

Michael (Qinglin) Li Ph.D. Professional Agrologist

Curriculum Vitae

P.O. Box 9512 Stn Prov Govt, Victoria, BC, V8W 9C2
Phone: 1-250-387-9355, Qinglin.li@gov.bc.ca

Education:

Ph.D., Environmental Science (Landscape Ecology), University of Toledo, Toledo, Ohio, USA **2006**
M.S. (eq.), GIS and Applied Geographics, University of Toledo, Toledo, Ohio, USA **2004**
M.S., Urban Forestry, Southern University, Baton Rouge, Louisiana, USA **2002**
M.S., Forest Ecology, Northeast Forestry University, Harbin, Heilongjiang, China **1996**
B.S., Forest Science, Northeast Forestry University, Harbin, Heilongjiang, China **1993**

Professional Experience:

2008 to present, Carbon Modeling and Forest Inventory
Ministry of Forests, Lands, and Natural Resource Operations (British Columbia), Canada
2008 to present, Carbon Modeling and Forest Inventory (joint with BC),
Carbon Accounting Team, Pacific Forestry Center, Natural Resource Canada
2007-2008, Research Associate
Department of Environmental Science, University British Columbia, Kelowna, Canada
2006-2008, Senior Landscape Ecologist
Timberline Natural Resource Group Ltd. Kelowna, Canada
2002-2006, Research and Teaching Assistant
Department of Environmental Science, University of Toledo (UT), OH, USA
2000-2002, Research and Teaching Assistant
Department of Urban Forestry, Southern University (SU), LA, USA
2000 Apr-Sept, Research Associate
Department of Forestry, Purdue University, IN, USA
1996-2000, GIS Forester
Academy of Forest Inventory and Planning, Forest Administration of China
1993-1996, Research and Teaching Assistant
Department of Forest Science, Northeast Forestry University (NFU), Harbin, China

Academic History:

Research Interests

- Natural and anthropogenic disturbances impact on forest ecosystem carbon, water and nutrients cycling (modelling, eddy covariance, and remote sensing techniques).
- Modelling ecosystem productivity and element cycling based on bio-physiological regulating mechanisms
- Forest inventory, sampling design, and statistical analysis
- Landscape fragmentation and edge dynamics
- Remote sensing and environment
- Potential application of LiDAR data in forest inventory and strategic planning/decision support
- Integrated resource analysis in a metaheuristic environment
- Forest carbon offset, marketing mechanisms, and policy

Research Support (Total: \$3,084,873.00; PI: \$146,603.00)

2012-2015, *Adaptation of Asia-Pacific Forests to Climate Change* funded by Asia-Pacific Network for Sustainable Forest Management and Rehabilitation (APFNet), **\$2,211,700.00** (participant)
2013-2014, *Enhancing an Integrated System for Multiple Value Natural Resource Analysis* funded by Research Council for Natural Resource Sector of British Columbia, Canada, **\$30,000.00 (PI, con.)**.

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2013. *Forest Carbon Offsets and Their Policy Support System in North America* funded by China Green Carbon Foundation, **USDS\$17,000.00(Co-PI-UBC)**.
- 2012-2013, *Enhancing an Integrated System for Multiple Value Natural Resource Analysis* funded by Research Council for Natural Resource Sector of British Columbia, Canada, **\$33,000.00 (PI)**.
- 2011-2012, *Incorporating Forest Carbon and Hydrology into a Framework for Modeling Multiple Forest Values* funded by Research Council of Ministry of Forests, Lands, and Natural Resource Operations, **\$55,000.00 (PI)**.
- 2011-2012, *Updating BC Stand-Level Volume to Carbon Equations for the Use in the Carbon Budget Model of the Canadian Forest Sector (CBM-CFS3)* funded by Research Council of Ministry of Forests, Lands, and Natural Resource Operations, **\$17,000.00 (PI, Project Manager)**.
- 2008-2009, *The Development of Forest Carbon Indicators and Monitoring Strategies for the Prince George Forest District & Tree Farm Licensee 30* funded by Canadian Forest Products Ltd. **\$76,440.00 (Co-PI)**.
- 2007-2008, *The Development of Fragmentation Metric for the Prince George Timber Supply Area* funded by Pope & Talbot Ltd. **\$11,603.00 (PI)**.
- 2007-2008, *Terrestrial Ecosystem Mapping of McBride Community Forests* funded by McBride Community Forest Corporation (MCFC), **\$128,650.00 (Co-PI)**.
- 2007-2008, *Predictive Ecosystem Mapping of the Prince George and Fort St James Forest Districts* funded by Canadian Forest Products Ltd. **\$96,480.00 (Co-PI)**.
- 2006-2007, *Predictive Ecosystem Mapping of the Lakes and Morice Timber Supply Areas* funded by Lakes and Morice Innovative Forest Practice Agreement (IFPA), **\$248,000.00(Co-PI)**.
- 2002-2005, *Carbon Flux and Storage in Mixed Oak Forests of Missouri Ozarks Forest Ecosystem Project* funded by Missouri Department of Conservation, **USDS\$160,000.00(Participant-Co-PI)**.

