MASSACHUSETTS INSTITUTE OF TECHNOLOGY
School of Engineering Faculty Personnel Record

Date: March 2010 Name: George Barbastathis

Department: Mechanical Engineering

1. Citizenship: United States of America

2. Education

School	Degree	Date
National Technical University of Athens (Greece)	Dipl. EE	1993
California Institute of Technology	M.Sc. EE	1994
California Institute of Technology	Ph.D.	1998

3. Principal Fields of Interest:

Information photonics; Optical imaging; 3D optics; 3D nanomanufacturing.

4. History of MIT Appointments:

Rank	Beginning	Ending
Assistant Professor	3/99	6/02
Esther & Harold E. Edgerton Assistant Professor	7/02	6/05
Associate Professor without Tenure	7/05	6/06
Associate Professor with Tenure	7/06	6/10
SMART Centre (Singapore) faculty resident	7/08	8/09
Professor	7/10	future

5. Professional Service:

Activity	Beginning	Ending
International Symposium on Holographic Memories (Vouliagmeni, Greece), co-chairman	10/95	5/96
Neuromorphic Engineering Student Society at Caltech, co-founder and coordinator	12/96	10/97
Society for Photo-Instrumentation Engineering (SPIE) Optical Computing Program Committee member	12/99	present

Optical Society of America (OSA) 08/00 01/01
Optics in Computing Technical Program Committee Member

Optical Society of America (OSA) 12/01 06/03
Optics in Computing ’03 Topical Meeting Program Co-Chair

Conference on Lasers and Electro-Optics (CLEO)
Subcommittee #5 (Holography, Wavemixing, Photorefractives, and Storage)
Member 05/02 present

National Science Foundation panel member 06/02 06/02
Integrated Sensing, Computation, and Networked Systems for Decision and Action

National Institutes of Health 08/02 08/02
Special Emphasis Panel member R01/SBIR Quantitative Approaches to the Analysis of Complex Biological Systems

Optical Society of America (OSA) 07/03 06/05
Information Photonics ’05 Topical Meeting General Co-Chair

Journal of the Optical Society A (JOSA A) 11/03 06/06
Topical Editor (Image Processing)

IEEE/LEOS International Conference on Optical MEMS and their Applications
Member, Technical Program Committee 09/05 08/06

Optical Society of America Science and Engineering Council 10/05 10/06
Vice-Chair for Image and Sensing in Pattern Recognition

Optical Society of America Science and Engineering Council 10/06 10/07
Chair for Image and Sensing in Pattern Recognition

Optical Society of America Science and Engineering Council 10/07 present
Program Subcommittee 4 (Optics in Information Sciences) Member

OSA Topical Meeting on Digital Holography and Three Dimensional Imaging (DH)
Program Committee Member 06/07 present

IEEE/LEOS International Conference on Optical MEMS and Nanophotonics
Member, Steering Committee for Optical MEMS 08/06 present
Interim Chair 08/09 03/10

IEEE/LEOS International Conference on Optical MEMS and Nanophotonics
Program Co-Chair (MEMS) for the ’09 conference 08/07 08/09

IMID/IDMC/ASIA DISPLAY 2008
Program Committee Member 03/08 present

2nd International Workshop on Optical Super Computing
Program Committee Member 04/09 present

OSA Spring Congress on Digital Holography and Three Dimensional Imaging (DH)
General Co-Chair for the ’10 congress 04/09 04/10

OSA Spring Congress on Digital Holography and Three Dimensional Imaging (DH)
General Chair for the ’11 congress 04/10 04/11

6. Awards Received:

Award	Date
National Fellowship Institute (Greece)	Sept. 1989-1993
Technical Chamber of Greece Excellence Award	June 1993
Nikolaos Kritikos Mathematics Award	June 1993
Charles Lee Powell Foundation Graduate Fellowship	Sept.1993
3M Innovation Award	July 1999
National Science Foundation CAREER Award	May 2000
Esther & Harold E. Edgerton Career Development Chair	July 2002
John S. W. Kellett ’47 Award	May 2007

7. Current Organization Membership:

Organization	
American Society of Mechanical Engineers	Member
Inst. of Electrical and Electronics Engineers	Member
Optical Society of America	Member

Publication Record of George Barbastathis

Papers in Refereed Journals:

2.1. D. Psaltis, M. Levene, A. Pu, G. Barbastathis, and K. Curtis, "Holographic storage using shift multiplexing," Optics Letters 20 (7) 782-784, 1995.

