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Education

1968-1973 University of Cincinnati
1974 BSEE Ohio University
1976 MSEE Ohio University
Thesis: Design of a Digital Phase Lock Loop for Airborne Navigation
1982 Ph.D. Ohio University
Dissertation: VHF Air-Ground Propagation Modeling

Professional Experience Summary

2014	Professor and Chair, University of New Hampshire Dept. of Electrical & Computer Engineering
1985-2014	Professor, UNH Dept. of Electrical and Computer Engineering
2010 (Spring)	Visiting Professor: SRM University, Chennai, India
2000 – 2001	Fulbright Distinguished Chair in Antennas and Computational Electromagnetic at the University of Aveiro, Portugal
1993- 1994	Visiting Prof. at The Pennsylvania State University Department of Electrical Engineering. One-semester appointment to the Applied Research Labs
1982- 1985	Asst. Prof. at Ohio University Department of Electrical and Computer Engineering
1981 (Fall)	Visiting Professor at the FAA Technical Center
1977-1981	Senior Research Engineer with the Ohio University Avionics Engineering Center

Personal

United States Citizen, Married, Three Children

Research Experience

Below is a listing of research programs participated in along with the sponsoring agency and dates:

- “Low Cost, High Bandwidth, and Non-Intrusive Machining Force Measurement System,” The National Science Foundation, June 1, 2009- May 31, 2013
- “The Use of Datacast Signals for Public Safety Applications,” National Institute of Justice, January 2006- December 2007
- “Data Collection and Analysis of Low Altitude Propagation Effects for Mobile Radio,” U.S. Navy (SPAWAR), Feb. 04- Feb. 05.
- “Modeling the Wireless Ground-to-Ground Communication Channel”, Department of Justice (Project 54), June 2001- July 2004.
- “Distance Education Module Development,” part of an E2T2 (Enhancing Education Through Technology) grant obtained for the Seacoast Professional Development Center as part of the No Child Left Behind program, 8/04- 2/05.
- "Digital Air-Ground Link Modeling", Federal Aviation Administration, 7/1/98-9/30/01.
- "Sidewall Dielectric Damage by RIE: Detection by Scanning Probe Microscopy and the Effect on Signal Propagation", Semiconductor Research Corporation, 4/1/98-3/31/2001
- Development and Evaluation of a Distance Learning Classroom, Davis Educational Classroom, 1/99 - 12/99.
- “Development of the GELTI Propagation Model”, Federal Aviation Administration, 5/96- 9/97.
- “Electric Field Measurement by Scanning Probe Microscopy to Detect the Effect of Nanoscale Material Inhomogeneity on Signal Propagation in High Density Interconnects”, Semiconductor Research Corp., 10/96-12/97.
- “Propagation Model for Digital Radio in Airborne Platform”, MadenTech (Subcontract from the U.S. Army), 9/95-9/96.
- “Development of Digital Signal Processing Techniques for Avionics Instrumentation Package”, Airfield Technologies, 1/95-8/95.
- “Modeling Propagation Path Loss for the Microwave Landing System (MLS) Operating on Humped Runways,” CTA (subcontract from the Federal Aviation Administration), 8/89-12/93.
- “Application of the Finite-Difference, Time-Domain Approach to aid in the design of low-cost, computer cabinetry that will meet FCC requirements for Radio Frequency Interference,” Digital Equipment Corporation, 6/92-12/93.
- “Investigation into reflection from terrain and building surfaces as applied to Microwave Landing System Modeling”, CTA (subcontract from the Federal Aviation Administration), 7/92-9/92.
- “Capability Enhancement of the COSITE Computer Model for Use in Air-Ground Communications Facility Design and Telecommunications Analysis,” Information Systems and Networks, Inc. (subcontract from the Federal Aviation Administration), 10/90-3/92.
- “Enhancement of FAA Modeling Capabilities,” Pabon, Sims, Smith & Associates (subcontract from the Federal Aviation Administration), 2/87-2/88.