Publications:

1. Sharma, T*, W. Kurz, G. Stinson, M. Pellat, **Q. Li**. **In Press**. A 100-year conservation experiment: impacts on forest carbon stocks and fluxes. *Forest Ecology and Management*
2. Wei, X., **Q. Li***, Y. Liu, S. Liu, X. Guo, L. Zhang, D. Niu, W. Zhang. **2013**. Restoring ecosystem carbon sequestration through afforestation: a sub-tropic restoration case study. *Forest Ecology and Management* 300: 60-67.
3. Gong, X., Y. Liu, **Q. Li**, X. Wei, X. Guo*, D. Niu, W. Zhang, J. Zhang, L. Zhang. **2013**. Sub-tropic degraded red soil restoration: Is soil organic carbon build-up limited by nutrients supply. *Forest Ecology and Management* 300: 77-87.
4. **Li, Q.***, J. Chen, D. L. Moorhead. **2012**. Ecosystem and components respiration in a managed forest landscape. *Forest Ecology and Management* 279: 1-10.
5. Wei, X*, **Q. Li**, M. Waterhouse, and H. Armleder. **2012**. Organic matter loading affects lodgepole pine seedling growth. *Environmental Management* 49(6): 1143-1149.
6. Xu, J*, J. Chen, K. Brosofske, **Q. Li**, M. Weintraub, B. Wilske, R. Henderson, R. John, R. Jensen, C. Shao. **2011**. Influence of timber harvesting alternatives on forest soil respiration and its biophysical regulatory factors over a 5-year period in the Missouri Ozarks. *Ecosystems* 14(8): 1310-1327.
7. G. Stinson*, W.A. Kurz, C.E. Smyth, E.T. Neilson, C.C. Dymond, J.M. Metsaranta, C. Boisvenue, G.J. Rampley, **Q. Li**, T.M. White, and D. Blain. **2011**. An inventory-based analysis of Canada's managed forest carbon dynamics, 1990-2008. *Global Change Biology* 17 (6): 2227-2244.
8. LaCroix, J*, **Q. Li**, S. Ryu, D. Zheng, and J. Chen. **2010**. Edge fuel effects fire spread simulations in a managed northern Wisconsin forest, USA. Ch 18: 289-302. In: Qu, Gao, Kafatos, Murphy and Solomonson (Eds), Earth Science Satellite Remote Sensing. *Springer and Tsinghua University Press* Pg416.