2.2. G. Barbastathis and D. Psaltis, "Shift-multiplexed holographic memory using the two-lambda method," Optics Letters 21 (6) 429-431, 1996.

2.3. G. Barbastathis, M. Levene, and D. Psaltis, "Shift multiplexing with spherical reference waves," Applied Optics 35 (14) 2403-2417, 1996.

2.4. J-J. P. Drolet, E. Chuang, G. Barbastathis, and D. Psaltis, "Compact, integrated dynamic holographic memory with refreshed holograms," Optics Letters 22 (8) 552-554, 1997.

2.5. J. Ma, T. Y. Chang, J. Hong, R. R. Neurgaonkar, G. Barbastathis, and D. Psaltis, "Electrical fixing of 1,000 angle multiplexed holograms," Optics Letters 22 (14) 1116-1118, 1997.

2.6. G. Barbastathis, M. Balberg, and D. Brady, "Confocal microscope with volume holographic filter," Optics Letters 24(12):811-813, 1999.

2.7. G. Barbastathis and D. J. Brady, "Multi-dimensional tomographic imaging using volume holography" (invited paper), Proceedings of the IEEE, 87(12):2098-2120, 1999.

2.8. G. Barbastathis and A. Sinha, "Information content of volume holographic images," Trends in Biotechnology, 19(10):383-392, 2001.**

2.9. A. Sinha and G. Barbastathis, "Resonant holography," Optics Letters, 27(6):385-387, 2002.**

2.10. W. Liu, D. Psaltis, and G. Barbastathis, "Real-time spectral imaging in three spatial dimensions," Optics Letters, 27(10):854-856, 2002.**

2.11. A. Sinha and G. Barbastathis, "Volume holographic telescope," Optics Letters, 27(19):1690-1692, 2002.**

2.12. A. Stein and G. Barbastathis, "Axial imaging necessitates loss of lateral shift invariance," Applied Optics, 41(29):6055-6061, 2002.**

2.13. A. Sinha and G. Barbastathis, "Resonant holography," Information Sciences, 149(1-3):13-20, 2003.**

2.14. W. C. Shih, C. W. Wong, Y. B. Jeon, S.-G. Kim, and G. Barbastathis, "MEMS tunable gratings with analog actuation," Information Sciences, 149(1-3):31-40, 2003.**

** Outgrowth of supervised student research.
** Outgrowth of supervised student research.

2.15. C.-W. Wong, Y.-B. Jeon, G. Barbastathis, and S.-G. Kim, "Analog tunable grating with piezoelectric actuation and sub-microradian resolution," Applied Optics, 42(4):621-626, 2003.**

2.16. A. Sinha and G. Barbastathis, "Volume holographic imaging for surface metrology at long working distances," Optics Express, 11(24):3202-3209, 2003.**

2.17. A. Sinha, W. Sun, T. Shih, and G. Barbastathis, "Volume holographic imaging in the transmission geometry," Applied Optics, 43(4):1533-1551, 2004.**

2.18. K. Tian and G. Barbastathis, "Crosstalk in resonant holographic memories," Journal of the Optical Society of America A, 21:751-756, 2004.**

2.19. K. Tian and G. Barbastathis, "Coherence patterns originating from incoherent volume sources," Optics Letters, 29:670-672, 2004.**

2.20. C. W. Wong, P. T. Rakich, S. G. Johnson, M. Qi, Y. Jeon, E. P. Ippen, H. I. Smith, L. C. Kimerling, G. Barbastathis, and S.-G. Kim, "Strain-tunable silicon photonic band gap microcavities in optical waveguides," Applied Physics Letters, 84:1242-1244, 2004.**

2.21. C. W. Wong, Y. B. Jeon, G. Barbastathis, and S.-G. Kim, "Analog piezoelectric-driven tunable gratings with nanometer resolution," Journal of MicroElectroMechanical Systems, 13:998-1005, 2004.**

