

**CURRICULUM VITAE**

**Name** : Xueliang Cai  
**First Name** : Xueliang  
**Year of Birth** : 1979  
**Nationality** : Chinese

**Key Qualifications** *[maximum 200-300 words]*

Xueliang Cai is a water resources & irrigation engineer and RS/GIS expert with 18 publications under his name. He has extensive experience in agricultural water and land scientific researches with focus on integrated irrigation water management issue through field experiment/social-economic survey, hydrological modeling, performance assessment, remote sensing/GIS interpretation and statistical analysis. His research interest lies in agricultural water and land management diagnosis and assessment, through analysis of agriculture performance responses to water cycling processes as consequences of water management practices, therefore to identify and introduce sustainable high potential interventions to improve land and water productivity for food security and livelihoods of the poor. Specific research strengths also include water accounting, crop biophysical and yield modeling, ET mapping, LULC dynamic detection, GIS based spatial modeling and statistical analysis (SAS). With copyrights of two softwares registered to State Intellectual Property Office (SIPO) of China, he is also skilled in programming and database.

He has gained significant international working experience during his PhD study in Wuhan University, China, through close collaboration with IWMI, IRRI and CSIRO. He was appointed as a Post Doctoral Fellow (Remote Sensing) at the International Water Management Institute, a CGIAR research centre headquartered in Colombo, Sri Lanka, effective June 2007. His post-doc works at IWMI further enriched his international working experience and strengthened his problem-solving research abilities to work in multi-culture and multi-discipline teams. Particularly he has working experiences in China, Sri Lanka, Central Asia, India, and Bangladesh.

**Education** *[specify as per sample]*

2002-2007 M.Sc. & Ph.D. Water resources and irrigation engineering, Wuhan University, China  
 1998-2002 B.Sc. Agriculture water engineering, Wuhan University, China

**Language Skills** *[eg:]*

	<u>Written</u>	<u>Spoken</u>
Mandarin	Native	Native
English	Good	Good

**Professional Experience** *[starting with current]*

2007 – date Post Doctoral Fellow – Remote Sensing, International Water Management Institute  
 2006 Consultant. International Water Management Institute  
 2005 Consultant. International Water Management Institute

## List of Assignments and Projects

[list key assignments/projects]

- 2008.6– present Basin focal project (BFP) – Indo-Gangetic river basin: Project of CGIAR Challenge Program on Water and Food (CPWF).
- 2007.6– present Irrigated Area mapping for China
- 2007.6 – 2008.7 Water Productivity (WP) mapping in Central Asia
- 2006.6– 2007.7 Global Irrigated Area Mapping (GIAM): Project of Comprehensive Assessment of water management in agriculture of CGIAR.
- 2006.2 – 2007.6 “ Digital Irrigation System”: Development of Management Information System (MIS) and Decision Support System (DSS). Project of funds for transformation of agricultural scientific and technological achievements.
- 2005.8 – 2007.6 The Mechanisms and Effects of Water Saving Irrigation Techniques on Water Balance in Paddy Irrigation District. Supported by the National Natural Science Foundation of China.
- 2003.9–2005.11 Growing More Rice with Less Water: Increasing Water Productivity in Rice-based Cropping Systems. Project of ACIAR with collaboration of Wuhan Univ., IWMI, IRRI and CSIRO.
- 2003 – 2004 Assessment of the Management of China Irrigation Systems. Project of Department for International Development (DFID), UK.
- 2003.9–2004.10 Development of Database Management System for Irrigation Experiment Stations in Hubei province. Project of water resources department of Hubei province.
- 2002.12–2004.2 Development of Decision Support System for irrigation forecasting and optimized water allocation in Shandong province. Supported by Science and Technology Development Plan of Shandong Province.
- 2002.7–2002.12 Optimal Water Allocation from Multi-water Resources in Liaoning province. Project of Liaoning institute of water conversation & hydroelectric engineering exploration & design.

