



# American Academy of Mechanics

## 2017 AAM Fellow Nomination

Tribikram Kundu

**Citation:** Computational mechanics and elastic wave propagation theory with applications in nondestructive testing and evaluation.

**First Nominator:** Ajit Mal

**Email:** [ajit@ucla.edu](mailto:ajit@ucla.edu)

**Signature:**



**Second Nominator:** Jan Achenbach

**Email:** [achenbach@northwestern.edu](mailto:achenbach@northwestern.edu)

**Confirm:** Yes

**Signature:**



### Brief Curriculum Vitae of T. Kundu

**Education and Employment:** Professor Tribikram Kundu received his bachelor degree in Mechanical Engineering from the Indian Institute of Technology, Kharagpur in 1979. His MS and PhD were from the Department of Mechanics and Structures at the University of California, Los Angeles in 1980 and 1983, respectively. He joined the Department of Civil Engineering and Engineering Mechanics of the University of Arizona as an Assistant Professor in August 1983 and was promoted to full professor in August 1994.

**Research and Publications:** Dr. Kundu has made significant and original contributions in both basic and applied research in nondestructive evaluation (NDE) and structural health monitoring (SHM) by ultrasonic and electromagnetic techniques. His fundamental research interests are in the analysis of elastic and electromagnetic wave propagation in multi-layered solids, fracture mechanics, biomechanics and computational mechanics. Application areas of his research findings include civil and structural materials, aerospace materials, geomaterials, electronic and biological materials. He has published 7 books (2 text books and 5 research monographs), 15 book chapters and 321 technical papers, 162 of these papers have been published in refereed scientific journals. As of October 15, 2017, according to Google Scholar his publications have been cited 5666 times with an h-index of 41 (<http://scholar.google.com/citations?user=zKR0HmwAAAAJ&hl=en>) and his i10-index is 133 (*i.e.* 133 of his papers have been cited 10 times or more). According to Web of Science his h-index and citation numbers are 27 and 2600, respectively. He has also edited 22 conference proceedings.

**Student Advising:** He has supervised 38 PhD students [33 at the University of Arizona (9 jointly) and 5 in foreign universities] and 26 MS students [25 at the University of Arizona (2 jointly) and 1 in a foreign university]. Currently he is supervising 2 MS and 4 PhD students (1 jointly in a foreign university).

**Professional Society Membership and Activities:** He is Fellow of five societies - ASME (American Society of Mechanical Engineers), ASCE (American Society of Civil Engineers), ASA (Acoustical Society of America), ASNT (American Society of Nondestructive Testing) and SPIE (The International Society for Optics and Photonics), member of American Academy of Mechanics and a life member of AvHAA (Alexander von Humboldt Association of America). He has been serving as the Chairman of the SPIE yearly conference on Health Monitoring of Structural and Biological Systems since 2001, it is held in March of every year. He was the Co-Chair of the yearly SPIE Symposium on Smart Structures and NDE in 2016 and 2017, and will serve as the Symposium Chair in 2018 and 2019. He also served as the Chairman of the ASME NDE Engineering Division from 2003 to 2005.

**Editorial Activities:** He is the founding Editor-in-Chief of the *ASME Journal of Nondestructive Evaluation, Diagnostics and Prognostics of Engineering Systems* (serving as EIC since April 2017). He was also the founding Editor-in-Chief of the *Journal of Civil Engineering and Science* (served as EIC from 2012 to 2017). He is currently serving as an Associate Editor (AE) of *Ultrasonics* since 2014 and has served as an AE of the *ASME Journal of Pressure Vessel Technology* (2006-2012), *Journal of the Acoustical Society of America* (2012-2017), and *Structural Health Monitoring: An International Journal* (2008-2017). He had served on the editorial advisory board of the *International Journal of Geomechanics* (2001-2006) and *Structural Longevity journal* (2009-2017).

**Domestic and International Invitations and Research Collaborations:** He has extensive collaborations with international and US scientists. He has spent 30 months in the Department of Biology, J. W. Goethe University and Frankfurt University of Applied Science, in Frankfurt, Germany, first as an Alexander von Humboldt Fellow and then as a Humboldt Research Prize winner. He has also spent one month to more than a year in each of the following institutes as an Invited Professor

- Department of Mechanics, **Chalmers University of Technology**, Gothenburg, Sweden
- Acoustic Microscopy Center, **Semienov Institute of Chemical Physics**, Russian Academy of Science, Moscow
- Department of Civil Engineering, **EPFL** (Swiss Federal Institute of Technology in Lausanne), Switzerland