2.22. A. Sinha, W. Liu, D. Psaltis, and G. Barbastathis, "Imaging with volume holograms," (invited article) Optical Engineering, special issue on volume diffractive optical elements, 43:1959-1972, 2004.**

2.23. W. Liu, D. Psaltis, and G. Barbastathis, "Volume holographic hyper-spectral imaging," Applied Optics, 43:3581-3599, 2004.**

2.24. A. Sinha and G. Barbastathis, "Broadband volume holographic imaging," Applied Optics, 43:5214-5221, 2004.**

2.25. A. Sinha and G. Barbastathis, "*N*-ocular volume holographic imaging," Applied Optics, 43:5784-5795, 2004.**

2.26. S.-G. Kim, G. Barbastathis, and H. L. Tuller, "MEMS for optical functionality," Journal of Electroceramics, special issue on electroceramics in micro-electro-mechanical systems, 12:133-144, 2004.

2.27. R. Menon, D. Gil, G. Barbastathis, and H. I. Smith, "Photon sieve lithography," Journal of the Optical Society of America A, 22:342-345, 2005.

2.28. W. Sun, G. Barbastathis, and M. A. Neifeld, "High resolution volume holographic profilometry using the Viterbi algorithm," Optics Letters 30:1297-1299, 2005.**

2.29. W. Sun and G. Barbastathis, "Volume holographic imaging with rainbow illumination," Optics Letters 30:976-978, 2005.**

2.30. G. N. Nielson, D. Seneviratne, F. Lopez-Royo, P. Rakich, M. R. Watts, H. A. Haus, H. L. Tuller, and G. Barbastathis, "Integrated wavelength selective optical MEMS switch," IEEE Photonics Technology Letters 17:1190-1192, 2005.**

2.31. K. Tian, T. Cuingnet, Z. Li, W. Liu, D. Psaltis, and G. Barbastathis, "Diffraction from deformed volume holograms: perturbation theory approach," Journal of the Optical Society of America A 22:2880-2889, 2005.**

2.32. W. J. Arora, A. J. Nichol, H. I. Smith, and G. Barbastathis, "Membrane folding to achieve 3-D nanostructures: nano-patterned silicon nitride folded with stressed chromium hinges," Applied Physics Letters 88:053108, 2006.**

2.33. H. J. In, S. Kumar, Y. Shao-Horn, and G. Barbastathis, "Supercapacitor fabrication and assembly using the Nanostructured Origami™ process," Applied Physics Letters 88:083104, 2006.**

2.34. H. I. Smith, R. Menon, A. Patel, D. Chao, M. Walsh, and G. Barbastathis, "Zone-plate array lithography: a low-cost complement or competitor to scanning electron beam lithography," Microelectronic Engineering 83:956-961, 2006.

2.35. A. J. M. Kiruluta, K. Anderson, and G. Barbastathis, "Time-domain frequency-selective processing in nuclear magnetic resonance: a spatial-spectral holographic perspective," Journal of the Optical Society of America A, 23:1391-1399, 2006.

2.36. W. Shih, S.-G. Kim, and G. Barbastathis, "High resolution electrostatic analog tunable grating with single mask fabrication process," Journal of Micro Electro Mechanical Systems (JMEMS) 15:763-769, 2006.**

2.37. G. Nielson and G. Barbastathis, "Dynamic pull-in of parallel plate and torsional electrostatic MEMS actuators," Journal of Micro Electro Mechanical Systems (JMEMS) 15:811-821, 2006.**

2.38. S. Bagheri, D. Pucci de Farias, G. Barbastathis, and M. A. Neifeld, "Reduced-complexity representation of the coherent point-spread function in the presence of aberrations and arbitrarily large defocus," Journal of the Optical Society of America A 23:2476-2493, 2006. **

2.39. K. Tian, G. Barbastathis, and J. Hong, "Localized propagation modes guided by shear discontinuities in photonic crystals," Optics Express 14:10887-10897, 2006. **

** Outgrowth of supervised student research.

2.40. G. L. La O, H. J. In, E. Crumlin, G. Barbastathis, and Y. Shao-Horn, "Recent advances in microdevices for electrochemical energy conversion and storage," International Journal of Energy Research 31:548-575, 2007.**

