

Weifeng Wang

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RESEARCH INTEREST

- **Global change ecology;**
- **Ecological modeling;**
- **Forest ecology and management;**

EDUCATION BACKGROUND

- Ph.D., Sciences de l'environnement, Université du Québec à Montréal (UQAM) **2008-Present**
- M.Sc., Forest Management, Chinese Academy of Forestry (CAF) **2005-2008**
- B.Sc., Environmental Science, Central South Forestry University (CSFU) **2001-2005**

RESEARCH EXPERIENCE

2010- Present Participated in the project of *Incorporating the effects of weather and climate change into the calculation of net primary productivity in the Carbon Budget Model of the Canadian Forest Service* funded by CSCAS (Canadian Foundation for Climate and Atmosphere Science)

- To test the TRIPLEX-management model against Canada-Flux data and to predict carbon dynamics under future climate change and harvesting disturbances.

2008- Present Participated in Strategic Project Grant project and Strategic Network (ForValueNet) funded by Natural Sciences and Engineering Research Council of Canada (NSERC).

- "Modeling the Impacts of Thinning on Forest Growth, Biomass and Carbon Sequestration in Eastern Canada", to develop TRIPLEX- Management model.

2006-2008 Participated in "Automatic Seedling Growth Monitoring and Diagnosis Technology Based on Field Server" funded by Hi-Tech Research and Development Program (863) of China.

- Completed five-month monitoring fieldwork, and responsible for wireless network and equipment maintenance as well as seedling growth monitoring.
- Develop recognition algorithm for seedling diseases with C++.

- 2006-2008** Participated in “Data-Sharing Center of China Forestry” funded by National Science and Technology Foundation Platform Construction Projects.
-Responsible for the construction and standard of ForestryModel database.
- 2006** Participated in field survey of project entitled “Modified Adaptive Cluster Sampling of Vegetation on Western Arid Regions in China” funded by Projects of International Cooperation and Exchanges NSFC.

HONOURS & AWARDS

- **2010 Chinese government award for outstanding self-financed students abroad**, China Scholarship Council, 2011
- **Outstanding graduate student scholarship**, UQAM, 2009-2010, 2010-2011, 2011-2012.
- Supplemental Tuition Fees Exemption Scholarship Program**, Minister of Education, Recreation and Sports (Quebec). 2008-2009, 2009-2010, 2010-2011, 2011-2012
- **UQAM doctoral fellows**, 2008-2012
- **Outstanding Student**, Graduate School of CAF, 2008
- Outstanding Student Scholarship**, CSFU, China 2002, 2003, 2004

PUBLICATIONS

Under-reviewed Journals and Manuscripts in Preparation:

- Wang, W.**, Peng, C., Kneeshaw, D.D., Larocque, G.R. & Song, X. (2011) Quantifying the effects of climate change and harvesting disturbance on carbon dynamics of boreal aspen and jack pine forests using TRIPLEX-Management model and eddy covariance measurements. In preparation (**almost finish first draft**).
- Wang, W.**, Peng, C., Zhu, Q., Kneeshaw, D.D., Larocque, G.R., Lei, X., Tong, Q., Song, X. & Ma, Z. (2011) Process-based modeling effects of varied management regimes on carbon dynamics in jack pine stands under future climate change in Northwestern Ontario, Canada. **In preparation (results come out)**.
- Wang, W.**, Peng, C., Kneeshaw, D.D., Larocque, G.R. & Luo, Z. (2011) Drought-induced tree mortality: causes, ecological consequences, and modeling. (**second draft**).
- Song, X., Peng, C., Zhou, G., Jiang, H., **Wang, W.** & Xiang, W. (2011) Climate warming-induced upward shift of Moso bamboo population on Tianmu Mountain, China. *Climatic Change*, Submitted.
- Ma, Z., Peng, C., Li, W., Zhu, Q., **Wang, W.** & Song, X. (2011) Modeling individual tree mortality rates using marginal and random effects regression models. *Natural Resource Modeling*, **In revision**.
- Ma, Z., Peng, C., Zhu, Q., Chen, H., Yu, G., Li, W., Zhou, X., **Wang, W.** & Zhang, W. (2011) Regional drought-induced reduction in the biomass carbon sink of Canada's boreal forests since 1963. *Proceedings of the National Academy of Sciences of the United States of America*, **In revision**.

