

NICHOLAS XUANLAI FANG

Education:

- Feb. 04: Ph.D., Mechanical Engineering, University of California - Los Angeles
Dec. 98: M.S., Physics, Nanjing University, China
Jun. 96: B.S., Physics, Nanjing University, China

Appointments:

- 01/11-present Associate Professor, Department of Mechanical Engineering, MIT
07/11-present Core member, Microsystems Technology Laboratory, MIT
11/04-12/10 Assistant Professor, Department of Mechanical Sciences and Eng., UIUC
12/05-12/10 Assistant Professor (0%), Beckman Institute, UIUC
01/09-12/10 Affiliate Faculty, Institute of Genomic Biology, UIUC
02/04 – 10/04 Research Engineer, Dept. of Mechanical and Aerospace Eng., UCLA

Honors and recognitions:

- 2011: ICO prize/Ernest Abbe Medal, by the International Commission for Optics
2011: d'Arbeloff Career Development Chair, MIT
2010: Cambridge Who's Who Professional of the Year in Higher Education
2010: Xerox Faculty Award, UIUC
2009: SME Outstanding Young Manufacturing Engineers Award
2009: NSF CAREER Award
2008: MIT Technology Review Magazine's 35 Young Innovators Award
2007: UIUC Engineering Council Award of Excellence in Advising
2006: ASME Pi Tau Sigma Gold Medal Award recipient
2003: Outstanding PhD Student Award, UCLA

Selected External Professional Service

- Journal of Micro- and Nano-Manufacturing, Editorial Board 2012-Present
Invited Advisory Board, 4th International Conference on "Smart Materials, Structures and Systems" 2011-2012
User Committee, Center of Nanoscale Materials, Argonne National Laboratory 2009-2012
Co-organizer, MRS Symposium on Metamaterials 2006, 2011,2012
Co-organizer, ASME Symposium on Acoustic/Phononic Metamaterials 2009- present
Technical Committee, CLEO/QELS 2011, 2012
Technical Committee, ICALEO Nanomanufacturing 2009, 2011, 2012

NSF Grant Reviewer on STC, NIRT, NUE, CMMI, ECCS, DMR and CBET

NICHOLAS XUANLAI FANG

Referee of over 50 journals including “Science”, “Nature Materials”, “Nature Communication”, “Proceedings of National Academy of Sciences”, “Nano Letters”, “Physical Review Letters”, “Journal of American Chemical Society”

Delivered Over 78 Invited Lectures and Keynote Presentations

Taught summer short course of nanomanufacturing at NSF Summer Institute of Nanomanufacturing, Evanston, 2008

INVENTIONS:

1. N. Fang, P. M. Ferreira, K. H. Hsu, P. Schultz, and A. Kumar, ” Direct Nanoscale Patterning of Metals Using Polymer Electrolytes,” US Patent No. 7,998,330, 2011.
2. N. Fang, C. G. Xia and A. M. Cox, “Three-Dimensional Microfabricated Bioreactors with Embedded Capillary Network,” International Patent, WO2009042671.
3. X. Li, N. Fang, P. Ferreira, W. Chern, I. Chun, K. Hsu, “Method of Forming an array of high aspect ratio semiconductor nanostructures”, International Patent, WO2011049804,
4. P. Ferreira, B. Azeredo, N.X. Fang, X. Han, K. E. Jacobs, A. Kumar, and K. H. Hsu, “Direct Nanoscale Patterning of Surfaces by Electrochemical Nanoimprinting”, International Patent, WO2012115635.
5. Wei Q, Su K, Fang N and Zhang X, “ Micro-Electro-Mechanical Band-Pass Filters for Radio Frequency Signal Processing”, International Patent, WO2006039554.