

CORT J. WILLMOTT – Presentations¹

May 2009

- Willmott, C.J., 2009. Some geostatistical issues in analyzing climate and climatic change using weather-station records. Public lecture for “Math Awareness Month”, Department of Mathematical Sciences, University of Delaware, Newark (April)*
- Willmott, C.J. and M. Rawlins, 2009. Evaluating space and time varying estimates of Arctic precipitation made from in situ data. Paper presented at the annual meeting of the Association of American Geographers, Las Vegas (March).
- Nickl, E. and C.J. Willmott, 2009. Uncertainty and variability in land-surface precipitation over 100-plus years. Paper presented at the annual meeting of the Association of American Geographers, Las Vegas (March).
- Willmott, C.J., 2008. Some geostatistical issues in estimating and mapping climate and climatic change from weather-station records. Invited Yi-Fu Tuan lecture presented to the Department of Geography, University of Wisconsin, Madison (October).*
- Willmott, C.J. 2008. Issues in climate science and geography: a conversation. Brown-bag-lunch talk presented to the Department of Geography, University of Wisconsin, Madison (October).*
- Willmott, C.J. and K. Matsuura, 2008. Ambiguities inherent in sums-of-squares-based statistics. Paper presented at the annual meeting of the Association of American Geographers, Boston (April).
- Nickl, E. and C.J. Willmott, 2008. A new approach to the estimation of precipitation fields in mountainous environments. Paper presented at the annual meeting of the Association of American Geographers, Boston (April).
- Robeson, S.M. and C.J. Willmott, 2008. Using geographic box plots to estimate climatic change. Paper presented at the annual meeting of the Association of American Geographers, Boston (April).
- Willmott, C.J., 2007. Geostatistical issues in estimating and mapping climate and climatic change from weather-station records. Lecture presented to the Graduate School of Geography and the Department of International Development, Community, and Environment, Clark University, Worcester, MA (September 28).*
- Willmott, C.J., 2007. Geostatistical issues in estimating and mapping climate and climatic change from weather station records. Lecture presented to the Department of Land, Air and Water Resources, University of California, Davis, CA (April 10).*
- Willmott, C.J., 2006. Estimating climate and climatic change from lousy weather station networks: two air-temperature examples. Banquet lecture given at the annual meeting of the Pennsylvania Geographical Society, Salisbury, MD (October 27).*

¹ Invited presentations are indicated by a “*”

- Willmott, C.J. and K. Matsuura, 2006. Comparison of three dimensioned measures of average model-performance error. Presentation made to the Physical Ocean Science and Engineering (POSE) Program, University of Delaware, Newark (October 20).*
- Willmott, C.J. and K. Matsuura, 2006. Comparison of three dimensioned measures of average model-performance error. Lecture given to the Geography Department, Dartmouth College, Hanover, NH (October 18).*
- Willmott, C.J. and K. Matsuura, 2006. Comparison of the root-mean-square error (RMSE) and the mean-absolute error (MAE) as measures of average model performance. Paper presented at the annual meeting of the Association of American Geographers, Chicago (March).*
- Nickl, E. and C.J. Willmott, 2006. Teleconnections and climate in the Peruvian Andes. Paper presented at the 86th annual meeting of the American Meteorological Society, Atlanta (January).
- Willmott, C.J., 2005. On the use of dimensioned measures of average error in evaluating and comparing estimated climate fields. Lecture given to the Water Systems Group at the University of New Hampshire, Durham (June 28).*
- Willmott, C.J., 2005. On the use of dimensioned measures of average error in evaluating interpolated climate fields. Lecture given to the Geography Department at the University of California, Santa Barbara (April 21).*
- Nickl, E. and C.J. Willmott, 2005. Teleconnections and climate in the Peruvian Andes. Paper presented at the annual meeting of the Association of American Geographers, Denver (April).
- Willmott, C.J., 2004. On the use of dimensioned measures of average error in comparing climate fields. Lecture given at the Center for Ocean-Land-Atmosphere Studies, Calverton, Maryland (November 1).*
- Willmott, C.J. and K. Matsuura, 2004. On the use of dimensioned measures of average error in the evaluation of model performance. Seminar-series lecture given to the Geography Department at the University of Delaware, Newark (September 17).*
- Zimmermann, P.A. and C.J. Willmott, 2004. A refined rules-based model for distributing human populations at high spatial resolutions. Paper presented at the annual meeting of the Association of American Geographers, Philadelphia (March).
- Johnson, M.L. and C.J. Willmott, 2004. Bias corrected rain gauge observations intercompared with satellite precipitation estimates. Paper presented at the annual meeting of the Association of American Geographers, Philadelphia (March).
- Nickl, E. and C.J. Willmott, 2004. Teleconnections and climate in the Peruvian Andes. Paper presented at the annual meeting of the Association of American Geographers, Philadelphia (March).

