Curriculum Vitae

Update on January 24, 2018

Name:	ZHENTAO CONG / 丛振涛
Date of Birth:	November 23, 1973
Place of Birth:	Wafangdian City, Liaoning Province, China
Title:	Professor Department of Hydraulic Engineering, Tsinghua University
Degrees:	Ph.D., Tsinghua University, 2003 Master, Tsinghua University, 2001 Bachelor, Tsinghua University, 1998

Academic and Professional Interests

ET (evapotranspiration): hydrological response under changing environment, crop water demand and irrigation, ecohydrology, urban hydrology.

Academic Positions

Professor, Department of Hydraulic Engineering, Tsinghua University, December 2017 -

Associate Professor, Department of Hydraulic Engineering, Tsinghua University, December 2008 - December 2017

Director, Hydrological and Water Resources Lab, Tsinghua University, 2013 - 2017

Visiting Fellow, Civil and Environmental Engineering, Princeton University, January 2010 - January 2011

Lecturer, Department of Hydraulic Engineering, Tsinghua University, December 2003 - December 2008

Assistant Professor, Department of Hydraulic Engineering, Tsinghua University, August 2001 - December 2003

Academic Awards and Distinctions

First-class of Natural Science Award by Ministry of Education in 2016
Second-class of Science and Technology Award by Ministry of Water Resources in 2010
Second-class of Science and Technology Award by Ministry of Water Resources in 2008
Second-class of Science and Technology Award by Ministry of Water Resources in 2007
Second-class of Science and Technology Award by Ministry of Education in 2007
Second-class of Science and Technology Award by Ministry of Education in 2004

Teaching Awards and Distinctions

First Prize of Tsinghua University Teaching Achievements in 2016

First Prize of Tsinghua University Teaching Achievements in 2016
Second Prize of Tsinghua University Teaching Achievements in 2015
Second Prize of Beijing Teaching Achievements in 2013
First Prize of Tsinghua University Teaching Achievements in 2012
First Prize of Tsinghua University Teaching Achievements in 2012
Second Prize of Tsinghua University Teaching Achievements in 2010
Second Prize of Beijing Teaching Achievements in 2009
First Prize of Tsinghua University Teaching Achievements in 2008

Teaching Courses

Subsurface Hydrology
Water resources planning and management
Irrigation and drainage
Ecohydrology
Campus Lab

Grants from National Natural Science Foundation of China

The ecohydrological optimality and its dynamics （生态水文最优性的特征与演替过程研究），2015.01-2018.12

Ecohydrology in arid oasis based on optimization principle （基于最优性原理的干旱区绿洲生态水文研究），51179083，2012.01-2015.12

Influence of Climate Change on Evapotranspiration and Irrigation Water Requirement of Winter Wheat（气候变化对冬小麦耗水及灌溉需水的影响研究），50979039，2010.01-2012.12

Study on the trend, theory and influence of the Evaporation Paradox （“蒸发悖论”的规律、机理与响应研究），50509011，2006.01-2008.12

Principal Publications

Books:

丛振涛, 杨大文, 倪广恒. 蒸发原理与应用. 科学出版社, 2013

杨大文, 丛振涛（译）. 生态水文学. 水利水电科学出版社, 2008

Papers in Journals (in English):

Shen, Q. N., Cong, Z. T. and Lei, H. M. (2017), Evaluating the impact of climate and underlying surface change on runoff within the Budyko framework a study across 224 catchments in China, Journal of Hydrology, 554, 251-262.

Shahid M., Cong Z. T., Zhang D. W (2017), Understanding the impacts of climate change and human activities on streamflow: a case study of the Soan River basin, Pakistan. Theoretical and Applied Climatology, 1-15.

Zhang, L. X., Cong, Z. T., Zhang, D. W. and Li, Q. S (2017), Response of vegetation dynamics to climatic variables across a precipitation gradient in the Northeast China Transect,

Hydrological Sciences Journal,62(10), 1517-1531.

Cong, Z. T., Li, Q. S., Mo, K. L., Zhang, L. X. and Shen, H. (2017), Ecohydrological optimality in the Northeast China Transect. Hydrology and Earth System Sciences, 21(5), 2449-2462.