- “Enhancement of FAA Modeling Capabilities,” Information Systems and Networks, Inc. (Subcontract from the Federal Aviation Administration, 11/86- 11/87.
- “Development of a Graphics-Oriented, Finite-Difference, Time-Domain Code in the C Programming Language, Microsoft Corporation, Summer, 1988.
- “Modeling and Validation of VOR and TACAN Errors Resulting from Near-Zone Parasitic Scatterers,” Graph-Tech, Inc. (subcontract from the Federal Aviation Administration), 11/84-8/85
- “VHF Omni-Range Maintainability and Course Accuracy, Federal Aviation Administration, 4/85-8/85
- “Modeling and Validation of VHF Air-Ground Communications Coverage in the Presence of Long Range Radar Antennas,” Ohio University, Graph-Tech, Inc. (subcontract from the Federal Aviation Administration, 11/84-8/85
- “Microwave Landing System (MLS) Critical Areas Investigation,” Ohio University, Federal Aviation Administration, 9/83-11/84
- “Extension and Validation of the Geometrical Theory of Diffraction Propagation Model,” Ohio University, Electromagnetic Compatibility Analysis Center via Southeastern Center for Electrical Engineering Education, 6/82-1/83
- “Delivery of GTD Glide Slope Model and Operations Manual, “ Ohio University, Government of India, 10/83
- “Study of Glide Slope Signal Derogation Due to Presence of Aircraft Near Glide Slope Critical Area”, Federal Aviation Administration
- “Electromagnetic Interference Measurements on Emissions from Industrial, Scientific, and Medical (ISM) Equipment and Their Effects on ILS Localizer Receiver Performance,” Federal Aviation Administration
- “Development of Ground-to-Air Coverage-Area Prediction for VHF/UHF Communications,” Federal Aviation Administration

Other research efforts include: A centralized computer monitor system for O’Hare Airport (FAA); Development of the Memory-Aided Phase Lock Loop (MAPLL) for use in low-frequency navigation for NASA; Development of a mathematical model and computer simulation for the Memory-Aided, Phase Lock Loop (MAPLL) for the Naval Avionics Facility in Indianapolis; Evaluation of Omega navigation receivers for the U.S. Coast Guard; Investigation of snow effects on the ILS Glide Slope.

Consulting (abbreviated)

Remcom, Inc.: Provide engineering support and analysis relating to electromagnetics modeling efforts.

New Hampshire Public Television: Performed a signal coverage study as a pre-pilot program to implement datacasting for public safety applications.

KAI, Inc.: Performed FDTD analysis of heating effects of an antenna positioned in oil-bearing soil.

Penn State Applied Research Labs: Performed a preliminary study of coastal effects on HF propagation using FDTD and investigated the use of GTD for HF air-ground propagation modeling.

City of Willoughby, Ohio: Provided technical and administrative support for the procurement, flight testing, and installation of a VOR navigation aid.

Raytheon Service Company: Evaluated an existing computer model of mono-pulse radar performance in a space-frame radome.

Information Systems & Networks Corporation: Aided in specifying a frequency management strategy for siting multi-channel, air-ground communication facilities.

Pacific Telecommunications Corporation, Alaskom Division: Investigated radiation patterns for meteor burst communication systems. This effort included computer simulation and airborne data collection for directional 40 MHz. systems operating in the presence of irregular terrain.

General Electric Company: Analytical and computer modeling study to access magnetic field behavior due to currents on irregular surfaces.

Memberships

IEEE (Senior Member): Antennas and Propagation Society and Electromagnetic Compatibility Society, Sigma Xi, Tau Beta Pi, Applied Computational Electromagnetics Society (ACES), and International Union of Radio Scientists URSI)

Honors

Awarded a Fulbright Distinguished Chair in 2000

Received a UNH Industrial Research Consulting Center Research Award

Awarded a Fulbright Fellowship in 1993, but was unable to accept because a family member could not take a requisite vaccine.

Received the Radio Technical Commission for Aeronautics William E. Jackson Award presented by the FAA Administrator

Awarded the UNH College of Engineering and Physical Sciences Outstanding Teacher for 2013-14

Professional Service

Associate Editor for IEEE Transactions on Antennas and Propagation

Associate Editor of the International Journal for Computing

Proposal Reviewer for National Science Foundation, the National Institute for Health and the American Association for the Advancement of Science

Session Chair for numerous IEEE and URSI conferences

Editorial Review Board for SciTech Publishing

Served as member of the Evaluation Team, coordinated by the New Hampshire Department of Education, for the American University of Madaba in Jordan

Refereed, Invited, and Award-Winning Papers

Kent Chamberlin and Benjamin McMahon, "Magnetic-Field Antenna for Mobile Reception of Broad-Band, Horizontally-Polarized Signals," submitted to IEEE Antennas and Propagation

Ronald Croce, John Miller, Kent Chamberlin, David Filipovic and Wayne Smith, "Wavelet analysis of Quadriceps power spectra and amplitude under varying levels of contraction intensity and velocity," accepted for publication in Muscle & Nerve Journal

Kent Chamberlin, Ph.D., Wayne Smith, Ph.D., Seshank Appasani, Christopher W Chirgwin and Paul T Rioux, "Analysis of the Charge Exchange between the Human Body and Ground: Evaluation of "Earthing" from an Electrical Perspective," Journal of Chiropractic Medicine, accepted pending minor revisions.