2.41. A. J. Nichol, P. S. Stellman, W. J. Arora, and G. Barbastathis, "Two-step magnetic self-alignment of folded membranes for 3D nanomanufacturing," Microelectronic Engineering 84:1168-1171, 2007.**

2.42. W. J. Arora, H. I. Smith, and G. Barbastathis, "Membrane folding by ion implantation induced stress to fabricate three-dimensional nanostructures," Microelectronic Engineering 84:1454-1458, 2007.**

2.43. P. Stellman, T. Buchner, W. J. Arora, and G. Barbastathis, "Dynamics of Nanostructured Origami," Journal of Micro Electro Mechanical Systems 16:932-949, 2007.**

2.44. W. J. Arora, S. Sijbrandij, L. Stern, J. Notte, H.I. Smith, and G. Barbastathis, "Membrane folding by helium ion implantation for three-dimensional device fabrication," Journal of Vacuum Science and Technology B 25:2184-2187, 2007.**

2.45. Y. Luo, P. J. Gelsinger, J. K. Barton, G. Barbastathis, and R. K. Kostuk, "Optimization of multiplexed holographic gratings in PQ-PMMA for spectral-spatial imaging filters," Optics Letters 33:566-568, 2008.**

2.46. P. Wissmann, S. B. Oh, and G. Barbastathis, "Simulation and optimization of volume holographic imaging systems in Zemax®," Optics Express 16:7516-7524, 2008.**

2.47. Y. Luo, P. Gelsinger, J. M. Watson, G. Barbastathis, J. K. Barton, and R. K. Kostuk, "Laser-induced fluorescence imaging of subsurface tissue structures with a volume holographic spatial-spectral imaging system," Optics Letters 33:2098-2100, 2008.**

2.48. H. J. In, H. Lee, A. J. Nichol, S.-G.Kim, and G. Barbastathis, "Carbon Nanotube-based Magnetic Actuation of Origami Membranes," Journal of Vacuum Science and Technology B 26:2509-2512, 2008.**

2.49. S. B. Oh and G. Barbastathis, "Passive quasi-monochromatic depth discrimination using a coherence imager with volume holographic pupil," Applied Optics 47:6881-6888, 2008.**

2.50. W. J. Arora, W. Tenhaeff, K. K. Gleason, and G. Barbastathis, "Integration of reactive polymeric nanofilms into a low power electro-mechanical switch for selective chemical sensing," Journal of Micro Electro Mechanical Systems 18:97-102, 2009.**

2.51. S. Bagheri, P. E. X. Silveira, and G. Barbastathis, "Signal-to-noise ratio limit to the depth-of-field extension for imaging systems with an arbitrary pupil-function," Journal of the Optical Society of America A 26:895-908, 2009.

** Outgrowth of supervised student research.

2.52. H. J. In, H. Lee, S.-G. Kim, and G. Barbastathis, "Nanomanufacturing of carbon nanotubes on titanium nitride," accepted for publication to the International Journal of Nanomanufacturing.**

2.53. J. A. Domínguez-Caballero, S. Takahashi, G. Barbastathis, and S. J. Lee, "Design and sensitivity analysis of Fresnel domain computer generated holograms," accepted for publication to the International Journal of Nanomanufacturing.**

2.54. S. Lee, J. A. Domínguez-Caballero, and G. Barbastathis, "Surface relief hologram mask recording optimization using simulation based on SDTA method in Fresnel diffraction zone," Journal of the Korean Society of Mechanical Engineers (in Korean) 33:793-798, August 2009.**

2.55. L. A. Waller, J. Kim, Y. Shao-Horn, and G. Barbastathis, "Interferometric tomography of fuel cells for monitoring membrane water content," Optics Express 17:14806-14816, Aug. 2009.**

2.56. S. B. Oh and G. Barbastathis, "The Wigner distribution function of volume holograms," Optics Letters 34:2584-2586, Sep. 2009.