- Willmott, C.J., 2004. The climatic water budget and the in-service education of a “young Turk.” Paper presented at the annual meeting of the Association of American Geographers, Philadelphia (March).*
- Willmott, C.J., 2003. Estimating climate and climatic change from lousy weather-station networks. Edwin Way Teale Lecture on Nature and the Environment, University of Connecticut, Storrs (February 2003).*
- Zimmermann, P.A. and C.J. Willmott, 2003. Using environmental variables to distribute human populations spatially, with an evaluation in California. Poster presented at the annual meeting of the American Geophysical Union, San Francisco (December).
- Zimmermann, P.A. and C.J. Willmott, 2002. Revised rules for spatially distributing population for climate research. Paper presented at the annual meeting of the Association of American Geographers, Los Angeles (March).
- Stevenson, M.L., K. Matsuura, P.A. Zimmermann, and C.J. Willmott, 2002. New raingage-based, gridded precipitation fields for the Tropics. Paper presented at the annual meeting of the Association of American Geographers, Los Angeles (March).
- Willmott, C.J., 2002. Estimating climate and climatic change from weather-station records. Lecture in Geography, Northern Illinois University, DeKalb (September).*
- Willmott, C.J., 2002. Estimating climate and climatic change from weather-station records. Advances in Environmental Science Seminar, Environmental Research Division, Argonne National Laboratory, Chicago (September).*
- Matsuura, K. and C.J. Willmott, 2001. Fifty years of land-surface air-temperature change from weather-station records. Paper presented at the annual meeting of the Association of American Geographers, New York (March).
- Zimmermann, P.A. and C.J. Willmott, 2001. A rules-based approach to high-resolution population mapping for use in climate research. Paper presented at the annual meeting of the Association of American Geographers, New York (March).
- Stevenson, M.L. and C.J. Willmott, 2001. An analysis of sub-grid-scale variability in satellite derived, gridded precipitation fields. Paper presented at the annual meeting of the Association of American Geographers, New York (March).
- Willmott, C.J., 2001. Estimating climate and climatic change from lousy weather-station networks. E. Willard and Ruby S. Miller Distinguished Lecture in Geography, Pennsylvania State University, State College (April).*
- Stevenson, M.L., K. Matsuura, P.A. Zimmermann, and C.J. Willmott, 2001. Estimating monthly precipitation over the tropical land surface from raingage records. Poster paper presented at the Fall meeting of the American Geophysical Union, San Francisco (December).

- Zimmermann, P.A., K. Matsuura, M.L. Stevenson and C.J. Willmott, 2000. Climatic water availability and human population density. Poster presented at the fall meeting of the American Geophysical Union, San Francisco (December).
- Willmott, C.J., 2000. Temperature fields. Presentation made at the NSF-ARCSS Hydrology Workshop held at the National Center for Ecological Analysis and Synthesis, Santa Barbara, CA (September).*
- Willmott, C.J., 2000. Estimating climate and climatic change from lousy weather-station networks. Edward J. Taaffe Colloquium Lecture, Department of Geography, the Ohio State University, Columbus, Ohio (May 11).*
- Stevenson, M.L. and C.J. Willmott, 2000. Estimating rainfall over the Amazon Basin from satellite and in situ measurements. Paper presented at the annual meeting of the Association of American Geographers, Pittsburgh (April).
- Willmott, C.J. and K. Matsuura, 1999. Estimating average land-surface air temperature from weather-station means. Poster-paper presented at the fall meeting of the American Geophysical Union, San Francisco (December).
- Rawlins M.A. and C.J. Willmott, 1999. Estimation of Arctic surface air temperatures using a variable lapse-rate interpolator. Paper presented at the annual meeting of the Association of American Geographers, Honolulu (March).
- Willmott C.J., 1999. Estimating climate and climatic change from imperfect weather station records. Lecture presented to the Department of Geography, Central Michigan University, Mt. Pleasant (January).*
- Willmott, C.J., 1998. Spatially interpolating and mapping climate fields from lousy weather-station networks. CIRES Interdisciplinary Distinguished Lecture presented in the Department of Geography, University of Colorado, Boulder (November).*
- Willmott, C.J., 1998. Musings on climate, climatic change and clues distilled from the historical weather-station record. Lecture presented to the Department of Geography, University of Minnesota, Minneapolis (April).*
- Willmott, C.J., 1998. Spatial estimation and averaging of climate variables from weather-station observations. Lecture presented in the Department of Civil and Environmental Engineering, University of Delaware, Newark (April).*
- Zimmermann, P.A., C.J. Willmott, S.R. Webber, M.A. Rawlins and D.Y. Graybeal, 1998. Improving monthly water-balance computations by modeling sub-monthly variations in precipitation. Paper presented at the annual meeting of the Association of American Geographers, Boston (March).