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- Department of Mechanical Engineering, **University of Technology, Compiegne**, France
- Laboratory of Mechanics and Physics, **University of Bordeaux**, France
- Electrical Engineering Department (SATIE Lab.), **Ecole Normale Supérieure (ENS)**, Cachan, France
- **Aarhus University Medical School**, Aarhus, Denmark
- Department of Applied Physics, **University of Leipzig**, Germany
- Graduate School of Frontier Sciences, **University of Tokyo**, Japan
- **Technical University of Valencia (UPV)**, Spain
- **KAIST** (Korea Advanced Institute of Science and Technology), Daejeon, South Korea
- **AGH University of Science and Technology**, Krakow, Poland
- Centre for Mechanics of Machines; **Polish Academy of Sciences**, Gdansk, Poland
- Nondestructive Evaluation branch of the **Wright-Patterson Material Laboratory**, Air Force Research Laboratory (AFRL), Dayton, Ohio.

**Awards and Recognitions:** Dr. Kundu has received a number of recognitions; some of those are listed below.

- **Humboldt Research Prize** from Germany, Senior Scientist Award, 2003
- **Humboldt Fellowship Award** from Germany in 1996-97 and 1989-90
- **ASME NDPD Division's Founders Award** 2017
- **NDE Lifetime Achievement Award** 2012 from **SPIE** (The International Society for Optics and Photonics) (the award certificate was given in March 2012 at the SPIE's annual symposium on Smart Structures/NDE).
- **2015 Research Award for Sustained Excellence** from **ASNT** (The American Society for Nondestructive Testing) in recognition of his outstanding and sustained contributions in NDE/NDT (the award was given on March 18, 2015 at the ASNT's research symposium in Anaheim, California)
- **2015 SHM Lifetime Achievement Award** chosen by the researchers and educators in the field of Structural Health Monitoring. This award was given at the International Workshop on Structural Health Monitoring at Stanford University in September 2015. Details are in <http://structure.stanford.edu/workshop/awards.html>
- **Structural Health Monitoring Person of the Year Award** 2008 (chosen by the SHM Journal)
- **Engineering Faculty Fellow** of the University of Arizona 2012 – for his research contribution the Engineering College of the University of Arizona recognized him as the Engineering Faculty Fellow that comes with a salary raise, similar to Chair Professorships in some other universities. Selected few faculty members are given this distinguished honor. The College of Engineering of the University of Arizona does not have any Chair Professorship but instead has Engineering Research Faculty Fellow and Teaching Faculty Fellow recognitions.
- **Elected Fellow of ASA** (The Acoustical Society of America), **ASNT** (The American Society for Nondestructive Testing), **SPIE** (The International Society for Optics and Photonics), **ASCE** (The American Society of Civil Engineers) and **ASME** (The American Society of Mechanical Engineers).
- **Best Paper Awards:** in 2000 and 2004 from SPIE, and in 2001 from ASME NDE Division (The 2001 best paper award was given to his PhD student who was the leading author)
- **Invited Professor** from a number of foreign Universities (Chalmers University of Technology, Gothenberg, Sweden, 1989; Swiss Federal Institute of Technology, Lausanne, Switzerland, 1996; University of Technology of Compiegne, France, 1997; University of Bordeaux, France, 1997, 2009; Ecole Normale Supérieure (ENS), Cachan, France, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2008, 2009, 2010; University of Leipzig, Germany, 2003; University of Tokyo, Japan, 2010, 2011, 2012, 2013; Technical University of Valencia or UPV, Spain, 2012; Korea Advanced Institute of Science and Technology or KAIST, South Korea, 2013; AGH University of Science and Technology, Krakow, Poland, 2014; Hohai University in Nanjing, Harbin Institute of Technology, Jilin University, Xiamen University and Sichuan University, China, 2015.
- **Plenary and Keynote talks** in conferences and workshops within last eight years:
  - Plenary talk at the IMECE (Int. Mech. Eng. Congress and Expo.), Phoenix, Arizona, USA, Nov. 16, 2016
  - Plenary talk at the ASNT Research Symposium in Anaheim, California, USA, March 18, 2015
  - Plenary speaker at the 2013 SPIE Symposium on Smart Structures/NDE, in San Diego, March 10-14, 2013
  - Plenary talk at the SMART'09 (Smart Structures and Materials IV), Porto, Portugal, July 13-15, 2009;
  - Keynote talk in 2<sup>nd</sup> CANEUS Fly-by-Wireless Workshop, Montreal, Canada, June 8-12, 2009;
  - Keynote talk at the Int. Symp. on NDT of Mat. and Struct. (NDTMS), Istanbul, Turkey, May 16-18, 2011;