

Curriculum Vitae

Yuh-Lang Lin, PhD

Professor

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Department of Physics

Applied Sci. & Tech. (AST) PhD Program

College of Science and Technology

North Carolina A&T State University (NCAT)

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Education

Ph.D.: Yale University, Meteorology and Geophysical Fluid Dynamics, 1984

M.S.: South Dakota School of Mines and Technology, Meteorology, 1979

M.A.: Fordham University, New York, Mathematics, 1978

B.S.: Fu Jen Catholic University, Taiwan, Mathematics, 1976

Areas of Research Interest

- Mesoscale Dynamics and Modeling
 - Mountain Meteorology
 - Storm Dynamics and Moist Convection
 - Gravity Waves and Turbulence
 - Forest Fire Dynamics
 - Mars Atmosphere Modeling
- Tropical Cyclone and Wave Dynamics
- Cloud Microphysics and Dynamics

Professional Experience

- 08 –: Senior Scientist & Professor, Department of Physics
- 17/8 –: Adjunct Chair Professor, Department of Atmospheric Sciences, National Central University, Taiwan
- 17 (su): Chair Professor, Ministry of Science & Technology (MOST), Taiwan
- 08 – 12: Chief Scientist for the NOAA ISET Center
- 11 – 16: Graduate Faculty, Department of Civil and Environmental Engineering, Duke University (Term membership: 11/1/11 – 11/30/16)
- 98 – 07: Professor, Department of Marine, Earth, and Atmos. Sci. (MEAS), North Carolina State University (NCU)
- 93 – 98: Associate Professor, MEAS, NCSU
- 87 – 93: Assistant Professor, MEAS, NCSU
- 84 – 87: Drexel Fellow, Department of Physics and Atmospheric Science, Drexel University
- 83 – 84: Postdoctoral Associate, Department of Geology and Geophysics, Yale University
- 82 (su): Predoctoral Fellow, NATO Advanced Study Program on Mesoscale Meteorology
- 80 – 83: Research/Teaching Assistant, Department of Geology & Geophysics, Yale University
- 78 – 79: Research Assistant, Department of Meteorology, S. D. School of Mines & Technology
- 76 – 78: Teaching Assistant, Department of Mathematics, Fordham University

List membership(s) in professional organizations

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|---|-------|
| American Meteorology Society | 1979- |
| Sigma Xi | 1982- |
| North America Taiwanese Professors' Association | 1993- |
| American Geophysical Union | 2007- |
| American Physics Society | 2008- |

Synergistic Activities

Senior Researcher of the Year, 2018, College of Science and Technology, NC A&T State University
 Editor, Open Physics
 Associate Editor, Frontiers in Earth Science
 Chair Professor, appointed by the Ministry of Science & Technology (MOST) and National Central University (NCU), Taiwan in summer 2017 to teach Dynamics of Mountain Meteorology at NCU and National Taiwan University.
 Coordinating research among 31 PIs in 7 partner universities as the chief scientist for NOAA ISET Center (2008-12)
 Formed an Atmospheric Modeling Group for the NOAA ISET Center and established a real-time forecasting system (NCAST)
 Published an advanced graduate textbook – “*Mesoscale Dynamics*” (Cambridge University Press, 2007, 630pp)
 Developed a cloud microphysics parameterization scheme (Lin, Farley and Orville, 1983, J. Appl. Meteor. & Climate) with Farley and Orville.
 Graduate faculty of Duke University (2011-16)
 Outstanding College Senior Researcher Award, 2014, College of Arts & Sciences, NC A&T State University
 Foreign Advisor, Central Weather Bureau, Taipei, Taiwan
 Served as a leader in the UNC Tomorrow Global Warming Task Force, 2008
 Review Panel, National Environmental Research Council, UK, 2006-07
 Board member, PhD program development committee, Addis Ababa University, Ethiopia
 External examiner for a PhD student’s dissertation defense, Addis Ababa University, Ethiopia
 Conducted a large number of funded research for funding agencies (see Appendix A for details)
 Published more than 100 peer-reviewed journal papers (see Appendix B for details)
 Delivered more than 300 conference presentations and invited talks nationally and internationally
 Editor, East Asian Journal of the Atmospheric Sciences (2007-11)
 Chaired a large number of sessions for national and international conferences
 Member, Steering Committee of the Terrain-induced Monsoon Rain Experiment (TiMREX, 2007)
 NASA award for "Turning Goals into Reality" for outstanding contribution to Aircraft Vortex Spacing System (AVOSS) Team and exceptional progress toward revolutionizing aviation by increasing capacity while maintaining a high degree safety, 2003.
 Award for Collaboration with Raleigh Office, National Weather Service, 2002
 AMS Mesoscale Conference Committee, 2001-04
 Scientific Committee, East Asian Mesoscale Conferences (Korea (99); Taiwan (01); Japan (02)
 President, North America Taiwanese Professors’ Association, 1996-97
 Co-Chair (with Dr. P. Arya) of the Seventh Southeast Conference on Geophysical Fluid Dynamics, 1990
 Participated in field programs: TiMREX, T-REX, MAP, AMMA, TAMEX, and GALE
 Reviewed many papers for national and international journals
 Reviewed many grant proposals for national and international funding agencies
 Chaired many sessions for national and international conferences