- Webber, S.R. and C.J. Willmott, 1998. Estimating monthly precipitation fields using data-blending interpolation techniques. Paper presented at the annual meeting of the Association of American Geographers, Boston (March).
- Willmott, C.J., 1998. Spatially interpolating and mapping climate fields from lousy weather-station networks. Lecture presented to the Department of Geography, University of North Carolina, Chapel Hill (February).*
- Willmott, C.J., 1997. Spatially interpolating and mapping climate fields from lousy weather-station networks. Lecture presented to the Department of Geography, University of Delaware, Newark (November).
- Willmott, C.J., 1997. Panel on environmental engineering versus other environmental fields. Speaker and panel discussant, Department of Civil and Environmental Engineering, University of Delaware, Newark (October).*
- Rawlins, M.A. and C.J. Willmott, 1997. Estimation of Arctic climate fields from station data. Paper presented at the annual meeting of the Association of American Geographers, Fort Worth (April).
- Funk, C.C. and C.J. Willmott, 1997. Sensitivity of spherical interpolators to nearest-neighbor selection. Paper presented at the annual meeting of the Association of American Geographers, Fort Worth (April).
- Webber, S.R. and C.J. Willmott, 1997. Temporal variability of networks and spatially-integrated estimates of precipitation. Paper presented at the annual meeting of the Association of American Geographers, Fort Worth (April).
- Crotty, J.K. and C.J. Willmott, 1997. Canopy structure and precipitation interception in a deciduous forest: results of field study. Paper presented at the annual meeting of the Association of American Geographers, Fort Worth (April).
- Willmott, C.J., 1997. Estimating interannual climate variability from weather-station observations. Poster and presentation given at the NASA Workshop on Interannual Biosphere-Atmosphere Variability, Tucson, Arizona (March).*
- Willmott, C.J., R. Raskin and C. Funk, 1996. SPHEREKIT: The spatial interpolation toolkit. Presentation made at the Board of Directors Meeting, National Center for Geographic Information and Analysis, Orono, Maine (June).*
- Webber, S.R. and C.J. Willmott, 1996. Interpolation of high-resolution precipitation fields from satellite and in situ observations. Paper presented at the annual meeting of the Association of American Geographers, Charlotte, North Carolina (April).
- Willmott, C.J., S.R. Webber and H. Power, 1996. Better statistics for the evaluation of model performance. Paper presented at the annual meeting of the Association of American Geographers, Charlotte, North Carolina (April).

