

## Kevin Jose

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CONTACT INFORMATION	68 Burgess Road Southampton SO16 7AB UK	+44-7946-033867 <a href="mailto:K.Jose@soton.ac.uk">K.Jose@soton.ac.uk</a> , <a href="mailto:kevjose@gmail.com">kevjose@gmail.com</a>
RESEARCH INTERESTS	Mechanical Vibrations, Musical Acoustics, Solid Mechanics	
WORK EXPERIENCE	<b>University of Southampton</b> , Southampton SO16 7QF, UK	
	PhD student & Marie Skłodowska-Curie Fellow	May 2019 - Present
	<ul style="list-style-type: none"><li>• Researching effect of structural periodicity in mechanical wave propagation characteristics</li><li>• Industrial applications of the aforementioned will be explored at Vestas-Aircoil, Denmark</li></ul>	
	<b>Boston Consultancy Group</b> , Gurgaon HR 122002, India	
	Specialist Consultant	Nov 2018 - May 2019
	<ul style="list-style-type: none"><li>• Worked on a profit turnaround program for one of India's largest steel manufacturers</li><li>• Focused on de-bottlenecking of finishing operations at the world's largest rail mill</li><li>• Wrote a Python based code to collect and summarize defect occurrence in the final product. This was later deployed at the plant for use in maintenance planning and execution.</li></ul>	
	<b>New York University Tandon School of Engineering</b> , Brooklyn NY 11201, USA	
	Ph.D. Candidate, Mechanical Engineering	Aug 2017 - Oct 2018
	<ul style="list-style-type: none"><li>• Conducted research in the areas of electro-active materials (results published in Appl. Phys. Lett.) and wearable assistive technology</li><li>• Took four graduate courses (GPA: 3.7/4.0)</li><li>• Served as teaching assistant for two semesters for an undergraduate course</li><li>• Received Best PhD Qualifying Exam Performance Award from the dept.</li></ul>	
EDUCATION	<b>Indian Institute of Technology Kanpur</b> , Kanpur UP 208016, India	
	B.Tech.-M.Tech. Dual Degree, Mechanical Engineering with a minor in control systems engineering	Jul 2012 - Aug 2017
	<ul style="list-style-type: none"><li>• Masters Thesis: Vibration of circular membranes backed by taut strings. (Results published in J. Acoust. Soc. Am.)</li><li>• Advisors: Prof. Anurag Gupta, Prof. Saikat Ghosh</li><li>• M.Tech. CPI: 8.7/10</li><li>• B.Tech. CPI: 7.6/10</li></ul>	
SUMMER INTERNSHIPS	<b>Singapore University of Technology and Design</b> , Upper Changi 487372, Singapore	
	Visiting Student	May 2016 - July 2016
	<ul style="list-style-type: none"><li>• Received training in soft material robotics design and fabrication</li></ul>	
	<b>Whirlpool Global Technology &amp; Engineering Center</b> , Pune MH 411014, India	
	Summer Intern	May 2015 - July 2015
	<ul style="list-style-type: none"><li>• Proposed a mathematical model of a dishwasher</li><li>• Received Best Intern Award</li></ul>	

REFEREED  
JOURNAL  
PUBLICATIONS

1. Boldini A.\*, **Jose K.\***, Cha Y., and Porfiri M. "Enhancing the deformation range of ionic polymer metal composites through electrostatic actuation." *Applied Physics Letters* 112.26 (2018): 261903 (\*Co-first authors)
2. **Jose, K.**, Chatterjee, A., and Gupta, A. "Acoustics of Idakkā: An Indian Snare Drum with Definite Pitch." *The Journal of the Acoustical Society of America* 143.5 (2018): 3184-3194

CONFERENCE  
PROCEEDINGS

1. Boldini, A., **Jose K.**, Cha Y., and Porfiri M. "Electrostatic actuation in ionic polymer-metal composites." In *Nano-, Bio-, Info-Tech Sensors and 3D Systems III*, vol. 10969, p. 1096910. International Society for Optics and Photonics, 2019.

