

## Curriculum Vitae (Caren Marzban)

**Name:** Caren Marzban

**Gender:** Male

**Date of Birth:** January 10, 1960

**Nationality:** American

**Address:**

Dept. of Statistics, Univ. of Washington, Box 354323, Seattle, WA 98195-4323 **AND**  
Center for Analysis and Prediction of Storms (CAPS), University of Oklahoma, Sarkey's  
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### Professional Preparation

Michigan State University	Physics	B.S. 1981
University of North Carolina	Theoretical Physics	Ph.D. 1988
Int. Center for Theor. Physics, Trieste, Italy	Theoretical Physics	Postdoc 1988-1991
University of Oklahoma	Theoretical Physics	Postdoc 1991-1994

### Appointments

2002-present: Univ. of Oklahoma, CAPS (Senior Research Scientist)

2002-present: Univ. of Washington, Dept. of Statistics (Visiting Faculty)

1994-2001: University of Oklahoma, Dept. of Physics (Adjunct Assistant Professor)

1994-2001: University of Oklahoma, CIMMS (Research Associate)

### 5 + 5 Publications ([www.nhn.ou.edu/~marzban](http://www.nhn.ou.edu/~marzban))

1. Marzban, C., S. Sandgathe, 2005: Cluster analysis for verification of precipitation fields. Conditionally accepted at *Wea. Forecasting*.
2. Marzban, C., 2003: A neural network for post-processing model output: ARPS. *Monthly Weather Review*, 131(6), 1103-1111.
3. Marzban, C. 2000: A neural network for tornado diagnosis. *Neural Computing and Applications*, 9 (2), 133-141.
4. Kantowski, R., C. Marzban, 1995: A neural network for locating the primary vertex in a pixel detector. *Nuclear Instruments & Methods in Physics*, A 355, 582.
5. Marzban, C., R. Viswanathan, 1994: Stochastic neural networks with the weighted Hebb rule. *Physics Letters A*, 191, 127.
1. Drton, M., Marzban, C., P. Guttorp, & J. T. Schaefer, 2003: A Markov chain model of tornadic activity. *Monthly Weather Review*, 131(12), 2941-2953.
2. Marzban, C., and J. Schaefer, 2001: The correlation between U.S. tornados and Pacific sea surface temperature. *Monthly Weather Review*, 129(4), 884-895.
3. Marzban, C., V. Lakshmanan, 1999: On the uniqueness of Gandin and Murphy's equitable performance measures. *Monthly Weather Review*, 127 (6), 1134-1136.
4. Marzban, C. 1998: Scalar measures of performance in rare-event situations. *Weather and Forecasting*, 13, 753-763.
5. Marzban, C. 1998: Bayesian probability and scalar performance measures in gaussian models. *Journal of Applied Meteorology*, 37, 72-82.

## **Synergistic Activities**

- Developed and organized a short course on neural networks at Third Conference on Artificial Intelligence Applications to Environmental Science, 9-13 February, 2002, Long Beach, CA.
- Developed and organized a similar short course at the American Meteorological Society Meeting, January 10, 2004, Seattle, WA.
- Writing an invited book (World Scientific Publishing) on neural networks.
- Chair of the Artificial Intelligence Applications in Environmental Sciences Committee of the American Meteorological Society.
- Panel Reviewer for National Science Foundation, and reviewer for numerous journals in meteorology, ecology, and artificial intelligence.

## **Collaborators and Co-Editors**

Laura Bowling: Department of Agronomy, Purdue University, West Lafayette, IN  
Mathias Drton: Department of Mathematics, UC, Berkeley, CA  
Peter Guttorp: Department of Statistics, University of Washington, Seattle, WA  
Steven Hare: International Pacific Halibut Commission, Seattle, WA  
Chris Hennon: NOAA Tropical Prediction Center, Miami, FL  
J.S. Hobgood: Department of Geography, Ohio State University, Columbus OH  
Dennis Lettenmaier: Dept. of Civil Engineering, University of Washington, Seattle, WA  
Nathan Mantua: JISAO, University of Washington, Seattle, WA  
Arthur J. Miller: Scripps Institution of Oceanography, La Jolla, CA  
Joseph Schaefer: Storm Prediction Center, Norman, OK

## **Graduate and Postdoctoral Advisors**

Y. Jack Ng: Dept. of Physics, University of North Carolina, Ph.D. advisor.  
S. Randjbar-Daemi: Int. Center for Theor. Physics, Trieste, Italy, Postdoctoral sponsor.  
Ronald Kantowski: Dept. of Physics, University of Oklahoma, Postdoctoral sponsor.

## **Thesis Advisor and Postgraduate-Scholar Sponsor**

None.