Peer-reviewed Journals:

- Peng, C., Ma, Z., Lei, X., Zhu, Q., Chen, H., **Wang, W.**, Liu, S., Li, W., Fang, X. & Zhou, X. (2011) A drought-induced pervasive increase in tree mortality across Canada's boreal forests. *Nature Climate Change*, **1**, 467-471.
- Wang, W.**, Lei, X., Ma, Z., Kneeshaw, D.D. & Peng, C. (2011) Positive relationship between aboveground carbon stocks and structural diversity in spruce-dominated forest stands in New Brunswick, Canada. *Forest Science*, **57**, 506-515.
- Song, X., Zhou, G., Jiang, H., Yu, S., Fu, J., Li, W., **Wang, W.**, Ma, Z. & Peng, C. (2011) Carbon sequestration by Chinese bamboo forests, and their ecological benefits: Assessment of potential, problems, and future challenges. *Environmental Reviews*, **19**, 418-428.
- Dietze, M., Vargas, R., Richardson, A.D., Stoy, P.C., Barr, A.G., Anderson, R.S., Arain, A., Baker, I., Black, A.T., Chen, J.M., Cias, P., Flanagan, L.B., Gough, C., Grant, R.F., Hollinger, D.Y., Izaurrealde, R.C., Kucharik, C.J., Lafleur, P.M., Liu, S., Lokupitiya, E., Luo, Y., Munger, J.W., Peng, C., Poulter, B., Price, D.T., Ricciuto, D.M., Riley, W.J., Sahoo, A.K., Schaefer, K.M., Suyker, A.E., Tian, H., Tonitto, C., Verbeeck, H., Verma, S.B., **Wang, W.** & Weng, E. (2011) Characterizing the performance of ecosystem models across time scales: A spectral analysis of the North American Carbon Program site-level synthesis. *Journal of Geophysical Research*. **116**, G04029
- Chen, H., Yin, K., Wang, H., Zhong, S., Wu, N., Shi, F., Zhu, D., Zhu, Q., **Wang, W.**, Ma, Z., Fang, X., Li, W., Zhao, P. & Peng, C. (2011) Detecting one-hundred-year environmental changes in western China using seven-year repeat photography. *Plos One*, **6**, e25008.
- Wang, W.**, Peng, C., Zhang, S.Y., Zhou, X., Larocque, G.R., Kneeshaw, D.D. & Lei, X. (2011) Development of TRIPLEX-Management model for simulating the response of forest growth to pre-commercial thinning. *Ecological Modelling*, **222**, 2249-2261.
- Lei, X., **Wang, W.** & Peng, C. (2009) Relationships between stand growth and structural diversity in spruce-dominated forests in New Brunswick, Canada. *Canadian Journal of Forest Research*, **39**, 1835-1847.

Presentations:

- **ForValueNet Workshop**, Linking Tree and Stand Models into decision support tools – demonstrations and discussions, June 8, 2010, Edmonton, Alberta, Canada.

Peng, C., **Wang, W.** (Co-presenter), Development of TRIPLEX and current challenges. **Oral**

- **5th Meeting / Workshop of the WOVEN project**, May 23-25, 2011, Korkeakoski, Finland.

Wang, W., Peng, C., Zhang, S. Y., Zhou, X., Larocque, G. R., Kneeshaw, D. D. & Lei, X. (2011) Development of TRIPLEX-Management model for simulating the response of forest growth to pre-commercial thinning. **Oral**

- **ISEM 2009 Conference-Ecological Modelling for Enhanced Sustainability in Management**, Oct. 6-9, 2009, Québec, Canada

Wang, W., Zhou, X., Peng, C., Larocque, R.G., Lei, X., Kneeshaw, D., Zhang, S.Y., Sun, J., 2009. Simulating the Effects of Pre-commercial Thinning on forest Growth of Jack Pine Stands Using a Process-based Model. **Oral**

- **Carbon in Northern Forests**- integration of research and management, June 10-11, 2009, Traverse City, MI, US.

Wang, W., Lei, X., Peng, C., Kneeshaw, D., Relationships among Aboveground Carbon Storage, Stand Productivity, and Structural Diversity of Spruce-dominated Forests in New Brunswick, Canada. **Poster**

- **AGU, 2009 Joint Assembly**, May 24-27, 2009, Toronto, ON, Canada.

Wang, W., Lei, X., Peng, C., Zhang, S. Y., Simulating the effects of forest managements on carbon sequestration: TRIPLEX-Management model development. **Poster**

- **The 8th China Forest Youth Academic Annual Meeting**. Changsha, Hunan Province, Nov. 8-10, 2007.

Wang, W., Lei, Y., Wang, X., Zhao, H., Forest Biomass Models in China. **Oral**

REVIEWS:

Ecological Modelling: Reviewer

TRAINING

- Two weeks visit to University of Helsinki and Finnish Forestry Research Institute, May 13-27, 2011, **Finland**

-**Advanced SWAT Course**, May 5-7, 2010, Montreal, Quebec, Canada.

-**CCP (Canadian Carbon Program) 2010 Annual General Meeting**, February 26-28, 2010, Montreal, Quebec, Canada.

ACADEMIC ASSOCIATION

2010-Present	Ecological Society of America (ESA)	Member
2009- Present	The International Society for Ecological Modelling (ISEM)	Member
2009- Present	American Geophysical Union (AGU)	Member