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9. **Li, Q***, D. L. Moorhead, R. Henderson, J. Chen, J. DeForest, and R. Jensen. **2009**. Mixed litter decomposition in a managed Missouri Ozark forest Ecosystem. *Forest Ecology and Management* 257: 688-694.
10. LaCroix, J*, **Q. Li**, J. Chen, R. Henderson, R. John. **2008**. Edge effects on fire spread in a disturbed Northern Wisconsin landscape. *Landscape Ecology* 23: 1080-1092.
11. Henderson R*, **Q. Li**, J. Chen, C. Mayer, M. Weintraub, R. Jensen. **2008**. Partitioning soil carbon dioxide efflux through vertical profiles: a study of harvested forests in Missouri. *VDM Verlag* P 48.
12. Noormets, A*, S. McNulty, G. Sun, J. L. DeForest, **Q. Li**, and J. Chen. **2008**. Drought during canopy development can have lasting effect on annual carbon balance. *New Phytologist*. 179: 818 – 828.
13. **Li, Q***, J. Chen, J. D. L. Moorhead, L. DeForest, R. Jensen, and R. Henderson. **2007**. Effects of timber harvest on carbon pools in Ozark forests. *Canadian Journal of Forest Research*. 37: 2337 – 2348.
14. **Li, Q***, J. Chen, B. Song, J. J. LaCorix, M. Breese, and J. Rademacher. **2007**. Areas influenced by multiple edges and their implications in fragmented landscapes. *Forest Ecology and Management* 242: 99-107.
15. Ren, Q*, X. Yang, G. Gui, J. Wang, Y. Huang, X. Wei, and **Q. Li**. **2007**. Smith fir population structure and dynamics in the timberline ectone of the Sejila Mountain, Tibet, China. *ACTA ECOLOGICA SINICA*, 27 (7): 2669-2677. (in Chinese and English)
16. Eushirchen, E*, K. Harper, and **Q. Li**. **2006**. The influence of edges on plant communities: Research frontiers on forested landscapes. In: J. Chen, S. C. Saunders, K. D. Brosofske, and T. R. Crow (eds.), Linking Ecology to Landscape Hierarchies. *Nova Science Publisher*.
17. Concilio, A.*, S. Ma, **Q. Li**, J. LeMoine, J. Chen, M. North, D. Moorhead, and R. Jensen. **2005**. Soil respiration response to prescribed burning and thinning in mixed-conifer and hardwood forests. *Canadian Journal of Forest Research*. 35: 1581-1591.
18. Zhang, P., G. Shao*, G. Zhao, D. C. LeMaster, G. R. Parker, J. B. Dunning, and **Q. Li**. **2000**. Ecology: China's Forest Policy for the 21st Century. *Science*. 288 (5474), June 23, 2135-2136.
19. Chen, C.*, J. Zhang, and **Q. Li**. 2000. Statistic database management in natural forest conservation program, 2nd edition. *China's Forestry Publishing House, Beijing*, p40. (in Chinese)
20. **Li, Q***. 2000. Sustainable forestry management in Canada. *Forestry network and communication*, p8-23. (in Chinese)
21. **Li, Q***. and Y. Liu 1999. Possibility of information system establishment in natural forest conservation program. *Forestry economics* (addition), p43-46. (in Chinese)
22. Chen, C.*, J. Zhang, and **Q. Li**. 1999. Statistic database management in natural forest conservation program, 1st edition. *China's Forestry Publishing House, Beijing*, p45. (in Chinese)
23. **Li, Q***. 1999. Chinese natural forest conservation program overview. *China's Publishing House, Beijing*, p199-233, (p388). (in Chinese)
24. **Li, Q***, and F. Wang. 1995. A field experiment on the effect of the elevated CO₂ on plant growth. *World Forestry Research* (addition), Vol.6: 24-26.
25. **Li, Q***, and F. Wang. 1995. Sliver birch research review. *China's Forestry Publishing House*, p73-76. (in Chinese)
26. **Li, Q***, J. Yang and Ch. Zhang. 1995. The effect of harvesting on higher plants diversity in frigid area. *Journal Northeast For Univ* Vol.6: 34-37. (in Chinese)
27. Zhou, H.*, T. Cai and **Q. Li**. 1994. The application of digital geography information in forest inventory. *Journal of Northeast Forestry University*, 22(2): 24-30. (in Chinese)

Teaching Experience:

EES 5760: Landscape Ecology (S **2004**, Teaching Assistant - TA);

EES training: International Workshop Training on Carbon and Water Fluxes (S **2005**, Lecturer);

EEES 6660: Environmental Biophysical Processes of Ecosystems (F **2005**, TA);

EEES 1050: Natural Hazards & the Environment, teaching assistant (S **2006**, TA)

UFOR 0457: Remote Sensing of Environment and Digital Image Analysis (F **2001**, TA; S **2002**, Lecturer);

UFOR 0375: Applied GIS/GPS in Urban Forestry (F **2001**, TA; S **2002**, Lecturer)

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FSNF 4000: Methodology of Ecological Field Surveys (F 1994);

FSNF training: Introduction of Forest Distribution and Successions in Dahulan Region (F 1995)

Guest Lectures

“Adapting Asia-Pacific Forest to Climate Change” Training, Kunming, China, July 1-12, 2013

- Basic Modeling Concepts and its Application in Forest Ecosystem
- Growth and Yield Models for Natural and Managed Stands
- Forest Ecosystem Carbon Budgets and Carbon Cycling
- Sustainable Forest Management and Strategic planning

(Invited by University of British Columbia & Asia-Pacific Sustainable Forest Management Network Centre)

Presentations:

1. **Li, Q. 2013.** Forest carbon offsets and carbon markets in North American. May 26-28, Nanchang, Jiangxi, China. International workshop on sustainable forest management and carbon forestry.
2. **Li, Q. 2012.** Forest carbon dynamics and strategic planning. March 5-6, Vancouver, B.C. Canada. APFNet workshop invited presentation at University of British Columbia.
3. **Li, Q., C. Fletcher, and X. Yuan. 2011.** Estimating British Columbia forest ecosystem carbon stocks and their changes between 200 and 2009 from National Forest Inventory photo plots: A modelling approach. Feb 14-16, Vancouver, B.C. Canada. (Poster).
4. **Li, Q. 2010.** Estimating Canadian Forest Ecosystem Carbon Budget and its Policy Implications. Jan 25. Invited Presentation at University of British Columbia Okanagan, BC, Canada.
5. **Li, Q. 2009.** Deforestation Greenhouse Gas Emissions in British Columbia. May 24. Presented at Integrated Land Management Bureau, Victoria, BC, Canada
6. **Li, Q. and D. Coster 2008.** Carbon budgets and CBM analysis results. Jun 17. Invited presentation by the Island Timberlands, Victoria. BC, Canada
7. **Li, Q. 2007.** Carbon fluxes in managed forest landscape. Feb 12. Invited presentation by the University of British Columbia, Okanagan campus. Kelowna, BC, Canada
8. **Li, Q., D. L. Moorhead, R. Henderson, J. Chen, J. D. Forest, and R. Jensen. 2006.** Mixed leaf litter decomposition in a managed Missouri Ozark forest landscape. April 4-5. Toledo, OH. Alpha Phi Omega, Toledo chapter.
9. **Chen, J., Q. Li, R. Henderson, R. Jensen, D. L. Moorhead, and D. Zheng. 2005.** Carbon Pools (Biomass) and Vertical Soil Respiration across Ozark Landscape. Nov. 29-30. Jefferson City, MO.
10. **Li, Q., J. Chen, J. L. DeForest, R. Jensen, D. L. Moorhead, and M. Johanson. 2005.** Effects of Forest Management on Carbon Pools across Ozark Landscape. The Ecological Society of America 90th Annual Meeting, Montréal, Canada.
11. **Li, Q., R. Henderson, D. L. Moorhead, J. Chen, J. L. DeForest, and M. Johanson. 2005.** Effects of forest management on mixed leaf litter decomposition at Missouri Ozark Ecosystem Project (MOFEP). Poster presentation at The Ecological Society of America 90th Annual Meeting, Montréal, Canada.
12. **Chen, J., D. Moorhead, Q. Li, R. Jensen, and J. Kabric. 2004.** Carbon pools and mixed leaf litter decomposition in a managed landscape at Ozark landscape. Nov. 29-30. Jefferson City, MO.
13. **Li, Q., J. Chen, D. Moorhead, R. Jensen, and M. Johanson. 2002.** Carbon storage and flux in mixed oak forest of the Ozark landscape—biometric and modeling approaches. Oct. 10 – 12, Columbia, MO.

Professional Services: Peer Reviewer for the following Journals and/or Publishers:

- Higher Education Publisher of China (book chapter, 08/2005)
- Environmental Science (10/2005)
- Landscape Ecology (10/2006, 07/2009)
- Journal of Integrated Plant Biology (06/2007, 09/2007; 10/2008)
- Journal of Plant Biology (12/2006; 12/2008)
- Journal of Forest Research (01/2010)
- African Journal of Environmental Science and Technology (07/2010; 07/2010; 11/2011)
- Journal of Revista Científica UDO Agrícola (09/2010)

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- Journal of Plant Ecology (10/2010)
- Journal of Ecosystem and Management (12/2011)
- Ecohydrology (02/2012; 04/2012; 05/2012; 08/2012)
- Forest Ecology and Management (03/2012; 02/2013)
- African Journal of Biotechnology (02/2013)
- Global Change Biology (03/2013)
- Journal of Energy and Chemical Engineering (08/2013)

Professional affiliations

- Member of Association of British Columbia Forest Professionals (2009 -- present)
- Member of British Columbia Institute of Agrologists (2009 -- present)
- Member of International Society of Arboriculture (ISA, 2007 -- present)
- Member of Invited Reviewers for Journal of Energy and Chemical Engineering (2013 -- present)

Skills

- Database: SQL, PostGreSQL, Microsoft Access, DBase (xx)
- Programming: C++, Visual Basic, Java, Python
- Operating System: MS DOS, Windows Series, UNIX, Linux (limited)
- Professional Software Packages: ArcView, ArcGIS, Arc/Info, Image Processing (IMAGINE x, MultiSpec), SAS, Patchworks, Woodstock,