2.57. K. Tian, W. Arora, S. Takahashi, J. Hong, and G. Barbastathis, "Dynamic group velocity control in a mechanically tunable photonic-crystal coupled-resonator optical waveguide," Physical Review B 80:134305, Oct. 2009.**

2.58. S. B. Oh and G. Barbastathis, "Axial imaging necessitates loss of lateral shift invariance: proof with the Wigner analysis," Applied Optics 48:5881-5888, Oct. 2009.**

2.59. S. B. Oh, J. M. Watson, and G. Barbastathis, "Theoretical analysis of curved Bragg diffraction images from plane wave reference volume holograms," Applied Optics 48:5984-5996, Nov. 2009.**

2.60. C.-H. Chang, C. W. Tan, Z. Wang, J. Miao, and G. Barbastathis, "Self-assembled ferrofluid lithography," Nanotechnology 20:495301, Dec. 2009.

2.61. S. S. Kou, L. A. Waller, G. Barbastathis, and C. J. R. Sheppard, "A transport-of-intensity approach to differential interference contrast (TI-DIC) microscopy for quantitative phase imaging," Optics Letters 35:447-449, Feb. 2010.**

2.62. Y. Luo, S. B. Oh, and G. Barbastathis, "Wavelength-coded multi-focal microscopy," Optics Letters 35:781-783, March 2010.

2.63. S. S. Orlov, S. I. Abarzhi, S. B. Oh, G. Barbastathis, and K. R. Sreenivasan, "High performance digital holography for fluid dynamics experiments," Philosophical Transactions of the Royal Society A 368:1705-1737, March 2010.

** Outgrowth of supervised student research.

2.64. L. Tian, N. Loomis, J. A. Domínguez-Caballero, and G. Barbastathis, “Quantitative measurement of size and 3D position of fast-moving bubbles in air-water mixture flows using digital holography,” Applied Optics 49:1549-1554, March 2010.**

Theses Supervised by George Barbastathis

Summary:

	Total	Completed	In Progress
Bachelor's	17	17	0
Master's	17	10	7
Engineer's	0	0	0
Doctoral			
As Supervisor	13	8	5
As Reader	33	23	10

Master's Theses

Stein, Andrew M., "Design of imaging systems for depth sensitivity and detection of object growth," May 2002.

Jurga, Stanley M., "Nanostructured origami," May 2003.

Arora, Will J., "Nanostructured Origami: folding thin films out of the plane of a silicon wafer with highly stressed chromium hinges," June 2005.

In, Hyun Jin, "Origami nanofabrication of three-dimensional electrochemical energy storage devices," June 2005.

Waller, Laura, "Feedback loop design and experimental testing for integrated optics with micro-mechanical tuning," June 2005.

Domínguez-Caballero, José A., "Digital holographic imaging of aquatic species," January 2006 (co-supervisor: Jerome H. Milgram).

Stellman, Paul S., "Kinematic and dynamic modeling of Nanostructured Origami," January 2006.

Takahashi, Satoshi, "Integrated optical switching using titanium nitride micro electromechanical systems," January 2006.

Shaar, Nader (topic: latching for Nanostructured Origami; co-supervisor: Carol Livermore), June 2007.

Watson, Jonathan M. (topic: aberration modeling and optimization for multiplex volume holographic imaging systems) June 2008.

Theses Supervised by George Barbastathis

Tian, Lei (topic: digital holographic imaging of muddy waters) expected January 2010.

Bhakta, Aditya (topic: nanophotonics for efficient solar energy collection and conversion) expected May 2010.

Deterre, Martin (topic: magnetic actuated deformable gratings and nanophotonics) expected May 2010.

Choi, Hyungryul (Johnny) (topic: nanostructured membrane sensors) expected May 2011.

Gao, Hanhong (topic: nanostructured optical elements) expected May 2011.

Ku, Jason (topic: underwater digital holographic cameras) expected May 2011.

Lee, Justin Wu (topic: volume holographic microscopes and endoscopes) expected May 2011.

Doctoral Theses (Supervisor)

Sinha, Arnab, "Imaging using volume holograms," February 2004.

Nielson, Gregory N., "Micro-opto-mechanical switching and tuning for integrated optical systems," July 2004.

Sun, Wenyang, "Profilometry with volume holographic imaging," March 2006.

Tian, Kehan, "Three dimensional (3D) optical information processing," March 2006.

Arora, Will J. "Nanostructured Origami™: Stress-Engineering of Nanopatterned Membranes to Produce Three-Dimensional Structures," May 2008.