Keith Spaulding and Kent Chamberlin, "Measurements Relevant to Electrical Energy Transport both On and Off Acupuncture Meridians," February 2011, Journal of Complementary and Alternative Medicine.

Kent Chamberlin, "Intermodulation Product Interference: Theory and Practice," Keynote Address, International Conference on Communications & Computing (ICCC '10), Chennai, India, April 2010.

Benjamin McMahon, Kent Chamberlin & Scott Valcourt, "Datacasting in the Mobile Environment," *Journal of Networks*, Issue 7, 2008.

Jason Chan, K. Sivaprasad, and Kent Chamberlin, "Modeling Frequency-Dependent Stripline Losses at High Frequencies," *IEEE Trans. Packaging Materials*, March 2007

Kent Chamberlin and Shahaji Bhosle, "A Robust Solution for Preprocessing Terrain Profiles for Use with Ray-Tracing Propagation Models," *IEEE Trans. on Antennas & Propagation*, October 2004

Kent Chamberlin and Maxim Khankin, "Measuring the Impact of In-Vehicle-Generated EMI on VHF Radio Reception in an Unshielded Environment," Proceedings of the 2004 International Symposium on Electromagnetic Compatibility and winner of an "Excellence of the Presented Papers Award", Sendai, Japan

Kent Chamberlin and Dragan Vidacic, "Analysis of Finite-Differencing Errors to Determine Cell Size When Modeling Ferrites and other Lossy Electric and Magnetic Materials Using FDTD," *IEEE Trans. on Electromagnetic Compatibility*, November 2004

Todd S. Gross, Kevin G. Soucy, Ebrahim Andideh, and Kent Chamberlin, "Detection of Plasma-Induced, Nanoscale Dielectric Constant Variations in Carbon-Doped CVD Oxides by Electrostatic Force Microscopy," *Journal of Applied Physics*, 35 (2002) pg. 723-728.

Todd S. Gross, Christopher M. Prindle, Kent Chamberlin, Nazri bin Kamsah, and Yuanyan Wu, "Two-dimensional, electrostatic finite element study of tip-substrate interactions in electric force Microscopy of high density interconnect structures," *Ultramicroscopy Journal*, 87 (2001) pg. 147-154

Kent Chamberlin, Mikhailo Seledtsov, and Petar Horvatic, "Modeling Large and Small-Scale Fading on the DPSK Datalink Channel Using a GTD Ray-Tracing Model", invited paper, Proceedings of, the 2000 Applied Computational Electromagnetics Symposium, Monterey, California.

Jennifer Bernhard, Kent Chamberlin and Chris Williamson, "A Student Perspective on an Internet-Based Synchronous Distance Learning Course Experience," *The Journal of the American Association of Engineering Education*, January, 2000.

Bruce Archambeault, Kent Chamberlin and Omar Ramahy, "EMC Modeling of Shielded Enclosures with Apertures and Attached Wires in a Real-World Environment", *Journal of the Applied Computational Electromagnetics Society*

Kent Chamberlin, "Terrain-Effect Modeling Using the Geometrical Theory of Diffraction," invited paper, *The Radio Science Bulletin*, International Union of Radio Science, March, 1997.

Kent Chamberlin, "An Automated Approach for Implementing GTD to Model 2-Dimensional Terrain Effects at Microwave Frequencies," *IEEE Transactions on Electromagnetic Compatibility*, February, 1996

Kent Chamberlin and Lauchlan Gordon, "Modeling Good Conductors Using the Finite-Difference, Time-Domain Technique," *IEEE Transactions on Electromagnetic Compatibility*, Vol. 37, No. 2, May, 1995.

Kent Chamberlin, Ken Komisararak, and Kondagunta Sivaprasad, "A Method of Moments Solution to the Twisted-Pair Transmission Line", *IEEE Transactions on Electromagnetic Compatibility*, February, 1995.

Kent Chamberlin, "Overview of Terrain-Effect Modeling Using the Geometrical Theory of Diffraction," Invited Paper, Proceedings of the 1994 Beyond Line of Sight Conference, University of Texas, August, 1994.

Kent Chamberlin, "Applications For Theory of Re-Radiation By Non-Linearly Terminated Antennas," Invited Paper, Proceedings of, the 1993 URSI/IEEE Symposium, Kyoto, Japan.

R. Luebbers, K. Kunz, and K. Chamberlin, "An FDTD Analysis of Transient Response from Non-Linearly Terminated Scatterers," *IEEE Transactions on Antennas and Propagation*, Vol. 41, no. 5, May 1993.