Cong, Z. T., Shen, Q. N., Zhou, L., Sun, T. and Liu, J. H (2017), Evapotranspiration estimation considering anthropogenic heat based on remote sensing in urban area, Science China Earth Sciences, 60(4), 659-671.

Cong, Z. T., Shahid, M., Zhang, D. W., Lei, H. M., & Yang, D. W (2017), Attribution of runoff change in the alpine basin: a case study of the Heihe Upstream Basin, China. Hydrological Sciences Journal, 62(6), 1013-1028.

Pan, B., and Z. Cong (2016), Information Analysis of Catchment Hydrologic Patterns across Temporal Scales, Adv Meteorol, 2016, 11.

Mo, K. L., Z. T. Cong, and H. M. Lei (2016), Optimal vegetation cover in the Horqin Sands, China, Ecohydrology, 9(4), 700-711.

Zhang, D., Z. Cong, G. Ni, D. Yang, and S. Hu (2015), Effects of snow ratio on annual runoff within the Budyko framework, Hydrol Earth Syst Sc, 19(4), 1977-1992.

Yang, D. W., B. Gao, Y. Jiao, H. M. Lei, Y. L. Zhang, H. B. Yang, and Z. T. Cong (2015), A distributed scheme developed for eco-hydrological modeling in the upper Heihe River, Sci China Earth Sci, 58(1), 36-45.

Cong, Z. T., X. Y. Zhang, D. Li, H. B. Yang, and D. W. Yang (2015), Understanding hydrological trends by combining the Budyko hypothesis and a stochastic soil moisture model, Hydrolog Sci J, 60(1), 145-155.

Zhang, X. Y., and Z. T. Cong (2014), Trends of precipitation intensity and frequency in hydrological regions of China from 1956 to 2005, Global Planet Change, 117, 40-51.

Zhang, D. W., G. H. Ni, Z. T. Cong, T. Chen, and T. Zhang (2014), Statistical interpretation of the daily variation of urban water consumption in Beijing, China, Hydrolog Sci J, 59(1), 181-192.

Li, D., M. Pan, Z. T. Cong, L. Zhang, and E. Wood (2013), Vegetation control on water and energy balance within the Budyko framework, Water Resources Research, 49(2), 969-976.

Liu, D. F., F. Q. Tian, H. P. Hu, M. Lin, and Z. T. Cong (2012), Ecohydrological evolution model on riparian vegetation in hyperarid regions and its validation in the lower reach of Tarim River, Hydrological Processes, 26(13), 2049-2060.

Yang, H. J., Z. T. Cong, Z. W. Liu, and Z. D. Lei (2010), Estimating sub-pixel temperatures using the triangle algorithm, Int J Remote Sens, 31(23), 6047-6060.

Cong, Z. T., J. J. Zhao, D. W. Yang, and G. H. Ni (2010), Understanding the hydrological trends of river basins in China, Journal of Hydrology, 388(3-4), 350-356.

Yang, H. B., D. W. Yang, Z. D. Lei, F. B. Sun, and Z. T. Cong (2009), Variability of complementary relationship and its mechanism on different time scales, Sci China Ser E, 52(4), 1059-1067.

Cong, Z. T., D. W. Yang, and G. H. Ni (2009), Does evaporation paradox exist in China?, Hydrol Earth Syst Sc, 13(3), 357-366.

Cong, Z. T., D. W. Yang, B. Gao, H. B. Yang, and H. P. Hu (2009), Hydrological trend analysis in the Yellow River basin using a distributed hydrological model, Water Resources Research, 45, W00A13.

