 pages, [\[doi.org/10.1115/MSEC2022-84945\]](https://doi.org/10.1115/MSEC2022-84945)

BOOK CHAPTERS, PREPRINTS & CONFERENCE PAPERS

- **Dhami HS**, Chandrasekar S, 'Surface topographies in manufacturing of biomedical implants', *de Gruyter GmbH*, 2025 (in press).
- Saikiran, **Dhami HS**, Panda PR, Viswanathan K, (2024). Obstacles to progress: Probing interactions between moving fronts and rigid boundaries in 2D systems. *Bulletin of the APS*.
[\[https://meetings.aps.org/Meeting/MAR24/Session/S40.9\]](https://meetings.aps.org/Meeting/MAR24/Session/S40.9)
- Panda, **Dhami HS**, Viswanatha K. (2024). Solidification on spherical surfaces. *Bulletin of the APS*.
[\[https://meetings.aps.org/Meeting/MAR24/Session/S40.8\]](https://meetings.aps.org/Meeting/MAR24/Session/S40.8)
- **Dhami, et al.** "From steel scrap to usable powders: A sustainable recycling approach". (*J. Sustain. Metall.* (under-review))

PATENTS

1. [Granted] "A modular additive manufacturing system", IN patent No.:538401, Application No: 202241012225, Filing date: Mar 7, 2022, Inventors: **Dhami HS**, Panda, PR, Saikiran, P, Viswanthan, K
2. [First information report] "Method for production of spherical metal powder", IN patent, Application No: 202141061560, Filing date: Dec 29, 2021 Inventors : **Dhami HS**, Panda, PR, Viswanathan, K