- Crotty, J.K. and C.J. Willmott, 1996. Canopy structure and precipitation interception in deciduous forests. Paper presented at the annual meeting of the Association of American Geographers, Charlotte, North Carolina (April).
- Willmott, C.J., 1996. Smart interpolation of climate variables. Paper presented at Third International Conference/Workshop on Integrating GIS and Environmental Modeling, Santa Fe, New Mexico (January).*
- Willmott, C.J., 1996. Smart approaches to spatially interpolating climate variables. Lecture presented to the Department of Geography, University of California, Santa Barbara (January).*
- Willmott, C.J., 1995. Issues in spatial data interpolation. Guest Lecture to the Seminar in GIS (Geography 275), Department of Geography, University of California, Santa Barbara (October).*
- Willmott, C.J., 1995. Geographic approaches to estimating climate variables over continental and global scales. Lecture presented to the Department of Geography, Arizona State University, Tempe (October).*
- Willmott, C.J., 1995. Climate and climatic change: what we know, what we don't. Gore-Hunger Lecture in Environmental Science. University of Tennessee, Knoxville (September).*
- Willmott, C.J., 1995. Geographic approaches to estimating climate variables over continental and global scales. Lecture presented to the Department of Geography, University of Tennessee, Knoxville (September).*
- Willmott, C.J. and G.L. Gaile, 1995. Spatial analysis for physical and human geographers. Paper presented at the annual meeting of the Association of American Geographers, Chicago (March).*
- Willmott, C.J., 1995. Climate and climatic change: what we know and what we don't. Museum Talk presented at the Bohemian Club, San Francisco, California (March).*
- Willmott, C.J., 1995. Geographic analyses with GIS. Lecture presented at the University of Delaware Symposium on Present and Future Applications of Geographic Information Systems (GIS), Newark, Delaware (Feb.).*
- Willmott, C.J., 1994. Climate and climatic change: what can we learn from the instrumental record? Lecture presented to the College of Marine Studies, Lewes, Delaware (September).*
- Vörösmarty, C.J., A. Federer, A. Schloss, B. Fekete, D. Kicklighter, B.J. Peterson, C.J. Willmott and B. Moore III, 1994. The terrestrial water balance and estimates of its modification by anthropogenic change. Poster presentation made at the Wood's Hole science meeting on Global Change and Terrestrial Ecosystems (GCTE and IGBP), Wood's Hole, Massachusetts (May).

- Willmott, C.J., 1994. Assessing climate and climatic change from the instrumental record. Lecture presented to the Department of Geography, Cambridge University, Cambridge, England (May).*
- Willmott, C.J., 1994. Plants and their influences on climate. Lecture presented to the Department of Geoscience, Oregon State University, Corvallis (April).*
- Willmott, C.J., 1994. Progress in estimating climate and climatic change from the weather-station record. Lecture presented to the Department of Geoscience, Oregon State University, Corvallis (April).*
- Willmott, C.J., 1994 Smart interpolation and mapping of global climate fields from in situ observations. Lecture presented to the Environmental Systems Research Institute (ESRI), Inc., Redlands, California (April).*
- Matsuura, K., C.J. Willmott and S.M. Robeson, 1994. Spatial interpolation of air temperature aided by a digital terrain map. Paper presented at the annual meeting of the Association of American Geographers, San Francisco (March-April).
- Janis, M.J. and C.J. Willmott, 1994. Multivariate interpolation of monthly precipitation in the conterminous United States. Paper presented at the annual meeting of the Association of American Geographers, San Francisco (March-April).
- Song, J., C.J. Willmott and B. Hanson, 1994. Parameterizations of small-scale surface energy fluxes for use in large-scale climate models. Paper presented at the annual meeting of the Association of American Geographers, San Francisco (March-April).
- Klink K. and C.J. Willmott, 1993. Influence of soil moisture and surface roughness heterogeneity on modeled climate. Paper presented at the fall meeting of the American Geophysical Union, San Francisco (December).
- Willmott, C.J., 1993. Identifying climate change from the instrumental record. part 1: terrestrial air temperature and precipitation. part 2: at Yucca Mountain, Nevada. Lecture presented to the Center for Energy and the Environment, University of Pennsylvania, Philadelphia (November).*
- Willmott, C.J. and K. Matsuura, 1993. Land surface cover estimates from satellite and in situ data. Presentation made on NASA's Space Grant College, Space Activities Day, Newark, Delaware (November).*
- Klink, K. and C.J. Willmott, 1993. Heterogeneity in soil moisture and surface roughness and their effects on modeled climate. Paper presented at the annual meeting of the West Lakes Division of the Association of American Geographers, Milwaukee (October).*
- Matsuura, K., C.J. Willmott and K. Klink, 1993. Land surface cover estimates from satellite and in situ data. Paper presented at the annual meeting of the Middle States Division of the Association of American Geographers, Newark, Delaware (October).