Chamberlin, Kent, "Computer Modeling Of MLS Signal Strength in The Presence Of Runway Hump Shadowing," Invited Paper, Proceedings of ANTEM'92 Symposium on Antenna Technology and Applied Electromagnetics, Winnipeg, Manitoba, Canada, August, 1992.

Kent Chamberlin, Jarrett Morrow, and Raymond Luebbers, "Frequency-Domain and FDTD Predictions of Harmonic Radiation by Nonlinearly-Terminated Dipole," *IEEE Transactions on Electromagnetic Compatibility*, November, 1992.

Luebbers, R.J., Kunz, K.S., and Chamberlin, K., "Finite-Difference, Time-Domain Solution to the Wave Equation for Classroom Applications", *IEEE Transactions on Education*, November, 1989 (Special Edition on Electromagnetics).

Chamberlin, Kent A., "Quantitative Analysis of Intermodulation Product Interference", *IEEE Transactions on Electromagnetic Compatibility*, November, 1989.

Chamberlin, Kent A., "The Effect of Tree Cover on Air-Ground, VHF, Propagation Path Loss", *IEEE Transactions on Communications*, September, 1986

Chamberlin, Kent A. and Luebbers, Raymond J., "An Evaluation of Longley-Rice and GTD Propagation Models", *IEEE Transactions on Antennas and Propagation*, AP-30, No. 6, November, 1982

Conference Papers (abbreviated)

Minu Valayil and Kent Chamberlin, "Enhancement of Antenna Parameters of Slotted Waveguide Antennas Using Metamaterials," presented 2014 IEEE International Symposium on Antennas and Propagation

Kent Chamberlin and Daniel Carchidi, "Rapid Course Development Using OCW Resources: Applying the Inverted Classroom Model in an Electrical Engineering Course," Cambridge 2012: Innovation and Impact - Openly Collaborating to Enhance Education

Rama Rao and Kent Chamberlin, "Path Gain Measurements at 868/915 MHz for Wireless Sensor Communications in Indoor Corridors," 5th IEEE International Conference on Advanced Networks and Telecommunication Systems (ANTS), IEEE ANTS 2011, Bangalore, India

Todd Gross and Kent Chamberlin, "Low Cost, High Bandwidth, and Non-Intrusive Machining Force Measurement System," Proceedings of 2011 NSF Engineering Research and Innovation Conference, Atlanta, Georgia

Dan Brogan and Kent Chamberlin, "Comparison of Single-Frequency Monopulse Techniques that Mimic the Results of Multiple-Frequency, Single-Aperture Interferometry," 159th Meeting of the Acoustical Society of America, Baltimore, MD, April 2010

Dan Brogan and Kent Chamberlin, "Phase and Amplitude Monopulse Techniques to Increase the Accuracy of Within-Beam Bearing Estimates of Volume Scatterers," 158th Meeting of the Acoustical Society of America, October 2009, San Antonio, TX

Daniel S. Brogan and Kent A. Chamberlin, "Use of Within-Beam Mapping in Conjunction with Kalman Filtering to Improve Angle of Arrival Estimation Accuracy in Multi-beam Echo-Sounding," 158th Meeting of the Acoustical Society of America, October 2009, San Antonio, TX

Kent Chamberlin, Andrew Kun, Scott Valcourt and Benjamin McMahan, "Evaluation of Data-casting in the Mobile Environment," Invited presentation, the 2008 International Wireless Communications Expo in Las Vegas, February 2008

Scott A. Valcourt, Pushpa Datla, Kent Chamberlin, Benjamin McMahon, "Information Integration for Public Safety Officers," in Proceedings of the SPIE Defense & Security Conference, Orlando, FL, March 2008.

Scott A. Valcourt, Pushpa Datla, Kent Chamberlin, Benjamin McMahon, "Using Two-Way Datacasting to Deliver Real-Time Public Safety Information," in Proceedings of the 2008 IEEE International Conference on Technologies for Homeland Security, Boston, MA, May 2008.

Kent Chamberlin, Christopher Glynn, Kondagunta Sivaprasad, "Transmission Line Axon Model for Acupuncture Therapy," Invited, presented at the 2007 North American Radio Science Meeting, Ottawa, ON, Canada.

Kent Chamberlin, Andrew Kun, Benjamin McMahon, Scott Valcourt, "Measuring Datacast Channel Characteristics for the Mobile Environment," Invited, presented at the 2007 North American Radio Science Meeting in Ottawa, ON, Canada.

