

Aman Kumar

DST-INSPIRE Faculty, Department of Mechanical Engineering

Indian Institute of Technology Kanpur

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Research Interests- Vibrations of structures, Dynamics, Nonlinear Vibration

Current Position- DST-INSPIRE Faculty in the Department of Mechanical Engineering, Indian Institute of Technology Kanpur (joined August 11, 2021).

Awards:

- **Prof D.P. Ghosh Memorial Award 2016-** For obtaining the highest grade in the specialization “Mechanical Systems Design” in M.Tech, IIT Kharagpur.
- **DST-INSPIRE Faculty Fellowship Award 2020**

Publications:

- Kumar, A., DasGupta, A., 2018, Dynamics of a shell-type amplified piezoelectric actuator, *Trans of ASME, Journal of Vibration and Acoustics.*, **140(4)**, 041011. (Impact factor - 1.583)
- Kumar, A., DasGupta, A., 2019, Generation of harmonic waves in beams using boundary excitation, *International Journal of Mechanical Sciences*, **159(0020-7403)**, 234-245. (Impact factor - 5.329)
- Kumar, A., DasGupta, A., 2020, Generation of circumferential harmonic travelling waves on thin circular plates, *Journal of Sound and Vibration*, **115343**. (Impact factor - 3.655)
- Kumar, A., DasGupta, A., 2021, Wave-induced dynamics of a particle placed on a thin circular plate, *Nonlinear Dynamics*, **103(1)**, 293-308. (Impact factor - 5.022)

Externally Funded Project (Ongoing):

- Name of the Project: Studies in Nonlinear Dynamics of Mechanical Systems
- Project Number: DST/ ME/ 2021134
- Funding Agency: Department of Science and Technology (DST), Ministry of Science and Technology, Govt. of India.
- Sanctioned Amount: INR 3500000
- Project Duration : Five years (from 11-Aug-2021).

Educational Qualifications:

- Ph.D. (2016-2021) from Indian Institute of Technology Kharagpur, Department of Mechanical Engineering
Thesis title - Wave-Induced Transport of a Particle on a Flexible Surface
Supervisor - Prof. Anirvan DasGupta
- M.Tech. (2014-2016) in Mechanical Systems Design from Indian Institute of Technology Kharagpur, Department of Mechanical Engineering
Supervisor- Prof Anirvan DasGupta

CGPA- 9.46

- B.E. (2009-2013) in Mechanical Engineering from Bengal Engineering and Science University Shibpur (currently, **Indian Institute of Engineering Science and Technology Shibpur**)

%Marks and Division: 82.98%, First Class with Honors

- I.S.C (2006-2008) from St.Thomas Boys School, Kolkata.
%Marks: 86.5%
- I.C.S.E (2006) from St.Thomas Boys School, Kolkata.
%Marks: 82.3%

Papers Presented in Conferences:

- Generation of travelling waves in Euler-Bernoulli beams using search based optimization, IMECE 2018-88719, ASME Congress 2018, Pittsburgh, USA.
- Generation of harmonic travelling waves in thin circular plates, IMECE 2019-12372, ASME Congress 2019, Salt Lake City, Utah, USA.

Teaching Experience:

Teaching assistant for the **National Online Certification Courses (NOC)**, NPTEL on :

- Kinematics of Mechanisms and Machines (July - Oct 2019)
- Kinematics of Mechanisms and Machines (Jan - March 2020)
- Mechanism And Robot Kinematics (Sept - Nov 2020)

Key Responsibilities- Assisted in the preparation of course materials, assignments, question papers, and in doubt clearing.

Training/Internship :

Worked on the assignment “Design of Disc Clutch Mechanism” under the guidance of Dr. Atanu Maity, Principal Scientist & Head, Advanced Design and Optimization (ADO) Group, Central Mechanical Engineering and Research Institute (**CSIR-CMERI**), Durgapur, as vocational training in UG third year, 2012.

Position of Responsibility:

Core member of the organizing committee of the sixth SPICMACAY International Convention (INTCON) 2018 held in IIT Kharagpur.

Extra Curricular Activities :

- Represented my school in the Pailan Inter-School Table-Tennis championship.
- Instrumental Music- First Class with Distinction in Keyboard (Synthesizer)
- Active pursuit of Hindustani Classical music. Also, owner of YouTube Music Channel “Ruhaniat”.

Details of Referees :

- Prof Anirvan DasGupta
Professor, Department of Mechanical Engineering
IIT Kharagpur
Email: anir@mech.iitkgp.ac.in
Phone: +91-3222-282980
- Prof A.K. Samantaray
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Contact Details:

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- Permanent Address : H-6 Dwarika Housing, 20 Currie Road, Howrah 711104, West Bengal.

Declaration:

I hereby declare that the credentials stated above are true to the best of my knowledge.

Signature:

Date: 13-Oct-2021

Place: IIT Kanpur