- Janis, J., C.J. Willmott and S.M. Robeson, 1993. Multivariate interpolation of monthly precipitation in the United States. Paper presented at the annual meeting of the Middle States Division of the Association of American Geographers, Newark, Delaware (October).
- Willmott, C.J. and S.M. Robeson, 1993. Assessing terrestrial climate change from station air-temperature records. Paper presented at the annual meeting of the Middle States Division of the Association of American Geographers, Newark, Delaware (October).
- Song, J., C.J. Willmott and B. Hanson, 1993. Simulation of latent- and sensible-heat fluxes over the Konza Prairie with a three-dimensional model. Paper presented at the annual meeting of the Middle States Division of the Association of American Geographers, Newark, Delaware (October).
- Robeson, S.M. and C.J. Willmott, 1993. Spherical spatial interpolation and terrestrial air temperature variability. Paper presented at the Second International Conference and Workshop on Integrating Geographic Information Systems and Environmental Modeling, Breckenridge, Colorado (September).
- Willmott, C.J., 1993. Yucca Mountain: adventures in applied climatology. Lecture given to the Department of Geography, University of Delaware, Newark, Delaware (September).
- Willmott, C.J. and K. Matsuura, 1993. Possible future climates at Yucca Mountain Nevada over time scales from 10^1 to 10^4 years. Paper presented at the second meeting of the Expert Panel on Climatology convened by the Center for Nuclear Waste Regulatory Analyses (CNWRA), San Antonio, Texas (May).*
- Willmott, C.J., 1993. Evaluating the global hydrologic cycle: research makes its way into the classroom. Lecture presented to the Department of Geography, Rutgers University, New Brunswick, New Jersey (May).*
- Klink, K. and C.J. Willmott, 1993. Irrigation effects on surface fluxes at sub-GCM grid scales. Paper presented at the annual meeting of the Minnesota Academy of Science, Duluth (May).
- Feddema, J.J., C.J. Willmott and S.M. Robeson, 1993. Influence of spatially variable observation networks on detecting climatic change. Paper presented at the annual meeting of the Southern California Academy of Sciences, Long Beach (May).
- Klink, K. and C.J. Willmott, 1993. Irrigation effects on surface fluxes at sub-GCM grid scales. Paper presented at the annual meeting of the Association of American Geographers, Atlanta (April).
- Matsuura, K., C.J. Willmott and K. Klink, 1993. Estimating the Earth's vegetation cover using satellite and in situ data. Paper presented at the annual meeting of the Association of American Geographers, Atlanta (April).
- Robeson, S.M., C.J. Willmott and M. Janis, 1993. Comparison of methods for estimating long-term mean precipitation. Paper presented at the annual meeting of the Association of American Geographers, Atlanta (April).

- Willmott, C.J., 1993. Global climate and climatic change: what can we learn from the instrumental record? Lecture presented to the Department of Geography, University of California, Los Angeles (February).*
- Willmott, C.J., 1992. Detecting warming in the instrumental record or with GCMs. Lecture presented as a member of the Panel on "the Greenhouse Effect: Myth or Reality?" at the annual meeting of the Middle States Division of the Association of American Geographers, Syracuse, New York (October).*
- Willmott, C.J., 1992. Use of point observations. Lecture presented to the Joint GEWEX/WGNE Workshop on Global Observations, Analyses and Simulation of Precipitation. Camp Springs, Maryland (October).*
- Willmott, C.J., 1992. Estimating large-scale climate and climatic change from weather station data. Lecture presented to the Remote Sensing Seminar, College of Marine Studies, University of Delaware, Newark (September).*
- Klink, K., B. Hanson, K. Matsuura, S.M. Robeson, and C.J. Willmott, 1992. Correlation of two-dimensional vector data. Paper presented at the annual meeting of the Association of American Geographers, San Diego, California (April).
- Robeson, S.M. and C.J. Willmott, 1992. Spatial analysis of terrestrial air temperature networks. Paper presented at the annual meeting of the Association of American Geographers, San Diego, California (April).
- Willmott, C.J., 1992. Climate and climatic change: what can we learn from the instrumental record? Lecture presented to the Department of Geography, Virginia Polytechnic Institute and State University, Blacksburg (April).*
- Willmott, C.J., S.M. Robeson and J.J. Feddema, 1992. Influence of spatially variable instrument networks on continental and global scale climatic averages. Lecture presented to the Department of Geography, University of Maryland, College Park (March).*
- Willmott, C.J., S.M. Robeson and J.J. Feddema, 1992. Influence of spatially variable instrument networks on climatic averages. Lecture presented to the Institute for the Study of Earth, Oceans and Space at the University of New Hampshire, Durham (January).*
- Willmott, C.J. and K.A. Patterson, 1991. Spatial distribution of soil available water-holding capacity and its influence on the large-scale climatic water balance. Paper presented at the annual meeting of the Association of American Geographers, Miami, Florida (April).
- Willmott, C.J., 1991. Appropriate research programs for geography departments. Presentation and discussion at the annual meeting of the Association of American Geographers, Miami, Florida (April).*