Oh, Se Baek, "Volume holographic pupils in ray, wave, statistical optics, and Wigner space," December 2008.

Domínguez-Caballero, José A. "Optimization of the Holographic Process for Imaging and Lithography," November 2009.

In, Hyun Jin, "Nanostructured Origami fabrication and assembly of 3D electrochemical devices," December 2009.

Waller, Laura (topic: tomographic imaging of thin membranes using three dimensional optics) expected May 2010.

Nichol, Anthony J. (topic: nanomagnet actuation and alignment for 3D nanomanufacturing) expected August 2010.

Theses Supervised by George Barbastathis

Loomis, Nick (topic: digital holographic imaging of nekton underwater and of particle flows; co-supervisors: Jerome H. Milgram, MIT/ME and Cabell S. Davis, Woods Hole Oceanographic Institution) expected January 2011.

Shaar, Nader (topic: optimal latching and alignment of nanostructured origamis; origami inductors) expected January 2011.

Takahashi, Satoshi (topic: mechanically tunable 3D nanophotonics) expected May 2011.

Doctoral Theses (Reader)

Aumond, Bernardo (primary supervisor: K. Youcef-Toumi) ”High precision stereo profilometry,” June 2001.

Sweetland, Matthew (primary supervisor: J. Lienhard) ”Design of thermal control systems for testing of electronics,” June 2001.

Sujan, Vivek (primary supervisor: S. Dubowsky) “Compensating for model uncertainty in the control of cooperative field robots,” April 2002.

Zhang, Yi (primary supervisor: H. Asada) “Multi-channel blind system identification for central hemodynamic monitoring,” August 2002.

Kavehpour, Pirouz (primary supervisor: G. McKinley) “An interferometric study of spreading liquid films,” January 2003.

White, James (primary supervisor: A. Slocum) “The Nanogate: nanoscale flow control,” May 2003.

Ryu, Jekwan (primary supervisor: D. M. Freeman, EECS and Harvard/MIT HST) “Resolution improvement in optical microscopy by use of multi-beam interferometric illumination,” July 2003.

Wong, Cheewei (primary supervisor: S.-G. Kim) “Strain-tuning of periodic optical devices: tunable gratings and photonic crystals,” August 2003.

Jones, Ryan E. (primary supervisor: D. P. Hart) ”Thermally driven visco-elastic measurement technique via spectral variations in scanning probe microscopy cantilevers,” May 2004.

Wilhelm, Eric (primary supervisor: J. Jacobson) ”Printed electronics and micro-electromechanical systems,” May 2004.

Cao, Chengyu (primary supervisor: A. Annaswamy) “Parameter estimation and control of nonlinearly parameterized systems,” June 2004.

Theses Supervised by George Barbastathis

Masterson, Becky (primary supervisor: D. Miller) “Dynamic tailoring and tuning for space-based precision optical structures,” September 2004.

Shi, Yong (primary supervisor: S.-G. Kim) “A lateral, self-cleaning direct-contact MEMS switch,” September 2004.

Lichter, Matthew (primary supervisor: S. Dubowsky) “Shape, motion, and inertial parameter estimation of space objects using teams of cooperative vision sensors,” February 2005.

Kim, Ki Hean (primary supervisor: P. T. C. So) “Development of high-speed two-photon microscopy for biological and medical applications,” April 2005.

Tan, Sheng Sarah (primary supervisor: D. P. Hart) “Stereo vision based on compressed feature correlation and graph cut,” May 2005.

Anthony, Brian T. (primary supervisor: K. Youcef-Toumi) December 2005.

Hu, Qiao (primary supervisor: C. Davis – Woods Hole Oceanographic Institution) “Application of statistical learning theory to plankton image analysis,” April 2006.

Chung, Euiheon (primary supervisor: P. T. C. So) December 2006.

Joo, Chulmin (primary supervisor: Mark L. Schattenburg, Kavli Institute for Astrophysics and Space Research) September 2007.

Shih, Wei Chuan (primary supervisor: M. Feld; topic: inverse problems approach to fluorescence imaging) May 2007.

Chang, Chihhao (primary supervisor: Mark L. Schattenburg, Kavli Institute for Astrophysics and Space Research) June 2008.

Kim, Jungik, (primary supervisor: Y. Shao-Horn), February 2009.

