The Members’ Nominating Committee is very pleased to present Dr. Leonard Pietrafesa from the North Carolina State University as a candidate for 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 estuarine and coastal oceans, and atmospheric weather and climate fluid physics dynamics, and he has over 150 peer-reviewed publications. He has been frequently asked to testify in Congress on subjects important to our profession and the future of our field and has done so very well. He has also been an extremely active leader of the atmospheric and oceanic sciences community, participating in a number of important committees and boards.

PERSONAL STATEMENT

I look forward to serving the UCAR community of institutions and UCAR itself in working to build the national capacity of the atmospheric, oceanic and hydrologic enterprise in education and research. Areas of interest include but are not limited to:

- 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, the social and economic sciences, policy and management, etc. depending on the career interests of the student. 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, etc. Have served on and participated on AMS/UCAR committees focussed on elements of this issue, such as those on higher education, and on UCAR institutions taking the lead in the development of hydrology courses. (Also, I was Chair of the CORE Education Committee so am aware of community wide issues).

- 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 (2001, 2002) 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, EPA, and others.

- Providing written and oral testimony to and before the US Congress. Have done so 5 times in the past 3 years, which was acknowledged via a 2001 UCAR “Cheerleader for Science” Award.
• Working to expand the national funding level for the USWRP. Have helped arrange and or have
attended meetings with and have made presentations to congressional representatives and House
Science Committee staffers on the importance of this program to the Nation. Most recent meeting was
17 September 2002 at a luncheon meeting hosted by UCAR on Capitol Hill.
• 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 Co-PI on an NSF grant to explore this very issue.
• Working to bring together the national efforts of UCAR and the AMS with NASULGC, the AGU,
CORE and their associated member institutions on issues of education and research that are cross
cutting. I would certainly work to help UCAR work with these natural organizational allies, such as
NASULGC, to more effectively build the national capacity and influence of the earth systems sciences.
• Attempting to expand and strengthen existing partnerships and to expand those partnerships between
federal agencies and the UCAR community of institutions. Co-chaired the 11/01 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. Anderson and the Undergraduate Teaching awards committees.
• Exploring and pushing the role that the atmospheric sciences should play in homeland security.

Finally, it is my belief that while UCAR is the premier atmospheric sciences research and education
organization, its’ portfolio is broad enough 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.

BIOGRAPHICAL INFORMATION

Title/Position: Director, Office of External Affairs
College Of Physical & Mathematical Sciences

Institution: North Carolina State University

Areas of Interest: Estuarine and Continental Margin Oceanographic, Atmospheric and Land Coupled Processes,
Oceanic and Atmospheric Weather and Climate Phenomena and Impacts, Observations and Modeling of Non-Linear
Couplings of Atmospheric, Oceanic, Hydraulic Coupled Systems, 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)

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:**

9/1999-         Director, Office of External Affairs, College of Physical and Mathematical Sciences, NCSU
7/1989-9/1999  Head, Dept. of Marine, Earth and Atmospheric Sciences, NCSU.
6/1988-7/1989  Associate Dean for Research, College of Physical and Mathematical Sciences, NCSU
7/1988-6/1989  3rd Director, University Honors Council, NCSU
7/1992-12/1996 Director, Southeast University Consortium for Severe Storms (NCSU, FSU, GTU, UAL-H)
7/1981-         Full Professor, Department of Marine, Earth and Atmospheric Sciences, NCSU
7/1976 –6/1981  Tenured Associate Professor, Departments of Geosciences & Marine Sciences & Engineering, NCSU
7/1973 –6/1976  Assistant Professor, Dept. of Geosciences, NCSU

**Recent (Selected) National Committee Service and Special Recognition:**

8/2000-         University Member Representative to the University Corporation for Atmospheric Research (UCAR)
6/2001-         Chair, NOAA/ National Geodetic Research Program Review Team
5/2002-         Member, NOAA/ Climate Monitoring & Diagnostics Laboratory review Team
6/1989- 7/2000  NCSU Heads/Chairs Representative to the UCAR
10/2001         Received 2001 “Cheerleader for Science Award” from UCAR
9/1999-         Co-Chair of US/People’s Republic of China Steering Committee on Virtual Collaboratories
3/1997-         Member, National Water Initiative Task Force of National Association of State Universities and Land Grant Colleges (NASULGC)
1/2000-         National Association of State Universities and Land Grant College’s Representative to US National Water Task Force Team
11/1999 -       Member, National Association of State Universities and Land Grant Colleges (NASULGC) Executive Committee on Food, the Environment and Natural Resources
11/1996-11/1997 Chair, NASULGC Board on Oceans and Atmosphere
7/1997-6/1998   Member, National Academy of Science/ National Research Council Committee on Reauthorization of the National Sea Grant College Program
10/1995- 2/2002 Member, American Meteorological Society (AMS)/UCAR Board on Higher Education
3/1998-3/2000   Chair, Consortium for Oceanographic Research and Education (CORE) Board on Education
5/1996- 4/1998  Member, American Geophysical Union (AGU) Committee on Natural Hazards
5/1999-         Member, NASULGC/Department of Interior (USGS) Partnership Committee
5/1999-         Member, NASULGC/NASA Partnership Committee
11/1994-11/1999 Board of Trustees, National Institute of Statistical Sciences
1/1990-12/1997  Steering Committee of the US Department of Energy Programs in Environment & Health
11/1997- 3/2000 Member CORE Executive Committee
3/1996-11/1997  Chair (the 3rd), Council on Ocean Affairs (the Precursor to CORE)
3/1997-10/2001  Presented oral and written testimony before Six 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.

9/2002  Made a presentation to the US House Science Committee staffers on the need for value of the USWRP Collaboration Fund at invitation of UCAR


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)

21 recent/relevant of 163 peer reviewed publications (includes “in press”)

Professional and Public (Invited Only) Presentations: Total of 167
Student Committees Supervised: Chair or Co-Chair of 22 PhD (22 completed) Committees
Post Docs and Technicians Supervised: Chair or Co-Chair of 22 MS (21 Completed) Committees
Grants: Total of 75 Awards as Principal or Co-Principal Investigator totaling $15,574,790.
Selected Present Funding:
1) NOAA $325,000, 11/2001-7/2003 Ocean and Atmospheric Observations in the Coastal Ocean of NC (Pietrafesa, Xie and Morrison)
2) NSF $94,624, 8/1999-9/2002 Ocean Margins Data Assimilation, Interpretation (Pietrafesa, DeMaster and Xie)
4) NOAA $600,000, 3/1/2001 – 7/2003 A Risk Assessment Tool: Predicting Coastal Flooding for Operational Purposes (Pietrafesa, Xie and Stirling)
5) NOAA $1,220,000, 5/1/02-4/30/03 Carolina Coastal Observation and Prediction System (Pietrafesa, Xie, and Morrison)
6) NOAA $225,000, 9/02-8/05 Determining fish recruitment indices from weather and climate factors (Pietrafesa and Dickey)