- Robeson, S.M. and C.J. Willmott, 1991. Spatial interpolation and global temperature change. Paper presented at the annual meeting of the Association of American Geographers, Miami, Florida (April).
- Legates, D.R. and C.J. Willmott, 1991. A comparison of GCM-simulated and observed mean January and July global precipitation fields. Paper presented at the annual meeting of the Association of American Geographers, Miami, Florida (April).
- Willmott, C.J., 1991. Modeling—the other approach? Lecture presented to the Department of Geography, University of Delaware, Newark (March).
- Willmott, C.J. and S.M. Robeson, 1991. Can we identify global climate change from the weather-station record? Lecture presented to the Department of Geography at the University of Colorado, Boulder (February).*
- Willmott, C.J. and S.M. Robeson, 1990. Climate, climatic change and their representation in the instrumental record. Paper presented at the Resource Technology '90 Conference, Georgetown University, Washington, DC (November).*
- Vörösmarty, C., B. Choudhury, B. Moore, and C.J. Willmott, 1990. Linking models of large river basins, regional climatology and satellite remote sensing to analyze tropical hydrology. Paper presented at the Chapman Conference on Hydrologic Aspects of Global Climate Change, Lake Chelan, Washington (June).
- Willmott, C.J., 1990. Can we detect climate change from station data? Lecture presented to the Remote Sensing Group, College of Marine Studies, University of Delaware, Newark (May).*
- Willmott, C.J., 1990. Large-scale computing in Geography and Climatology. Lecture presented at the Enabling Technologies '90 Conference, University of Delaware, Newark (April).*
- Willmott, C.J., C.M. Rowe, and D.R. Legates, 1990. WIMP: the water-budget interactive modeling program. Paper presented at the annual meeting of the Southwest Division of the Association of American Geographers, Fort Worth, Texas (March).
- Willmott, C.J., 1990. Estimating components of the land-surface water cycle from traditional data. Lecture presented at the Geophysical Fluid Dynamics Laboratory, Princeton University, Princeton, New Jersey (March).*
- Willmott, C.J., 1990. Climatology of the global water cycle from traditional data. Lecture presented to the Department of Geography, San Diego State University, San Diego, California (February).*
- Willmott, C.J., 1990. Futures in geography. Lecture presented to the Growth of Geographic Thought class in the Department of Geography and Environmental Studies, California State University, Hayward (February).*

- Willmott, C.J., S.M. Robeson, and D.R. Legates, 1989. Can we identify climate change from station data? Lecture presented to the Department of Geography, University of Delaware, Newark (November).
- Willmott, C.J., 1989. Land-surface processes and climate change. Lecture presented to the QUEST Group, University of Delaware, Newark (May).*
- Willmott, C.J., 1989. Statistics for the evaluation of model performance. Lecture presented to the Department of Civil Engineering, University of Delaware, Newark (April).*
- Patterson, K.A. and C.J. Willmott, 1989. Global distribution of soil field capacity. Paper presented at the annual meeting of the Association of American Geographers, Baltimore (March).
- Willmott, C.J., K. Klink, D.R. Legates and S.M. Robeson, 1989. A critical review of hypothesis testing. Paper presented at the annual meeting of the Association of American Geographers, Baltimore (March).
- Willmott, C.J., C.M. Rowe, and D.R. Legates, 1989. WIMP: the water-budget interactive modeling program. Paper presented at the annual meeting of the Association of American Geographers, Baltimore (March).
- Willmott, C.J., 1989. Parameterizing the land-surface for climate studies. Lecture presented to the Department of Geography, University of California, Davis (February).*
- Willmott, C.J., 1988. Global and terrestrial seasonal water cycles. Paper presented at NASA's Third Interdisciplinary Science Conference on Land-Surface Climatology, Las Cruces, New Mexico (November).*
- Willmott, C.J., 1988. Estimating terrestrial variables for use in global climate studies. Lecture presented to the Department of Geography, University of Maryland, College Park (October).*
- Willmott, C.J., 1988. Estimating the global climatic water balance from archival data. Paper presented at the Second Annual Earth System Science Center Workshop on "The Global Water Cycle: Past, Present and Future," Pennsylvania State University, University Park (July).*
- Willmott, C.J., 1988. Climate and the biosphere. Lecture presented to the Department of Geology, University of Delaware, Newark (March).*
- Willmott, C.J., D.R. Legates, and J.E. Burt, 1987. A high-resolution climatology of the terrestrial seasonal water cycle. Paper presented at NASA's Second Interdisciplinary Science Conference on Land-Surface Climatology, Tempe, Arizona (November).*
- Willmott, C.J., 1987. Representing the terrestrial biosphere for climate studies. Paper presented at the annual meeting of the Association of American Geographers, Portland, Oregon (April).
- Willmott, C.J., 1987. Evaluation of model performance. Lecture presented to the Department of Geography, University of Nebraska, Lincoln (February).*