Scott A. Valcourt, Kent Chamberlin, Benjamin McMahon and Andrew Kun, "Systems Engineering of Datacasting for Public Safety Vehicles," 2007 IEEE Conference on Technologies for Homeland Security, Woburn, MA

Kent Chamberlin, Scott A. Valcourt, Benjamin McMahon and Andrew Kun, "Measurement of Propagation Effects for High-Speed, Digital UHF Channels," 2007 IEEE AP-S International Symposium on Antennas and Propagation in Honolulu, Hawaii, June 10-15, 2007

Henk Spaanenbunrg, Andrzej Rucinski, Kent Chamberlin, Thaddeus Kochanski and Lennart Long, "Globally-Collaborative Homeland Security System Design," presented at and in the proceedings of the 2007 International Conference on Microelectronic Systems Education, San Diego, CA.

Kent Chamberlin, Andrew Kun, Benjamin McMahon and Scott Valcourt, "Evaluation of Datacasting in the Mobile Environment," presented at and in the proceedings of the 2007 IEEE 66th Vehicular Technology Conference, Baltimore, MD

Kent Chamberlin, Larry Brady and Raymond Luebbers, "Computer Simulation to Assess Effects of Aircraft Structures on Flight Inspection Antenna Performance," presented at and in the proceedings of the International Flight Inspection Symposium in Toulouse, France, June 2006.

Kent Chamberlin, Amalia Barrios and Josh Jenkins, "Data Collection, Analysis and Model Validation of Low-Altitude Propagation for VHF Mobile Radio," presented at the 2006 International Union of Radio Sciences (URSI) meeting in Boulder, Colorado, January 2006.

Kondagunta Sivaprasad, Kent Chamberlin and John LaCourse, "Transmission Line Axon Model for Acupuncture Therapy," International Union of Radio Science (URSI) meeting in New Delhi, India in October, 2005.

Kent Chamberlin, Amalia Barrios, Kondagunta Sivaprasad and Josh Jenkins, "Data Collection, Analysis and Model Validation of Low-Altitude Propagation for VHF Mobile Radio," International Union of Radio Science (URSI) meeting in New Delhi, India in October, 2005

Jason Chan, K. Sivaprasad & K. Chamberlin, "An Improved Estimation of Composite Strip-Line Losses" PIERS 2004, Pisa, Italy, March '04.

Kent Chamberlin, K. Sivaprasad and Maxim Khankin, "Measuring Small-Scale Fading at VHF Frequencies," presented at the 2004 International Union of Radio Sciences (URSI) meeting in Boulder, Colorado, January 2004.

Chan, Sathyendra, Sivaprasad, Chamberlin, "Estimation of Strip-Line Losses in Printed Circuit Boards," Proceedings of the 2003 International Symposium on Antennas, Propagation, and EM Theory (ISAPE), Beijing, China

H. Sathyendra, J. Chan, K. Sivaprasad, K. Chamberlin and J. LaCourse, "Transmission Line Modeling for Acupuncture Modal Therapy," NE Bioengineering Conference, Newark, NH, March 2003.

K. Chamberlin, M. Khankin, A. Barrios, "Progress on the Validation of Short-Distance, Ground-to-Ground Propagation Models at VHF Frequencies," USNC/CNC/URSI North American Radio Science Meeting in Columbus, Ohio, June 2003

Chamberlin, Kent, "Evolution of a Bottom-Up Distance Education Program," Proceedings of the 2002 American Society of Engineering Education Conference in Berlin, Germany

Chamberlin, Kent, "A Streamlined Approach for Collecting Signal Strength Data to Validate a Ground-To-Ground Propagation Model," presented at the International Union of Radio Scientists (URSI) meeting in Boulder, Colorado, January, 2002

Barbara Dziurla-Rucinska and Kent Chamberlin, "Not so distant distance learning", Proceedings of the 6th Annual Advanced Technology Workshop ATW'98, May 19-20, 1998, Ajaccio, Corsica, France

Administrative, Committee, and Outreach Experience

URC/ISE Planning Committee (Co-Chair, AY13-Present): College committee charged with planning the logistics of the UNH Undergraduate Research Conference

URC/ISE Steering Committee (AY13): University committee addresses conference details from a university perspective

University Research and Engagement Academy Proposal Selection Committee (AY12-Present): University committee charged with selecting inductees into the Academy based upon their research proposals.

ECE Technician Search Committee (Chair, AY13): This departmental committee worked with HR to define the position and then successfully fill it.

UNH Disclosure Review Committee (AY99-02 and AY13-Present): This university committee meets on a regular basis to determine whether relationships identified by proposal submitters constitute a conflict of interest according to university rules.

ECE Department Graduate Committee (Chair for over 15 years until AY14): Performed regular duties of graduate coordinator for ECE Masters and Doctoral programs, plus dealing with a program review and the addition of a non-thesis Masters option.