Figueredo, Stacy (primary supervisor: A. H. Slocum), expected TBD.

Goldberg, Brian (Health Sciences & Technology program; primary supervisor: Gary Tearney, Mass General Hospital) expected TBD.

Kim, Yang Hyo, (primary supervisor: Peter T. C. So), expected TBD.

Lu, Hu, (primary supervisor: Gang Chen), expected TBD.

McGory, Ryan (Harvard University; primary supervisor: V. Manoharan) expected TBD.

Naveen Kumar Bala (National University of Singapore/SMA; primary supervisor: C. J. R. Sheppard) expected TBD.

Theses Supervised by George Barbastathis

O’Reilley, Thomas B. (primary supervisor: H. I. Smith, EECS) expected TBD.

Petruczok, Christy (primary supervisor: K. Gleason, ChemE) expected TBD.

Sung, Yongjin, (primary supervisor: Michael Feld) “High resolution 3D refractive index imaging and its biological application,” expected TBD.

Tang Wai Teng (National University of Singapore/SMA; primary supervisor: C. J. R. Sheppard) expected TBD.

Teaching Evaluations of George Barbastathis

Massachusetts Institute of Technology

Term	Subject Number	Title	Role
ST99	2.672	Project Laboratory (with W. K. Cheng)	Laboratory instructor, 1 session
FT99	2.997	Optical Engineering	Lectures, in charge
FT99	2.a30	Innovations Using Light	Freshman Advisor
ST00	2.671	Measurement and Instrumentation (with D. Rowell)	Laboratory instructor, 2 sessions
SU00	2.79s	Biomedical Optics (with P. T. C. So)	Lectures, co-in charge
FT00	2.717J	Optical Engineering	Lectures, in charge
FT00	2.a31	Tech Goes to Movie-Land	Freshman Advisor
ST01	2.003	Modeling, Dynamics and Control I (with D. Gossard)	Recitation, in charge
SU01	2.79s	Biomedical Optics (with P. T. C. So)	Lectures, co-in charge
FT01	2.71 2.710	Optics	Lectures, in charge
FT01	2.a31	Tech Goes to Movie-Land	Freshman Advisor
ST02	2.717J	Optical Engineering	Lectures, in charge
FT02	2.71 2.710	Optics	Lectures, in charge
FT02	2.a31	Tech Goes to Movie-Land	Freshman Advisor
ST03		Junior Leave	
FT03	2.71 2.710	Optics	Lectures, in charge
FT03	2.a31	Tech Goes to Movie-Land	Freshman Advisor
ST04	2.391J/ /6.781J	Submicrometer and nanometer technology (with Henry I. Smith)	Lecture, co-in charge
FT04	2.71 2.710	Optics	Lectures, in charge
FT04	2.a31	Tech Goes to Movie-Land	Freshman Advisor
ST05	2.717J	Optical Engineering	Lectures, in charge

ST05	2.391J/ /6.781J	Submicrometer and nanometer technology (with H. I. Smith, K. Berggren)	Lecture, co-in charge
FT05	2.71 2.710	Optics	Lectures, in charge
FT05	2.a31	Tech Goes to Movie-Land	Freshman Advisor
ST06	2.007	Design and Manufacturing I (with A. H. Slocum)	Laboratory instructor, 1 session
ST06	2.391J/ /6.781J	Submicrometer and nanometer technology (with H. I. Smith, K. Berggren)	Lecture, co-in charge
FT06		Sabbatical Leave	
ST07		Sabbatical Leave	
FT07	2.004	Dynamics and Control II (with D. Gossard, F. Hover)	Lectures, in charge
ST08	2.71 2.710	Optics	Lectures, in charge
FT09		SMART Resident	
ST09	2.71 2.710	Optics[†] (with C. J. R. Sheppard /NUS)	Lectures, in charge
FT09	2.004	Dynamics and Control II (with D. Hardt)	Lectures (50%) and Labs (50%)
ST10	2.71 2.710	Optics	Lectures, in charge

[†]Jointly offered at the National University of Singapore on a trial basis as an educational branch of the Singapore-MIT Alliance for Research and Technology (SMART) Centre, with financial support and participation from the Singapore-MIT Alliance.