

BIOGRAPHICAL SKETCH

Rajeev Nair

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(a) PROFESSIONAL PREPARATION

Iowa State University, Ames, Iowa	Mechanical Engineering	Postdoctoral 2007-2008
Iowa State University, Ames, Iowa	Mechanical Engineering	Ph.D. 2006
Wichita State University, Wichita, Kansas	Mechanical Engineering	M.S. 2002
University of Calicut, India	Mechanical Engineering	B.S. 1998

(b) APPOINTMENTS

Aug 2013 – to date	Assistant Professor, Department of Mechanical Engineering, Wichita State University (WSU), Wichita, KS.
Aug 2009 – May 2013	Assistant Professor, Department of Applied Engineering, Morehead State University, Morehead, Kentucky.
Aug 2007 – May 2009	Lecturer, Iowa State University, Ames, Iowa
Jan 2007 – Dec 2008	Project Engineer, Photon Energy Technology, Inc., Ames, Iowa
July 1998 – Dec 1999	Design Engineer, Holmarc Opto-Mechatronics Pvt. Ltd., Cochin, India.

(c) NSF GRANTS

1. PI - Award # 98817 (2010)
2. PI - Award # 0738405 (2008)
3. PI - Award # 0637205 (2007)

(d) SELECTED PUBLICATIONS (8/16)

(i) Journal Publications

1. **Nair, R.**, Molian, P., “Femtosecond Laser Nanotexturing of Drug-Eluting Stents,” ASME Journal of Manufacturing Science and Engineering, December 2012, Volume 134, Issue 6, 061008 (12 pp.)
2. May, J., Joshi, N., **Nair, R.**, “Application of Design Simulation and Experimental Design Methodologies to the Study of Coronary Stent Designs,” Computer-Aided Design & Applications, September 2012, Volume 9, Issue 4, pp. 439-455.
3. **Nair, R.**, Molian, R., Molian, P., “Laser shock wave consolidation of nanodiamond powders on aluminum 319,” Applied Surface Science, January 2009, Volume 255, Issue 6, 1, pp. 3859-3867.
4. Dong, Y., **Nair, R.**, Molian, P. “Femtosecond pulsed laser micromachining of 4H-SiC Wafer for MEMS pressure sensor diaphragms and via holes,” Journal of Micromechanics & Microengineering, March 2008, Volume 18, Issue 3, 035022 (9pp).

(ii) Other Significant Journal Publications

1. **Nair, R.**, Molian, P., “Effect of nanoscale thin films of Dy₂Fe₁₄B on the magnetic hysteresis characteristics of melt-spun ribbons of Nd₂Fe₁₄B” Journal of Magnetism & Magnetic Materials, March 2008, Volume 320, Issue 6, pp. 957-965.

2. **Nair, R.**, Jiang W., Molian, P., “Synthesis of diamond-like carbon coatings on aluminum 6061 T-91 substrates by laser sintering of ultra-nanocrystalline diamond powders,” *Journal of Surface & Coatings Technology*, March 2008, Volume 202, Issue 13, pp. 2935-2944.
3. Jiang, W., **Nair, R.**, Molian, P., “Functionally graded mold inserts by laser-based flexible fabrication: processing modeling, structural analysis, and performance evaluation,” *Journal of Materials Processing Technology*, August 2005, Volume 166, Issue 2, pp. 286-293.
4. **Nair, R.**, Jiang, W., Molian, P., “Nanoparticle additive manufacturing of Ni-H13 steel injection molds,” *Journal of Manufacturing Science and Engineering*, American Society of Mechanical Engineers, August 2004, Volume 126, Issue 3, pp. 637-639.

(e) SYNERGISTIC ACTIVITIES

1. Serves as a reviewer for ASME Journal of Manufacturing Science and Engineering, Journal of Optics & Lasers in Engineering, IEEE Transactions on Components and Packaging Technologies, Journal of Surface & Coatings Technology, International Journal of Machine Tools and Manufacture, Journal of Materials Processing Technology, Journal of Materials Chemistry & Physics, Journal of App. Surface Science & Journal of Laser Micro/Nanoengineering
2. Book reviewer, *Machine Design: An Integrated Approach* by Robert L. Norton, Third Edition (towards its fourth edition, ISBN - 978-0136123705), Pearson Prentice Hall
3. Invited technical reviewer, NSF
4. Senior Member of SME since 2009; member of ASME since 2004 and holds memberships of Sigma Psi, ATMAE, KAS and Laser Institute of America.
5. Certifications - Quality Matters Program (QMP) 2012, Preparing Future Faculty (PFF) 2004
6. Serving in various departmental, college and university committees

(f) COLLABORATORS & OTHER AFFILIATIONS

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|------------------------|--|
| • Dr. Hai-Lung Tsai | University of Missouri, Rolla |
| • Dr. Anil Mahapatro | BioEngineering, Wichita State University |
| • Dr. Willy Moscova | IME, Wichita State University |
| • Dr. Ramazan Asmatulu | ME, Wichita State University |
| • Dr. Hamid Lankarani | ME, Wichita State University |
| • Dr. William McCallum | DOE Ames Lab of US, Ames, Iowa |
| • Dr. CheeWei Wong | UCLA, California |
| • Dr. Wenping Jiang | NanoMech, LLC, Fayetteville, Arkansas |
| • Dr. Ben Bahr | Pomona Institute of Technology, Pomona, California |
| • Dr. Abhijit Chandra | Iowa State University, Ames, Iowa |
| • Dr. Michael Shirk | AKT America, Santa Clara, California |

Undergraduate Research Mentor, Thesis Advisor and Postgraduate-Scholar Sponsor (present)

- Emilio Rocha, Department of Mechanical Engineering, WSU, since summer 2015 (B.S)
- Martina Salerno, Department of Biomedical Engineering, WSU, since summer 2015 (B.S)
- Raz Duyandra KC, Department of Mechanical Engineering, WSU, since fall 2013 (M.S)
- Ujwala Thejaswini, Department of Mechanical Engineering, WSU, since fall 2015 (M.S)
- Josh Countryman, Department of Mechanical Engineering, WSU, since fall 2015 (M.S)
- Aravind Nair, Department of Mechanical Engineering, WSU, since fall 2015 (M.S)
- Arfath Mohammad, Department of Mechanical Engineering, WSU, since fall 2015 (M.S)
- Ikram Khan, Department of Mechanical Engineering, WSU, since fall 2014 (Ph.D.)
- Mahmood Bashir, Department of Mechanical Engineering, WSU, from spring 2016 (Ph.D.)