Teaching Experience

Courses Taught:

(a) Undergraduate:

NCAT: College Phys II; Atmospheric Thermodynamics; Atmospheric Dynamics I, II; Weather Systems

NCSU: Air Processes & Motion I, II; Atmospheric Thermodynamics I, II; Atmospheric Dynamics I, II

Drexel U.: General Physics I; FORTRAN Programming

(b) Graduate:

NCAT: Dynamic Meteorology; Numerical Weather Prediction; Tropical Meteorology;

Mountain Meteorology; Storm Dynamics; Graduate Seminar; EES Doctoral Seminar
NCSU: Dynamic Meteorology; Mesoscale Modeling; Mesoscale Dynamics; Mesoscale Wave Dynamics; Numerical Weather Prediction; Advanced Physical Meteorology

Students advised and postdoctoral scholars sponsored

Postdocs and Graduate Students:

[NCAT]

Postdocs: Yong Jung
Ph.D. Graduates: 9
M.S. Graduates: Math - 2, Phys – 12, CSE -1
B.S. Graduates (research advisees): 7

[Current Students]

Ph.D. Students: AST - 6
M.S. Students: PHYS - 1
Undergraduates: ASME - 5

Sponsored Research: Conducted a relatively large number of research projects for various funding agencies (to be provided upon request)

List of Publications

(A) Theses

- (1) Lin, Y.-L. “Ice Generation in a Two-Dimensional Cloud Model”, M. S. Thesis, Dept. of Meteorology, S. D. School of Mines and Technology, December 1979. (Advisor: H. D. Orville) (See [Lin, Y.-L., R. D. Farley, and H. D. Orville, 1983](#); Also known as the Lin-Farley-Orville, LFO or Lin et al. microphysics parameterization scheme)
- (2) Lin, Y.-L., “The Dynamics of Orographic Rain with Large Latent Heat Release”, Ph.D. Dissertation, Dept. of Geology and Geophysics, Yale University, May 1984. (Advisor: R. B. Smith)(See [Lin, Y.-L., and R. B. Smith, 1986](#)).

(B) Books and Refereed Journal Papers

- (i) **Book:** Lin, Y.-L., 2007: Mesoscale Dynamics, Cambridge University Press, 630pp.
Lin, Y.-L. (Ed.), 2020: Orographic Effects on Tropical Cyclone Tracks and Precipitation.
- (ii) **Referred Journal Papers** (see a complete list or <http://mesolab.org> => publication): Published more than 120 peer-reviewed papers ([Google Scholar Citation](#): 7095 total citations by July 24, 2019)
- (iii) **Conference Preprints, Abstracts, and Presentations** (Delivered near 400 presentations in national and international conferences and invited talks; to be provided upon request)