The Members’ Nominating Committee is very pleased to present Dr. Leonard Pietrafesa as a candidate for a second three-year term as a UCAR Institutional Trustee. He is the Director of the Office of External Affairs in the College of Physical and Mathematical Sciences and a professor in the Department of Marine, Earth and Atmospheric Sciences, which he headed for 11 years. Dr. Pietrafesa's areas of expertise are observational and modeling studies of coupled, non-linear systems in the atmosphere and oceans, especially in estuarine and coastal regions. He has frequently testified in Congress on subjects important to our profession and to the future of our field, and has been an extremely active leader of the atmospheric and oceanic sciences community, participating in a number of important committees and boards, including his current position as Chair of NOAA’s Science Advisory Board. Dr. Pietrafesa has participated actively in the meetings and has been an enthusiastic Trustee liaison to the University Relations Committee. He would continue to bring his broad range of perspectives on national science to the Board.

PERSONAL STATEMENT

I look forward to being re-elected to serve the UCAR community of institutions and UCAR and NCAR in continuing to work to build the national capacity of the atmospheric, oceanic and hydrologic sciences enterprise in education and research. Areas of interest include but are not limited to:

- Working with the university community, as the UCAR representative to the University Relations Committee, to revisit its academic programs to ensure that the UCAR and AMS communities are prepared to meet the envisioned and perceived educational needs of the future by expanding and broadening the curriculum for undergraduates in the atmospheric sciences to include opportunities for formal training in areas such as hydrology, climate, instrumentation, oceanography, earth system science, ecology, atmospheric chemistry, the social and economic sciences, policy and management, depending on the career interests of the student and our perceived evolution of the atmospheric and associated fields of science. This must be done in a way which does not compromise the fundamental education of the atmospheric sciences student major but which will make the field attractive and rewarding to students who may want to pursue non-traditional graduate careers and professions, such as law school, policy and management, congressional representation, and even the next generation model for staffing existing NWS Weather Forecast Offices, which will require a new skill set. Have served on and participated on AMS/UCAR committees focused on elements of this issue, such as those on higher educations, and on UCAR institutions taking the lead in the
development of hydrology courses. Presently I Chair of the AMS education Advisory Committee so am aware of community wide issues. Also am Chair of the NOAA Science Advisory Board and have asked the NWS to address these issues in its’ 5, 10, 15 and 20 year plans and vision.

• Encouraging four-year colleges to offer courses in the atmospheric and oceanic sciences to fulfill undergraduate general education (science) requirements for traditional science and non-science majors. Co-authored two publications in the Chronicle for Higher Education and BAMS directed at this issue.

• Working to build a national effort amongst the UCAR institutions to actively assist each one another in the recruitment of the best and brightest undergraduates to each other’s graduate programs. This is an excellent opportunity to work together for the betterment of our collective enterprise.

• Working to expand the national agency support base for total research dollars in the atmospheric and associated sciences. Agencies targeted include NSF, NASA, NOAA, ONR, DOE, and EPA.

• Providing written and oral testimony to and before the US Congress and PPT presentations to staffers. Have also participated in events on the Hill and have brought several NC congressional representatives to these events to get their buy-in to support appropriations for the atmospheric sciences in particular and science and mathematics in general, at the highest possible levels.

• Acknowledged by UCAR for my efforts on Capital Hill to build congressional support for the atmospheric sciences in particular.

• Expanding the science, policy and decision making portfolio of UCAR and its’ member institutions. Have been working locally and at the national level for more than a decade to promote the value of a nationally engaged university community. Am on the AGU Public Policy Committee and am a Co-PI on an NSF grant to explore this very issue.

• Working to bring together UCAR with the AMS, NASULGC, AGU, CORE, etc. and their associated member institutions on issues of education and research that are cross cutting; thus assisting UCAR to partner with these natural organizational allies, to more effectively advance the National Innovation Agenda. The earth systems sciences can be a leader in helping build the Nation’s capacity for innovation, thus ensuring the future economic vitality and security of the Nation.

• Attempting to expand and strengthen existing partnerships and to expand those partnerships between federal agencies and the UCAR community of institutions. Co-chaired the last NOAA/NASULGC Partnership meeting.

• Assisting in the creation of awards and scholarships that recognize excellence in instruction and other special recognition and student scholarships for UCAR institutional faculty and students. Have served on both the C. E. Anderson Minority and Undergraduate Teaching awards committees.

• Exploring and pushing the role that the atmospheric sciences should play in homeland security.

• Working with UCAR and NCAR management to help make the NSF (re) competition of UCAR’s management of NCAR fully successful.
• Working to help the University community take full advantage of NCAR’s facilities and scientific staff and to help make the new structure of NCAR the partnership success that it has been and promises to be.

Finally, it is my belief that as the premier atmospheric sciences research and education organization, UCAR’s portfolio is sufficiently broad to provide needed national leadership in the oceanic, hydrologic and earth systems sciences, which are inextricably coupled. I welcome the opportunity to serve the community as a member of the Board.