## Publications

### Peer reviewed journal

- [1] **Cai, X.L.**, Thenkabail, P.S., Biradar, C., Platonov, A., 2008. Water productivity mapping methods and protocols using remote sensing data of various resolutions to support “more crop per drop”. *PE & RS*. In review.
- [2] **Cai, X.L.**, Thenkabail, P.S., Platonov, A., 2008. Benchmarking water productivity using very high resolution satellite sensor data. Paper accepted by Asia conference of remote sensing 2008, November 11-14, 2008, Colombo, Sri Lanka.
- [3] **Cai Xue-liang**, Cui Yuan-lai, 2008. Cropping patterns extraction using multi-sensor and multi-temporal remotely sensed data. *Transactions of the Chinese Society of Agricultural Engineering*. In press. (in Chinese with English abstracts)
- [4] **Cai Xue-liang, Cui Yuan-lai**, 2008. A simplified ET mapping algorithm and the application in Zhanghe Irrigation District. *Journal of Irrigation and Drainage*. In press.
- [5] Roost, N., **XL. Cai**, Turrall, H., D. Molden, YL. Cui. 2008. An assessment of distributed, small-scale storage in the Zhanghe Irrigation System, China. Part I: Storage capacities and basic hydrological properties. *Agricultural Water Management*. 95: 698-706
- [6] Roost, N., **XL. Cai**, Turrall, H., D. Molden, YL. Cui. 2008. An assessment of distributed, small-scale storage in the Zhanghe Irrigation System, China. Part II: Impacts on the system water balance and productivity. *Agricultural Water Management*. 95: 685-697
- [7] Thenkabail, P.S., Biradar, C.M., Turrall, H., Noojipady, P., Li, Y.J., Dheeravath, V., **Cai, X. L.**, Velpuri, M., Vithanage, J., Schull M., and Dutta, R. A Global Irrigated Area Map (GIAM) using time-series satellite sensor, secondary, Google Earth, and Groundtruth data. *International Journal of Remote Sensing*. (in press)

- [8] Thenkabail, P.S., Biradar C.M., Noojipady, P., **Cai, X.L.**, Dheeravath, V., Li, Y.J., Velpuri, M., Gumma, M., Pandey., S. 2007. Sub-pixel irrigated area calculation methods. *Sensors Journal*. 7: 2519-2538.
- [9] **CAI Xue-liang**, CUI Yuan-lai, DAI Jun-feng, 2007. Small Storage Based Return Flows Estimation and Evaluation in Melon-on-the-Vine Irrigation System. *Journal of Wuhan University (Engineering edition)*, No.2. (In Chinese with English abstract)
- [10] **Cai Xueliang**, Cui Yuanlai, Dong Bin. 2006. Estimating Pond Storage Capacity in Southern China Using RS/GIS – A case study in Zhanghe irrigation scheme. *China Rural Water and Hydropower*, No. 10: 1-3. (In Chinese with English abstract)
- [11] Cui Y.L., Dong, B., Li, Y.H., **Cai, X.L.**, 2007. Assessment indicators and scales of water saving in agricultural irrigation. *Transactions of the CSAE*. 23(7): 1-7.
- [12] Dai J.L., Cui, Y.L., **Cai, X.L.**, Dong, B., 2007. Water-saving irrigation and non-point source pollution management in small watershed of irrigation system. *Soils*. 39(3): 354-357. (in Chinese with English abstract)
- [13] Thenkabail, P.S., Biradar, C.M., Turrall, H., Noojipady, P., Li, Y.J., Vithanage, J., Dheeravath, V., Velpuri, M., **Cai, X. L.** and Dutta, R. 2006. An Irrigated Area Map of the World (1999) derived from Remote Sensing. *IWMI Research Report 105*.
- [14] Yufeng Luo , Yuanlai Cui , **Xueliang Cai**. 2005. A Fourier series model for forecasting of reference crop evapotranspiration. *Journal of Wuhan University (Engineering edition)*, Vol. 38(6): 45-47, 52. (In Chinese with English abstract)
- [15] **CAI Xue-liang**, CUI YL, SONG Zq, WANG Lx, WU L. 2003. Study on Real-time Irrigation Forecasting in Doushan Irrigation Scheme, *Journal of Irrigation and Drainage*, Vol.22, No.3, 33-36 (In Chinese with English abstract)

#### Conference proceedings

- [16] Biradar, C.M., Thenkabail, P.S., Turrall, H., Noojipady, P., Li, Y.J., Vithanage, J., Dheeravath, V., Velpuri, M., Schull M., **Cai, X. L.** and Dutta, R. 2006. A Global Map of Rainfed Cropland Areas at the end of last millennium using Remote Sensing and Geospatial Techniques. *Proceedings of 14th international conference on Geoinformatics*, October 2006, Wuhan (Oral presentation).
- [17] **CAI Xue-liang**, CUI Yuan-lai, DONG Bin, WANG Jian-zhang. 2006. OASIS Model and the Application in Zhanghe Irrigation System. *Proceedings of International conference on effective utilization of agricultural soil & water resources and protection of environment and the 4th annual academic conference of Chinese Society of agricultural soil and water engineering*, Nanjing, China.
- [18] **Cai Xueliang**, Cui Yuanlai, 2006. Mapping water reuses within reservoir cascades in irrigation district, *Proceedings of International Conference on Hydrological Sciences for Managing Water Resources in the Asisa Developing World*, Zhongshan Uni, China, Poster presentation.