Search Committee for Electrical Engineering Technology Faculty Member at UNH Manchester (AY 13)

Advanced Manufacturing Cluster Hiring in Statistics Committee (AY2013): This committee was convened to ensure continuity and coordination in the Advanced Manufacturing cluster hire.

ad-hoc Committee on Promotion and Tenure Standards (AY13-Present): This committee was formed by the Faculty Senate to look at issues that have arisen over the years relating to P&T. I was elected by the college to serve.

Faculty Activity Reporting Working Group (AY13): I was appointed by the Faculty Senate to monitor the process by which the FAR is being evaluated and revised.

CEPS e-Learning Committee (AY12 (Chair)): The mission of this committee is to determine next steps necessary to move forward with online programs, with findings documented in a final report.

eUNH Working Group (AY12): This group is advisory to the eUNH Steering Committee and was involved with tasks such as evaluating proposals submitted by outside vendors interested in partnering with UNH on online initiatives.

CEPS Curriculum and Academic Planning Committee (AY12):

College Promotion and Tenure Committee (AY01-03 and AY010-11(Chair)): The work of this time-consuming committee was complicated by unclear guidelines involving research faculty. Efforts outside of normal P&T Committee duties took place to help clarify those guidelines.

Faculty Senate Research and Public Service committee (AY11, Chair): This committee responded to all of the eight charges assigned to us.

President's Panel on Internationalization (AY11): I served on this panel as the representative of the Faculty Senate.

UNH Research Council (AY11): I served on this committee because of my role as Chair of the Faculty Senate Research & Public Service Committee

Sustainability Dual Major Leadership Team (summer-fall 2012): the goal of our team is to create a dual major in Sustainability that can be taken by all undergraduates at UNH.

Search Committee for Computer Science- Engineering Technology Faculty Member at UNH Manchester (AY10)

New Markets Working Group of the Strategic Planning Committee (Spring 09): as its name implies, this working group was charged with identifying new revenue streams for UNH.

CEPS Graduate Scholarship Committee (AY07- 09): this committee awards college scholarships to graduate students, including summer stipends and one-year fellowships that are used as a recruitment tool for outstanding applicants.

Faculty Moderator for the College of Engineering and Physical Sciences (AY08-09): this elected position entails the responsibility for conducting all college wide meetings and elections. The moderator works closely with the Dean's Office to help ensure that governance is carried out efficiently and according to policy.

Faculty Fellow for Distributed and Distance Education (AY03-04): the primary goal of this position, which received 50% support by the Provost's office, was to identify and articulate a University Vision on distance education. Duties included convening a working group to represent constituencies across campus in addition to meeting with individuals both on and off campus to obtain information and insights germane to distance education and e-learning in general.

Duties also included taking the lead on writing a proposal to consolidate distance learning at the University of New Hampshire. The proposal was submitted to the governing body overseeing state-funded higher education (USNH), and it laid out a plan for the partnering of all state organizations involved with distance education. This proposal was not endorsed by USNH.

University of New Hampshire Outreach Scholars Program (AY05): The Outreach Scholars Program is a faculty development initiative specifically designed to advance the University's academic strategic plan with a specific focus on outreach scholarship and engagement. The goals of this program include the development of mutually beneficial collaborative partnerships between faculty, extension educators, staff (New Hampshire Public Television, Office of Outreach Education), students and external partners with a specific focus on outreach scholarship and engagement.

Board of Trustees for the Great Bay Charter School (2003- present): This charter school, which began in Fall 2005) is affiliated with the Exeter School district, and was initially targeted towards high-school students at risk. As such, emphasis is placed on project-based learning and electronically-mediated learning. In addition to the normal functions performed by a Board of Trustees, the Great Bay Board provides oversight on the appropriate uses of technology in teaching. Experience with this type of education has shown that its positive effect is not limited only to students at risk.

Virtual Learning Academy Charter School (VLACS) Board of Trustees (January 2008- present): VLACS is a state-run, online charter school that provides an alternate means for New Hampshire junior high and high school students to obtain credits towards graduation. Major challenges for the Board have been to scale for rapidly increasing demand as well as to contend with a changing political/funding landscape.

Division of Continuing Education (DCE) Strategic Planning Group (AY04): This group of administrators, faculty and DCE staff met regularly throughout the year to develop a plan to reduce and redefine the scope of DCE so that it would be sustainable. That plan realigned the three main programmatic areas of DCE (Noncredit Programming and Marketing, Professional Development and Training, and Interhostel and Familyhostel) with other UNH entities in order to capitalize on synergies and best use limited resources.