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**BIOGRAPHICAL INFORMATION**

**Areas of Interest:** Observations and Modeling of Non-Linear Couplings of Atmospheric, Oceanic, Estuary, Hydraulic Coupled Systems, Oceanic and Atmospheric Weather and Climate Phenomena and Impacts, Wind-Wave-Current Coupled Interactions, Precipitation and River Discharge, Relationships between Climate Conditions, Weather Events and Human Health, Science and Public Policy.

**Education:**
- 1965   BS, Fairfield University (Fairfield, CT) Physics & Mathematics
- 1967    MS, Boston College/University of Chicago (Boston, MA/ Chicago, IL) Geophysical Fluid Dynamics (Advisors: Fr./Dr. J. DeVane, Dr. L.F. McGoldrick)
- 1973 PhD, University of Washington (Seattle, WA) Geophysical Fluid Dynamics (Advisors: Dr. M. Rattray, Dr. J.D. Smith, J.M. Wallace, J. Holton, R. Fleagle, P. Welander, C. Pearson)

**Industry Employment:**
- 1965, 1966, 1968 Weston Geophysical Engineers, Boston, MA. (Projects: US Nuclear Test Ban Treaty Verification; New England Power Blackout Source; Panama Canal Expansion Assessment; West Australia Environmental Assessment; Preservation of Old Man on the Mountain, NH)

**Academic Experience - NC State University:**
- 10/1999-  Director, Office of External Affairs, College of Physical & Mathematical Sciences,
- 7/1989-10/1999  Head, Dept. of Marine, Earth and Atmospheric Sciences
- 5/1988-8/1989  Associate Dean for Research, College of Physical and Mathematical Sciences
- 7/1988-6/1989  3RD Director, University Honors Council
- 7/1992-12/1996  Director, Southeast University Consortium for Severe Storms
- 7/1981- Full Professor, Department of Marine, Earth and Atmospheric Sciences
- 7/1976 – 6/1981  Tenured Associate Professor, Departments of GeoSci and Marine Science & Engineering
- 7/1973 –6/1976  Assistant Professor, Dept. of Geosciences

**Recent (Selected) National Committee Service and Special Recognition:**
- 06/2005- Oklahoma Mesonet & Climate Advisory Committee
- 01/2004-07 American Meteorological Society Chair, Education Advisory Comm.
01/2004-05   AMS, Co-Chair 2005 AMS Annual Conference on Living in the Coastal Zone (with M. Davidson, reporting to President S. Avery)
02/2004-2007 Member, American Geophysical Union (AGU) Council on Public Policy
07/2003-04   Chair, National Center for Environmental Prediction Ocean Modeling Review Panel
10/2002-05  Board of Trustees of UCAR (Elected)
06/1002-07   Chair, National Oceanographic and Atmospheric Administration (NOAA) Science Advisory Board (FACA approved)
10/2002-05  UCAR Trustee representative to the UCAR University Relations Committee
10/2002     Recognized 2002 UCAR “Lifetime Achievement Award” as a Champion for Science
8/2000-     University Member Representative to UCAR
6/2001-02   Chair, NOAA/ National Geodetic Research Program Review Team
5/2002-     Member, NOAA/ Climate Monitoring & Diagnostics Laboratory review Team
10/2001     Recognized 2001 “Cheerleader for Science Award” from UCAR
6/1998-07   Member (now Chair), NOAA) Science Advisory Board (FACA approved)
3/1997-     Member, National Water Initiative Task Force of National Association of State Universities and Land Grant Colleges (NASULGC)
11/1999 -   Member, NASULGC Executive Committee on Food, Environment and Natural Resources
11/1996-11/97 Chair, NASULGC Board on Oceans and Atmosphere
3/1998-3/2000 Chair, Consortium for Oceanographic Research and Education (CORE) Board on Education
5/1996-     Member, AGU Committee on Natural Hazards
5/1999-     Member, NASULGC/Department of Interior (USGS) Partnership Committee
5/1998-1/2001 Member, IPCC Assessment of Coastal Effects of Climate Change
5/1999-     Member, NASULGC/NASA Partnership Committee
3/1996-11/1997 Chair (the 3rd), Council on Ocean Affairs (the Precursor to CORE)
3/1997-5/2004 Presented oral and written testimony before Eight different United States Senate and House Subcommittees on issues related to science, technology, natural resources, severe storms, coastal flooding, societal impacts of severe storms, ocean and atmospheric observing systems, education reform; on the need for value of the USWRP Collaboration Fund; on the Recommendations of the US Commission on Ocean Policy

**Professional Organizations:**
1) American Meteorological Society –Elected Fellow
2) Sigma Xi (past local chapter president)
3) Phi Kappa Phi
4) American Association for the Advancement of Science
5) Society for Non-Linear Mathematics
6) American Geophysical Union
7) Oceanography Society (Charter- Lifetime member)
5 recent selected of 177 (9 in review) peer reviewed publications