- Willmott, C.J., 1987. Climatic classification. Lecture presented to the Department of Geography, University of Nebraska, Lincoln (February).*
- Willmott, C.J., 1987. Statistics for the evaluation of models. Lecture presented to the Department of Geography, Arizona State University, Tempe (February).*
- Willmott, C.J. and J.E. Burt, 1986. A high-resolution climatology of the terrestrial seasonal water cycle. Paper presented at NASA's First Interdisciplinary Science Conference on Land-Surface Climatology, Nogales, Arizona (October).*
- Willmott, C.J., 1986. Interpolation and contouring on small-scale maps. Lecture presented to the Advanced Computer Cartography class, Department of Geography, University of Wisconsin, Madison (May).*
- Willmott, C.J., 1986. Climate and the biosphere. Lecture presented to the Department of Geology and Geography, Hunter College (CUNY), New York (April).*
- Willmott, C.J., 1986. Climate and the biosphere. Lecture presented to the Department of Geography, University of Delaware, Newark (February).
- Willmott, C.J. and K. Klink (presented on the authors' behalf by Piers Sellers), 1985. A representation of the terrestrial biosphere for use in global climate studies. Presented at the ISLSCP Conference on Parameterization of Land-Surface Characteristics, Use of Satellite Data in Climate Studies, and First Results of ISLSCP, Rome, Italy (December).*
- Willmott, C.J. and K. Klink, 1985. Representing the terrestrial vegetation in global climate models. Paper presented at the joint meeting of the Middle States Division of the Association of American Geographers, and New England and St. Lawrence Valley Geographical Society, Albany, New York (October).*
- Willmott, C.J. and C.M. Rowe, 1985. Computer-aided instruction in the climatic water budget. Paper presented at the annual meeting of the Association of American Geographers, Detroit, Michigan (April).
- Willmott, C.J., 1984. Climatology of the terrestrial seasonal water cycle. Paper presented to the Department of Geography, The Pennsylvania State University, University Park (October).*
- Willmott, C.J., 1984. A critical assessment of the use of models in environmental science. Lecture presented to the College of Marine Studies, University of Delaware, Lewes (June).*
- Willmott, C.J., S. Ackleson, K. Klink, D.R. Legates, J. O'Donnell, and C.M. Rowe, 1984. More on the evaluation of climatic model performance. Paper presented at the annual meeting of the Association of American Geographers, Washington, DC (April).

- Willmott, C.J., 1984. A primer on the representation of the terrestrial seasonal snow cycle within GCMs. Paper presented at the fifteenth annual Pittsburgh Conference on Modeling and Simulation, Pittsburgh (April).
- Legates, D.R. and C.J. Willmott, 1984. On the use of factor analytic techniques with geophysical data. Paper presented at the fifteenth annual Pittsburgh Conference on Modeling and Simulation, Pittsburgh (April).
- Willmott, C.J., 1984. Snowcover physics for grasslands and forests. Paper presented in the "Green Machine" seminar series held at NASA's Goddard Space Flight Center, Greenbelt, Maryland (January).*
- Willmott, C.J., 1983. An empirically-derived climatology of the terrestrial seasonal water cycle. Special Colloquium presented to the Department of Geography, University of Connecticut, Storrs (December).*
- Willmott, C.J., 1983. Model evaluation. Lecture presented to the Statistics in the Earth Sciences Seminar Series, University of Delaware, Newark (December).*
- Willmott, C.J., C.M. Rowe, and Y. Mintz, 1983. A global parameterization of the seasonal soil moisture and snow cover cycles for use in GCMs. Paper presented at the annual meeting of the Association of American Geographers, Denver (April).
- Willmott, C.J., 1983. Climatological approaches to the evaluation of the available solar resource. Lecture presented to the Department of Geography, University of Victoria, Victoria, British Columbia (March).*
- Willmott, C.J., 1983. Climatic modeling and evaluation. Lecture presented to the Department of Geography, University of Victoria, Victoria, British Columbia (March).*
- Willmott, C.J., 1983. Operational evaluation of solar irradiance models. Lecture presented to the Department of Geography, University of British Columbia, Vancouver, British Columbia (March).*
- Willmott, C.J., 1982. Zeroth-order approximation of global soil moisture for use in the GLAS GCM. Paper presented at NASA's Climate Science Review, Greenbelt, Maryland (June).*
- Willmott, C.J., C.M. Rowe, and F. Gossette, 1982. Small-scale isoline maps: some projection-related inaccuracies resulting from interpolation in Cartesian space. Paper presented at the annual meeting of the Association of American Geographers, San Antonio, Texas (April).
- Willmott, C.J., 1981. Computer cartography. Lecture presented to the College of Urban Affairs and Public Policy, University of Delaware, Newark (November).*