New Hampshire Technology Council (AY04-05): The Council was an advisory group to the NH Department of Education regarding implementation of the State Educational Technology Plan. This assistance to the Department's Office of Educational Technology included developing policy guidelines to foster effective statewide technology integration, pursuing funding opportunities, designing infrastructure, identifying and disseminating information and resources, enlisting private sector support, and evaluating progress toward the vision of effective technology integration.

Seacoast Professional Development Center (SPDC) Advisory Board (Fall 02- Present): the SPDC was created with funds from the *No Child Left Behind* grant, and the purpose of the center is to provide school teachers in the Seacoast region with training that will enable them to perform their jobs more effectively. The major duties of the Advisory Board are to evaluate assessment data on ongoing efforts and to make recommendations regarding future initiatives.

Faculty Instructional Technology Development Grant Committee (AY00-05): The primary responsibility of this committee was to evaluate proposals submitted to the grant program, which focuses on improving student learning experiences through the use of information technology.

Task Force on the Undergraduate Experience (AY02-03): This task force was charged with exploring ways to improve the undergraduate experience, particularly in the freshman year. The objective of the committee was to make recommendations about how the experience could be improved, and measures that should be undertaken to bring about those improvements. A conclusion reached by the task force in its first year was that the freshman year experience could be enhanced by a series of inquiry courses. In an effort to bring these courses to fruition, the task force worked on defining those courses, including budgetary information, during its second year. After obtaining a go-ahead from the Provost office, requests for proposals for inquiry courses were distributed. Upon receiving the proposals, the task force evaluated them and made recommendations as to which one should be adopted.

Task Force on Network Security (Chair AY02): The purpose of the task force was to provide guidance to the President in shaping a policy that balances privacy with the need to increase network security. The result of Task Force efforts, performed in conjunction with the Faculty Senate, was a report that outlines acceptable boundaries between security and privacy.

Academic Computing Advisory Committee (Chair, AY00-02): This committee was advisory to the President and Provost, and focused on the centrality of computing to UNH's teaching, research and public service missions. The committee represented all parts of the community and included faculty representatives from each college, including UNHM. The committee was charged with the development of short-term goals and long-range plans for academic and research computing at UNH, including all aspects of instructional and informational technology. The responsibility of the Chair of this committee was to facilitate liaison between university administration, faculty, and students on issues relating to the use of technology, and then to garner consensus on technology policy within the formal committee. The recommendations of this committee were and are used to determine how technology funds are spent on campus.

Faculty Fellow in CEPS to Direct a Distance Learning Pilot Program (Fall 97- Present (unofficial)): This position, which initially included release time support, entails all aspects of the execution of pilot courses over the Internet. The duties associated with this position include:

- The selection and purchase of course delivery hardware and software
- Working with CIS support staff to maintain software and equipment
- Developing courseware for remote course delivery
- Providing training and support for other participating faculty
- Marketing distance education courses
- Writing proposals to obtain outside funding for distance education initiatives. Funding obtained from one such proposal enabled the development of a classroom that is being used for simultaneous delivery to on-campus and off-campus students.
- Writing a strategic plan for CEPS use of distance education

New Hampshire Distance Learning Commission (appointed by Governor Shaheen in September 1999): This commission was charged with coordinating and promoting distance education initiatives throughout the state. The commission met regularly to identify means for working with in-

dustries, businesses and schools to make distance education an affordable reality in New Hampshire. There were fifteen other members of this commission, representing constituencies ranging from industry and business, to government agencies and schools.

College Entrepreneurial Campus Committee (Fall 96- Spring 98): This committee acted as a steering committee in the planning of a UNH-affiliated enterprise facility on campus. This committee was comprised of two Deans, the Vice President for Research, the Directors of Research Computing and the Industrial Research Center, the Executive Director of Pease Development, and six faculty members. This committee established and coordinated the efforts of three subcommittees.

College Academic/Industry Alliance Subcommittee of the Entrepreneurial Campus Committee (Fall 96- Spring 98): The charge of this subcommittee was to look at the nature of University faculty, staff, and student involvement with the Entrepreneurial Campus. This committee was comprised of five faculty members and one Dean. Its primary mission was to develop criteria for academic and industrial alliances that would ensure success in a research-based economic development program.

College Facilities Subcommittee of the Entrepreneurial Campus Committee (Fall 1996- Spring 98): The charge of this subcommittee was to estimate the nature and size of the space that would be needed in the envisioned Entrepreneurial Campus. One facet of the subcommittee's work was to assess the space needs in each of the CEPS departments.