AWARDS,  
FELLOWSHIPS  
& SCHOLASTIC  
ACHIEVEMENTS

- Marie Sklodowska-Curie Fellow ITN**  
Awarded by University of Southampton. 2019
- Best Mechanical Engineering PhD Qualifying Exam Performance**  
Awarded by NYU Tandon School of Engineering. 2018
- School of Engineering Fellowship**  
Awarded by NYU Tandon School of Engineering. 2017
- Best Intern Award**  
Awarded by Whirlpool Global Technology & Engineering Center, Pune. 2015
- Merit-cum-Means Scholarship**  
Awarded by IIT Kanpur. 2014
- IIT-Joint Entrance Exam All India Rank 792**  
amongst ~0.47 million candidates (99.8%ile). 2012
- KVPY Fellowship Award (Declined)**  
National fellowship for students interested in research careers. 2012  
Awarded by the Government of India & Indian Institute of Science, Bangalore.

PROFESSIONAL  
TRAININGS

- ANSYS Mechanical Getting Started**  
2 Day training on ANSYS workbench 2020
- IHS ESDU**  
2 Day training on IHS ESDU design solutions 2020

RESEARCH  
EXPERIENCE

- NYU Tandon School of Engineering**
- Conceptualized a wearable vibro-tactile haptic feedback belt for assisting visually impaired individuals in navigation. Macro-fiber composite actuators are used to provide a haptic map of the visual space through vibration of varying intensities and frequencies. Designed and fabricated an op-amp based driving circuit (& PCB) capable of driving the actuators at the prescribed frequency. Designed and fabricated a low profile housing for the actuators for use in final product.

- Demonstrated a technique to improve actuation range of ionic polymer metal composites using electrostatic actuation. Designed and fabricated the experimental setup and associated electronic circuitry. Conducted the experiments and subsequent analysis.

### **IIT Kanpur**

- Proposed a reduced order model of vibration of a circular membrane backed by two taut strings and it was shown to yield several harmonic overtones. Such a membrane is present at each end of the barrel of an *idakkā*, an Indian snare drum well known for its rich musicality. Recordings of this musical drum were analysed and it shown that the drum has a rich set of harmonic overtones as predicted by the aforementioned model. Also, proposed a computationally inexpensive model of the string-membrane interaction as part of the modelling effort.

RELEVANT GRADUATE COURSES	Applied Numerical Methods, Optimization Methods in Engineering Design, Approximate Methods in Engineering Mathematics, Wave Propagation in Solids, Stochastic Calculus, Biostatistics
TEACHING EXPERIENCE	<p><b>Teaching Assistant</b></p> <p>NYU Tandon School of Engineering</p> <ul style="list-style-type: none"> <li>• ME-UY 3211: Mechanics of Materials Laboratory Spring 2018</li> <li>• ME-UY 3211: Mechanics of Materials Laboratory Fall 2017</li> </ul> <p>IIT Kanpur</p> <ul style="list-style-type: none"> <li>• ESO 202A/204: Mechanics of Solids Spring 2017</li> <li>• MSO 202A: Complex Analysis Fall 2016</li> </ul>
TECHNICAL SKILLS	<p><b>Programming Languages:</b> MATLAB, Python, ANSYS APDL, R</p> <p><b>Softwares:</b> Mathematica, AutoCAD, Autodesk Inventor, ANSYS Mechanical</p> <p><b>Development Platforms:</b> Arduino, Raspberry Pi</p> <p><b>Electronics:</b> AVR <math>\mu</math>Cs, PCB design and fabrication</p> <p><b>Rapid Prototyping:</b> 3D printing, Laser Cutting</p> <p><b>Soft Robotics Fabrication:</b> Mold Design, Casting</p>
MENTORING EXPERIENCE	<p><b>NYU Tandon School of Engineering, Brooklyn, NY, USA</b></p> <p>Mentored 2 undergraduate student and 1 masters student in their summer projects</p> <p><b>Electronics Club, IIT Kanpur, Kanpur, UP, India</b></p> <p>Delivered lectures and workshops with more than 300 attendees/participants on hobbyist electronics. Mentored 8 undergraduate summer projects.</p>

Last updated on February 16, 2020