Additional training

- Carbon Budget Model-Canadian Forest Sector 3(CBM-CFS3) – March 2009
- 3E training workshop: Interpersonal communication & working relationship workshop – Nov 2009
- BCIA¹ ethics workshop @Victoria – Nov 2009
- Variable Density Yield Projection (VDYP7) basics training - March 2010
- Forest Service Spatially Explicit Timber Supply Modeling (FSSAM) – March 2010
- Variable Density Yield Projection (VDYP7) - advanced training – Nov 2010
- Climate Change Training (hold by Environment Canada) – Dec 2010
- Effective Presentation Training @ Pacific Forestry Center Jan 2011
- Climate Change Seminar @Vancouver Feb 2011
- ESRI User Canada Conference @ Victoria April 2011
- Columbia Mountains Institute Carbon Management in BC Ecosystem @ Nelson June 2011
- Treaty Negotiation Seminar @ Victoria July 2011
- Carbon Sequestration and Credits in Agricultural Projects @ Vancouver November 2011
- Association of British Columbia Forest Professional's policy seminar (Webinar) September 6-7 2012
- SELES, Linear programming @Victoria through University of Victoria October 17-19 2012

Certifications

- **Certified Arborist**, International Society of Arboriculture – Pacific Northwest Chapter, 2007
Register number: PN-6577A
- **Certified Training**: Measuring your organization's carbon footprint: ISO 14064-1 Essentials-GHG inventories. (through CSA/ISO²);
Certification Number: 50018728-50056353

References:

¹ BCIA: British Columbia Institute of Agrologists

² CSA: Canadian Standards Association; ISO: International Standard Organization

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Jiquan Chen, professor
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The University of Toledo, Toledo, OH, USA
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Phone: 419-530-2664

Daryl L. Moorhead, Associate Professor
Department of Environmental Sciences
The University of Toledo, Toledo, OH, USA
Email: daryl.moorhead@utoledo.edu
Phone: 419-530-2017

Shikun Ran, Senior Ecologist
Ecora Resource Group Ltd.
579 Lawrence Ave. Kelowna, BC.
Email: shikun.ran@ecora.ca
Phone: 250-469-9757

Christine E. Fletcher, Strategic and Policy Team Lead
Forest Analysis and Inventory Branch
Ministry of Forests, Lands, and Natural Resource Operations
P.O. Box 9512 Stn Prov. Govt, Victoria, BC V8N 9C2
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Qinglin Li PhD Professional Agrologist
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Ministry of Forests, lands, and Natural Resource Operations
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Victoria British Columbia, Canada, V8W 9C2

Drs. Jiquan Chen and Daryl L. Moorhead

The Department of Environmental Sciences
The University of Toledo, Toledo, OH 43606

August 27, 2013

Dear Drs Chen and Moorhead,

It is my pleasure to write this application letter for an adjunct faculty position at The University of Toledo (UT) starting at adjunct associate professor.

In my position as carbon modelling and forest inventory senior analyst for both federal and provincial government over the past five years, I actively participated forest ecosystem carbon and nutrient cycling research at Canadian boreal, temperate, and US temperate forests. Understanding the ecosystem processes and functions is fascinating, communicating the information learnt is also critical to inform researchers in the field, thus, over 16 peer-reviewed papers had been published covering a broad range of landscapes and ecosystem. Research interests and curiosities, furthermore, can be implemented or investigated, have to have resources to support. My priority, hence, is focusing on grant proposal writing, expanding my collaborations, and networking. So far, I had secured research funding as principal investigator (PI) about \$150,000 and as co-PI or participant for research funding over \$3,000,000. And now, I would like to express my great interests to be a member of an adjunct faculty with UT to further advance my research careers.

I had deep connections with the Landscape Ecology and Ecosystem Studies (LEES) Lab and the Systems Ecology Lab for doctoral study and my junior research experience. We had been coauthored over nine peer reviewed publications in different major scientific research journals, which consolidated our collaboration foundation, and further inspired me to contribute my time and available resources to advance carbon science and ecosystem studies.

In addition, I already committed my time and resources in further advance decomposition model, GENDEC, developed by Dr Moorhead for the application of Ozark temperate deciduous forest ecosystem. Moreover, the collaboration with LEES Lab will enhance the understanding of carbon science, especially my contribution to the lab for my expertise of carbon modelling.

I look forward to hearing from you. Thank you for your consideration.

Qinglin Li PhD, Professional Agrologist
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