Coach and Advisor for the UNH Karate Club (AY88 through AY00 except for sabbatical year): Coaching responsibilities entailed teaching one or two classes per week, as well as participating in tournament judging and belt testing. Advising duties included maintaining class rosters, promotion records, travel arrangements, finances in addition to overseeing routine club activities and budgets.

University Distance Education Committee (AY97-98 through AY99-00): This committee was concerned with distance learning from a University-wide perspective. The committee explored ways in which the University might better serve the State by offering different education delivery methods. This committee became a subcommittee of the Academic Computing Advisory Committee.

Special Commission on the Budget Deficit (Fall 1995): Because of uncertainty regarding the magnitude of the projected budget deficit in fiscal year 97, the former Chairs of the Academic Senate Budget and Planning Committee were convened in the Fall semester to target the amount of that deficit. The primary duties of Commission members were to analyze the budget, contact individuals throughout the University to assess the expected shortfall in their particular areas, and then to aid in writing the final report that was presented to the University community.

College Freshman Calculus Committee (AY96): Reports of poor performance in follow-on courses, and concerns regarding retention, prompted a reevaluation of the manner in which freshman calculus was taught at UNH. The freshman calculus committee explored a variety of options, and made recommendations that led to the creation of the Studio Physics/Calculus course as well as other changes.

University Budget and Planning Committee (Spring 89- Spring 93; Chair AY 92-93): The Budget and Planning Committee was formed by the Academic Senate to provide oversight of the University budget and to make recommendations regarding University planning issues. Gaining

information regarding the budget in sufficient depth to make meaningful recommendations was achieved through frequent meetings with Trustees, the President and Vice-Presidents, Deans, and other constituencies. Committee recommendations were disseminated to the University community through open forums and regular presentations in the Academic Senate. Committee members, particularly the Chair, participated in a wide range of University committees, as documented below.

Space Allocation/R&R Committee (non-voting member AY92-93): This committee, which was comprised of the University Vice-Presidents, was charged with making final decisions regarding all building initiatives, swing space, space allocation, renovations, leases, handicap access, and toxic waste.

UNH Planning Council (Fall 91- Spring 93): Formerly the Task Force on the Reallocation of Resources, this council included the full complement of Vice President and Academic Deans, and was tasked with providing both short and long-range visions for the University. Those visions translated into recommendations for the distribution of funds on campus, and it was formed by in-depth analyses of every department, both academic and non-academic, on campus.

President's Cabinet (AY 92): The eighteen-member President's Cabinet met weekly to discuss issues of general interest to the University Community. The issues discussed ranged from the volume of the bells in Thompson Hall, to diversity, to University policy. The objective of the cabinet was to serve as a focus group for then-President Dale Nitzschke.

Academic/Faculty Senate (AY92-93 and AY10-11): Served as representative of the Electrical & Computer Engineering Department and Chair of the Budget & Planning Committee.

Accreditation Steering Committee (AY92-93): This group provided guidance in the generation of the documents supporting UNH's ten-year accreditation effort. This steering committee established task forces to address each of the major topics relating to accreditation, and then combined the reports from those task forces into a single document. Accreditation was awarded as a result of the report.

Accreditation Task Force for Standard Two, Planning and Evaluation (Chair): It was the responsibility of this task force to write the part of the accreditation self study that dealt with the university's progress in planning and evaluation since the last accreditation effort. This part of the report described planning and evaluation as it pertained to coping with budget rescission, academic programs, finance, and the physical plant.

Accreditation Task Force for Standard Nine, Financial Resources: This task force was responsible for writing the part of the accreditation self study that dealt with financial resources, stability, reporting, and planning. The task force was chaired by the Vice President for Finance.

Faculty Observer: Trustees' Academic Affairs Committee (AY92-93): This trustee committee has the responsibility to approve or deny changes in any academic programs, to evaluate class access, to provide honorary degrees, and to look at promotion and tenure issues.

Task Force on the Reallocation of Resources (Spring 89- Spring 91): This task force was initiated by the Budget and Planning Committee, and was put in place by the President to define a plan for addressing the budget deficits. This 13 member committee (which included five faculty, two Deans, one PAT, and five administrators) was charged with evaluating every department and office on campus, both academic and nonacademic, and then making recommendation as to the

amount of cuts each could sustain while minimizing the negative impact to the University as a whole.

Department Industrial Associates Program (IAP): Committee (regular participant and presenter): The IAP offers a means by which local industry can advise and support the Department of Electrical & Computer Engineering. The IAP committee provides liaison with the participating companies and organizes the annual meeting.

University Advising Center Advisor (AY88- 89): The UAC is set up primarily to advise undeclared students across campus, and to give them insights into particular majors. The UAC serves many students who have been readmitted to UNH after having been removed due to poor academic performance.