

Dr Rudranarayan Kandi

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Academic details

Educations	Year of Passing	CGPA/Percentages
• Ph. D, Department of Mechanical Engineering, Indian Institute of Technology, Delhi, India	2018- 2022	8.92/10
• Master of Technology (by research), Department of Mechanical Engineering, National Institute of Technology, Rourkela	2014- 2017	9.25/10
• Bachelor of Technology, Department of Mechanical Engineering, National Institute of Technology, Rourkela	2008-2012	7.67/10
• 12 th , Council of Higher Secondary Education (CHSE), Science, SVM college, Jagatsinghpur, Odisha	2006-2008	81.17%
• 10 th , Board of Secondary Education (BSE), Saraswati Vidya Mandir, Gatroutpatna, Cuttack, Odisha	2006	89.87%

Doctoral Research

Thesis Title: *Experimental investigations and characterization of tracheal scaffolds fabricated using solvent based 3D printing* (Research advisor: Prof. Pulak M Pandey).

Post graduate research

Thesis Title: *Acoustic Horn Design, Numerical and Experimental Investigations of Ultrasonic Vibration Assisted Turning of Ti-6Al-4V* (Research advisor: Prof. Susanta Kumar Sahoo)

Journals

1. Kandi R, Sachdeva K, Pandey PM, Mohanty S. Fabrication of hybrid tubular scaffolds using direct ink writing for tracheal regenerative application. *J Mater Sci.* 2023;58(11):4937-4953. doi:10.1007/s10853-023-08313-w
2. Kandi R, Sachdeva K, Choudhury SD, Pandey PM, Mohanty S. A facile 3D bio-fabrication of customized tubular scaffolds using solvent-based extrusion printing for tissue-engineered tracheal grafts. *J Biomed Mater Res Part A.* 2023;111(2):278-293. doi:https://doi.org/10.1002/jbm.a.37458
3. 1. Pandey H, Mohol SS, Kandi R. 4D printing of tracheal scaffold using shape-memory polymer composite. *Mater Lett.* 2022;329:133238. doi:https://doi.org/10.1016/j.matlet.2022.133238
4. Kandi R, Pandey PM. Statistical modelling and optimization of print quality and mechanical properties of customized tubular scaffolds fabricated using solvent-based extrusion 3D printing process. *Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine.* 2021 Dec;235(12):1421-38.
5. Kandi R, Pandey PM, Majood M, Mohanty S. Fabrication and characterization of customized tubular scaffolds for tracheal tissue engineering by using solvent based 3D printing on predefined template. *Rapid Prototyping Journal.* 2021 Feb 27;421:428.
6. Kandi R, Sahoo SK, Sahoo AK. Ultrasonic vibration-assisted turning of Titanium alloy Ti-6Al-4V: numerical and experimental investigations. *Journal of the Brazilian Society of Mechanical Sciences and Engineering.* 2020 Aug;42(8):1-7.

Patents

METHOD OF FABRICATING TUBULAR SCAFFOLD, Indian Patent (Granted: 401496), 2022.

Conferences

1. Kandi R, Pandey PM. Development and fabrication of customized tubular scaffolds using solvent-based extrusion 3D printing, *Proceedings of the 37th International Conference of the Polymer Processing Society (PPS-37)*, April 11-15, 2022, Fukuoka, Japan.
2. Kandi R, Sahoo SK. "Experimental investigations and simulation models validation on the machinability of Ti-6Al-4V during Ultrasonic vibration assisted turning", *Proceedings of the*

10th International Conference on Precision, Meso, Micro and Nano Engineering (*COPEN 10*), December 07-09.2017, Indian Institute of Technology, Madras, Chennai- 600036, India, pp. 39-42, 2017.

3. Kandi R, Sahoo SK. “Experimental Investigation on Machinability of Titanium Alloy, Ti-6Al-4V during Ultrasonic Vibration Assisted Turning,” Proceedings of 6th International & 27th All India Manufacturing Technology, Design and Research Conference, AIMTDR- 2016, College of Engineering, Pune, Maharashtra, INDIA, pp. 232-236, 2016.
4. R Kandi and S K Sahoo, “Design and Modeling of a Flexible Acoustic Horn for Ultrasonic Vibration Assisted Turning,” Proceedings of International Conference on Advances in Dynamics, Vibration and Control, ICADVC- 2016, National Institute of Technology, Durgapur, pp. 197-201, 2016

Skills

- Programming in MATLAB
- Proficient in solid modelling software, (Solidworks, CREO, NETFABB, MIMICS (MATERIALISE), Polyworks).
- Proficient in statistical analysis (MINITAB, Design of Experts).
- Proficient in Word, Power point and Excel.
- Hands- on experience on various types of 3D printers: FDM (AHA 3D), SLA (FORMLABS FORM 3), Solvent based extrusion 3D printer (Alfatek system, BIOBOT) and Markforged Mark 3 (Markforged).

Honors

- Qualified Graduate Aptitude Test in Engineering (GATE) in 2014 and received fellowship for master’s from Ministry of Human Resource Development, India
- Received fellowship from Ministry of Human Resource Development, India from 2018 for Doctoral study.

Workshops/Internship/Short-Term Courses attended.

- Completed CATIA training in CTTC, Bhubaneswar from 01.05.2010 to 31.05.2010.
- Attended a four-day short term course on Design of Experiments: An Optimization Tool (DOEOT-2014) during 22nd Dec. – 25th Dec. 2014 at Mechanical Engineering Department of NIT Rourkela.

References

1- Prof. Pulak Mohan Pandey

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2- Prof. Sunil Jha

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3- Prof. Susanta Kumar Sahoo

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