Krishna Prasath Logakannan

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ACADEMIC BACKGROUND

Educational Qualification	Year	Board/Institution	CGPA (/10)
Doctor of Philosophy	2021	Indian Institute of Technology Madras, India & Swinburne University of Technology, Australia	8.16
Master of Technology	2015	Indian Institute of Technology Roorkee, India	8.667
Bachelor of Engineering	2013	PSG College of Technology, India	7.51

WORK EXPERIENCE

- Postdoctoral researcher –Multiscale Mechanics & Materials laboratory, Department of Mechanical Engineering, University of Utah, UT, USA. (Current)
- Postdoctoral researcher – Hopkins Extreme Materials Institute, Johns Hopkins University, MD, USA. (October 2021 – September 2022)
- Project Associate – Indian Institute of Technology Madras, Chennai. (April 2016 – December 2016)

AWARDS AND ACHIEVEMENTS

- "Institute Research Award 2020-2021" awarded by Indian Institute of Technology Madras, Chennai, India.
- Best poster award in conference & exhibition on Non-Destructive Evaluation (NDE-2017), 14-16 December 2017, Chennai, India. (Title: Passive wireless RFID sensors for structural health monitoring).
- Best paper award in International Conference on Microwave Integrated Circuits, Photonics, and Wireless Network (IMICPW -2019), May 2019, Trichy, India. (Title: A passive UHF RFID tag for wireless fracture toughness measurement on metals).

AREAS OF INTEREST

- Mechanics of porous materials
- Fatigue
- Crystal plasticity
- Machine learning

SKILLS

Software packages : ABAQUS, LS DYNA, SolidWorks, MATLAB

Programming : Python, FORTRAN

PATENTS & PUBLICATIONS

Patents:

1. Geetha C, ***Krishna Prasath L***, Velmurugan R, Jayaganthan R, and Kavitha A, "Reusable passive RFID strain sensor for structural health monitoring", Indian patent filed on 9th Jan 2018 and granted on 5th Sep 2023 (Grant number: 449495, Application number:201841001020).
2. ***Krishna Prasath L***, Ruan D, Velmurugan R, and Jayaganthan R, "A novel hybrid tube with auxetic outer layer", Indian patent filed on 17th Nov 2020, patent pending (Application number: 202041049941).

Articles:

1. ***Krishna Prasath L,*** Velmurugan R, Kumar S, Jayaganthan R, and Ruan D, "Compressive behaviour of re-entrant structure using fracture locus of SLM printed AlSi10Mg", Thin-walled structure, 184, 110460, 2023.
2. ***Krishna Prasath L***, Zhu F, Sypeck D, Xu S, Deng J, and Kim S, "Testing and modeling of vehicle Li-ion battery module with prismatic cells under abuse conditions", Energies, 16(3), 1055, 2023.
3. ***Krishna Prasath L,*** Zhu F, Sypeck D, Deng J, and Kim S, "Impact response of prismatic Li-ion battery cells", International Journal of Impact Engineering, 170, 104352, 2022.
4. ***Krishna Prasath L,*** Velmurugan R, Kumar S, Jayaganthan R, and Ruan D, "Mechanical response of a novel hybrid tube composed of an auxetic outer layer", Thin-walled structure, 171, 108649, 2022.
5. ***Krishna Prasath L,*** Velmurugan R, Jayaganthan R, and Ruan D, "Stiffened star-shaped auxetic structure with tri-directional symmetry", Composite Structures, 279, 114773, 2022.
6. Zhu F and ***Krishna Prasath L***, "Crash Safety Design for Lithium-ion Vehicle Battery Module with Machine Learning", SAE International Journal of Advances and Current practices in Mobility, 4(5), 1667-1677, 2022.
7. Niranjan C, ***Krishna Prasath L***, Shankar K, and Velmurugan R, "Quasi-static compression performance of material extrusion enabled re-entrant diamond auxetic metamaterial: Fabrication, tuning geometrical parameters, and fiber reinforcements", Thin-walled structures, 179, 2022, 109550.

8. ***Krishna Prasath L***, Velmurugan R, Jayaganthan R, and Ruan D, "Quasi-static and dynamic compression behaviors of a novel auxetic structure", Composite structure, 254, 112853, 2020.
9. ***Krishna Prasath L***, Velmurugan R, Jayaganthan R, and Ruan D, "Dynamic mechanical performance of 3D re-entrant structure", Mechanics of materials, 148, 103503, 2020.
10. Geetha C, ***Krishna Prasath L,*** Jeby Philip, Jayaganthan R, Velmurugan R, and Kavitha A, "Reusable passive wireless RFID sensor for strain measurement on metals", IEEE Sensors Journal, 18(12), 5143 - 5150, 2018.

Conference Papers:

1. ***Krishna Prasath L***, Velmurugan R, Jayaganthan R, and Dong Ruan, "Numerical study of a re-entrant diamond structure under dynamic compression", IOP Conference series: Materials science and Engineering, Volume 1067, 012109, 2021.
2. ***Krishna Prasath L***, Raviraj Verma, Velmurugan R, and Jayaganthan R, "Effect of Strain Rate on Tensile and Fracture Behavior of Ultrafine grained Al6061 processed through Cryorolling and Warm rolling", Materials Today: Proceedings, 5(9), 17180-17187, 2018.
3. Geetha C, ***Krishna Prasath L***, Jayaganthan R, Velmurugan R, and Kavitha Arunachalam, "A passive UHF RFID tag for wireless fracture toughness measurement on metals," *Proceeding: 2019 TEQIP III Sponsored International Conference on Microwave Integrated Circuits, Photonics and Wireless Networks (IMICPW – 2019)*, pp. 500-502. (Best paper award)