

Dr. Vinod Malhotra, Associate Professor

Education

Ph.D., Electrical Engineering, Colorado State University, Fort Collins, CO, 08/1987
 M.S., Electrical Engineering, Colorado State University, Fort Collins, CO, 12/1983
 B.E. (honors), Electrical Engineering, Birla Institute of Technology and Sciences, India, 05/1981

Academic and Non-Academic Experience

- Associate Professor, Electrical Engineering, University of Hawaii, 07/1993 – present
- Graduate Chairman, Electrical Engineering, University of Hawaii, Honolulu, 08/1999 – 12/2002
- Director, Optoelectronics Research Laboratory, Electrical Engineering, 1991 - 2002
- Photonics Program Manager, PICHTR, Honolulu, 04/2003 – 12/2004
- Visiting Faculty, University of Illinois, Urbana Champaign, Illinois, 05/2001 – 08/2001
- Visiting Scientist, Sandia National Laboratory, Albuquerque, New Mexico, 01/1997 – 06/1997
- Assistant Professor, Electrical Engineering, University of Hawaii, 08/1987 – 06/1993
- Computer Engineer, Computer Maintenance Corporation, Bombay, India, 01/1981 – 05/1981 (intern)

Selected Professional Service and Activities

- Chair, ABET Core Committee, Electrical Engineering, UH, 08/2014 – present; 01/2002-12/2002
- Panelist, ‘S & T as an Economic Engine,’ Tech Enterprise 2003, Honolulu, Aug 19, 2003 (Other panelists included Former Hawaii Governor John Waihee).
- Departmental Personnel Committee, Electrical Engineering, University of Hawaii (various).
- Faculty Recruitment Committee Member, Electrical Engineering, University of Hawaii (various)
- Committee Member, Co-op program for EE and ICS, University of Hawaii, 2000.
- Advisory Core Review Committee Member, College of Engineering, UH, 1999
- Member, Undergraduate Curriculum Committee, Electrical Engineering, University of Hawaii, 1999.
- Technical Session Chair. State-of-the-art program on Compound Semiconductors [196th Electrochemical Society Meeting, Honolulu, Oct 19 - 22, 1999; 189th Electrochemical Society Meeting, Los Angeles, May 5-11, 1996; 187th Electrochemical Society Meeting, Reno, May 21-26, 1995; 186th Electrochemical Society Meeting, Miami, October 9-14, 1994.]
- Symposium Chairman, State-of-the-art program on compound semiconductors XXII, 187th Electrochemical Society Meeting, Reno, May 21 -26, 1995.
- Awards and Honors Committee Member, Regents Medal for Excellence in Teaching, University of Hawaii, 1994 and 1995.
- UH Manoa Educational Improvement Fund Grants Review Committee , Office of Faculty Development and Academic Support, University of Hawaii, 1995 -1997
- Travel Grants Committee Member. Office of Faculty Development and Academic Support, University of Hawaii, 1994.
- Host Chairman, 183rd Electrochemical Society Meeting (Co-sponsored by The Electrochemical Society of Japan, with the cooperation of The Japan Society of Applied Physics), May 16-21, Honolulu, 1993.
- Local Arrangements Chairman and Treasurer, First International Forum on Application Specific Integrated Circuits and Transducers Technology, Honolulu, Feb 7-10, 1988.
- Membership: Eta Kappa Nu (Electrical Engineering honor society)

Honors and Awards

Best Paper Award, CCCT '04, Austin, Texas, 2004
 Regents medal for excellence in teaching. May 1991.
 Best Poster Award, Annual Symposium of AVS, Denver, 1984.

Referee for Journals

Applied Physics Letters; Journal of Vacuum Science and Technology
 Proceedings - Materials Research Society; Electrochemical Society

Selected Publications (last 5 years – none)

- C. Talarico, V. Malhotra, J. C. Vial, and M. Hage-Hasan, "System Level Power Estimation of System-on-a-Chip SRAMs, Proc. International Conference on Computing, Communications and Control Technologies, Austin, August 14-17, 2004 (*Best paper award*)
- C. Talarico, J. W. Rosenblit, V. Malhotra, and A. Stritter, "A new framework for power estimation of embedded systems," Research feature article in IEEE Computer, pg 65-72, Feb 2005.
- V. Malhotra and A. Kapila, "Use of real-time photoluminescence and low-power electron cyclotron resonance hydrogen plasma for passivation of SiN/InP interfaces," J. Appl. Phys. 83(1), pg. 577, 1998.
- Kapila and V. Malhotra, "ECR-PECVD SiN overlayer passivation of GaAs and InP surfaces," Proc. of State-of-the-art program on compound semiconductors XXVII, The Electrochemical Society, vol. 97-21, pg. 322, 1997 (*invited paper*).
- Kapila and V. Malhotra, "Surface passivation of III-V compound semiconductors", IEEE Proc. On Optoelectronic and Microelectronic Materials and Devices, pg. 275, 1996 (*invited paper*).
- V. Malhotra and C. W. Wilmsen, "Passivation of InP and GaAs" book chapter in Handbook of Compound Semiconductors, ed. P. H. Holloway and G. E. McGuire, Noyes Publications, 1995.
- D. B. Young, A. Kapila, J. W. Scott, V. Malhotra, and L. A. Coldren, "Reduced threshold vertical-cavity surface emitting lasers, " Electronics Letters, vol. 30, no. 3, pg 233, 1994.
- A. Kapila and V. Malhotra, "Passivation of the InP surface using polysulfide and silicon nitride overlayer," Appl. Phys. Lett., 62 (9), pg. 1009, 1993.
- X. Chen, X. Si, and V. Malhotra "Measurement of reduced surface barrier in sulfur passivated InP and GaAs using raman spectroscopy," J. Electrochem. Soc., vol. 140, 7, pg. 2085, 1993.
- V. Malhotra, "Method of using dc photocurrent measurements to sense color of light or to characterize semiconductor materials, U. S. Patent No. 5,270,536, 1993.
- V. Malhotra, "Effects of arsenic n+ contact implants on memory switching in vertical polycrystalline silicon resistors," IEEE Trans. Electron Devices, ED-39, 5, 1235, 1992.
- M. Weling and V. Malhotra, "Color detection using amorphous silicon Schottky photodiode," Sensors and Actuators A, 29, 195, 1991.
- V. Malhotra, D. Yang, and M. Weling, "A novel technique for wavelength sensing using ac photocurrent measurements," Sensors and Materials, vol. 2, 6, 303, 1991.
- V. Malhotra and D. Yang, "On the theory of intrinsic wavelength-sensing capability of crystalline silicon," Sensors and Materials, vol. 2, 3, 127, 1990.
- V. Malhotra, J. E. Mahan, and D. L. Ellsworth, "An electrothermal model of switching in vertical polycrystalline silicon structures," IEEE Trans. Electron Devices, ED-35, 9, 1514, Sept. 1988.
- V. Malhotra, J. E. Mahan, D. L. Ellsworth, "Fundamentals of memory switching in vertical polycrystalline silicon structures," IEEE Trans. Electron Devices, ED32, 11, 2441, 1985.