- Rowe, C.M. and C.J. Willmott, 1981. Sensitivity of isoline positions on small-scale maps to some common assumptions and methods of digital interpolation. Paper presented at the annual meeting of the Middle States Division of the Association of American Geographers, Rochester, New York (October).
- Willmott, C.J. and C.M. Rowe, 1981. Sensitivity of the climatic water budget to key boundary conditions and parameterizations. Paper presented at the annual meeting of the Association of American Geographers, Los Angeles, California (April).
- Willmott, C.J., 1980. On the role of sensitivity analysis in climate modeling. Paper presented at the annual meeting of the Middle States Division of the Association of American Geographers, Newark, Delaware (October).
- Willmott, C.J., 1980. Computer graphics in geography. Lecture presented to the University of Delaware, ACM Society, Newark (May).*
- Willmott, C.J., 1980. On the validation of models in climatology. Paper presented at the annual meeting of the Association of American Geographers, Louisville, Kentucky (April).
- Willmott, C.J., 1979. On the climatic optimization of the tilt and azimuth of flat-plate solar collectors. Lecture given to the Institute of Energy Conversion, University of Delaware, Newark (December).*
- Willmott, C.J., 1979. Macroclimatology and macrocomputers. Paper presented to the annual meeting of the Middle States Division of the Association of American Geographers, New Brunswick, New Jersey (October).
- Willmott, C.J., 1979. Climatic optimization of flat-plate solar collectors. Paper presented at the annual meeting of the Canadian Association of Geographers, Victoria, British Columbia (May).
- Willmott, C.J., 1979. A climatic model for the evaluation of solar houses. Paper presented at the annual luncheon of the University of Delaware Research Foundation, Newark (January).*
- Willmott, C.J., 1978. A climatic model for the evaluation of solar houses. Lecture presented to the Institute of Energy Conversion, University of Delaware, Newark (October).*
- Willmott, C.J., 1978. Radiation climates of the conterminous United States. Paper presented at the annual meeting of the Association of American Geographers, New Orleans (April).
- Vernon, M.T. and C.J. Willmott, 1978. A classification of solar climates in the contiguous United States. Paper presented at the annual meeting of the Association of American Geographers, New Orleans (April).
- Wicks, D.E. and C.J. Willmott, 1978. An empirical method for the spatial interpolation of precipitation within California. Paper presented at the annual meeting of the Association of American Geographers, New Orleans (April).

- Willmott, C.J., 1978. Radiation climates in the United States. Lecture presented to the Department of Geography, The Ohio State University, Columbus (March).*
- Willmott, C.J., 1977. Climatic classification: its theory, methods and utility. Paper presented at the annual meeting of the Association of American Geographers, Salt Lake City (April).
- Willmott, C.J., 1976. A component analytic approach to precipitation regionalization in California. Lecture presented to the Departments of Geography at the University of Delaware, Newark (March);* the University of Wisconsin, Madison (April);* and the University of Minnesota, Minneapolis (April).*
- Willmott, C.J., 1975. Some numerical approaches to univariate climatic regionalization. Paper presented at the annual meeting of the Association of Pacific Coast Geographers, Fresno, California (June).
- Willmott, C.J., 1974. A component analytic approach to precipitation regionalization in California. Paper presented at the annual meeting of the Southern California Academy of Sciences, Fullerton (May).
- Willmott, C.J., 1973. Changing patterns of air temperature in the southeast San Francisco Bay region, 1945-1970. Paper presented at the annual meeting of the Association of Pacific Coast Geographers, San Diego, California (June).
- Willmott, C.J., 1973. Air temperature records: a useful tool in urban climatology? Paper presented at the annual meeting of the Southern California Academy of Sciences, Long Beach (May).