Yao, Ben-Zhi; Cong, Zhen-Tao; Ni, Guang-Heng. Reference evapotranspiration under climate change. Journal of Sichuan University (Engineering Science Edition), 2009, 41(S2), 182-186

Yang, Hong-juan; Cong, Zhen-tao; Lei, Zhi-dong. Methods comparison of soil heat flux in remote sensing model to estimate evapotranspiration. Journal of Sichuan University (Engineering Science Edition), 2009, 41(S2), 115-121

Yang, H., D. Yang, Z. Cong, and Z. Lei (2009), Analysis of the dominant climatic factors of evaporation change over the main basins in mainland China based on Budyko and Bouchet hypotheses, paper presented at 2nd International Symposium on Hydrological Modelling and Integrated Water Resources Management in Ungauged Mountainous Watersheds for IAHS-PUB, November 7, 2008 - November 9, 2008, IAHS Press, Chengdu, China.

Zhentao CONG, Jingjing ZHAO, Zhenning SHANG, Dawen YANG. Hydrological trends during the past 50 years in the Yangtze River basin. Hydrological Modelling and Integrated Water Resources Management in Ungauged Mountainous Watersheds (Proceedings of a symposium held at Chengdu, China, November 2008). IAHS Publ. 335, 2009, 143-148.

Zhentao CONG, Dawen YANG, Fubao SUN, Guangheng NI. Evaporation Paradox and its Response in Yellow River Basin, China. Hydrological Research in China: Process Studies, Modelling Approaches and Applications (Proceedings of Chinese PUB International Symposium, Beijing, September 2006). IAHS Publ. 322, 2008, 3-8

Yang, D. W., F. B. Sun, Z. Y. Liu, Z. T. Cong, G. H. Ni, and Z. D. Lei (2007), Analyzing spatial and temporal variability of annual water-energy balance in nonhumid regions of China using the Budyko hypothesis, Water Resources Research, 43(4), W04426.

Yang, D. W., F. B. Sun, Z. T. Liu, Z. T. Cong, and Z. D. Lei (2006), Interpreting the complementary relationship in non-humid environments based on the Budyko and Penman hypotheses, Geophysical Research Letters, 33(18), L18402.

CONG-Zhentao, ZHANG-Zhuoying, NI-Guangheng, LEI-Zhidong. Parameters of vG Model for Soil Water Retention Curve. Effective utilization of agricultural soil-water resources and protection of environment (Proceedings of International conference on effective utilization of agricultural soil-water resources and protection of environment at Najing, 2006.8), 2007, 222-229

CONG Zhentao, NI Guangheng, LEI Zhidong, Mahmut. The Hydrological and Ecological Effect of Restoring the Green Corridor in the Lower Tarim River, China. Dynamics and Biogeochemistry of River Corridors and Wetlands (Proceedings of symposium S4 held during the Seventh IAHS Scientific Assembly at Foz do Iguaçu, Brazil, April 2005). IAHS Publ. 294, 2005, p114-121

Lei, Z. D., B. L. Zhen, S. H. Shang, S. X. Yang, Z. T. Cong, F. W. Zhang, X. H. Mao, and H. Y.

Zhou (2001), Formation and utilization of water resources of Tarim River, Sci China Ser E, 44(6), 615-624.

Papers in Journals (in Chinese):

莫康乐, 丛振涛. 考虑植被对降雨变化响应的流域水量平衡. 清华大学学报(自然科学版), 2017, 8: 851-856

张乐昕, 丛振涛. 基于FAO-Blaney-Criddle方法的河套灌区参考作物蒸散发量估算. 农业工程学报, 2016, 16: 95-101.

丛振涛, 李沁书, 章诞武, 郑颖. 维持东洞庭湖湖泊功能的河湖格局研究. 水力发电学报, 2016, 04: 41-46.

章诞武, 丛振涛, 倪广恒. 1956—2010 年中国降雪特征变化. 清华大学学报(自然科学版), 2016, 04: 381-386.

杨大文, 丛振涛, 尚松浩, 倪广恒. 从土壤水动力学到生态水文学的发展与展望. 水利学报, 2016, 03: 390-397.

章诞武, 丛振涛, 倪广恒. 1956—2010 年中国水热季节性特征分析. 水科学进展, 2015, 04: 466-472.

丛振涛, 肖鹏, 章诞武, 黎昔春, 郑　颖. 三峡工程运行前后城陵矶水位变化及其原因分析. 水力发电学报, 2014, 33(3): 23-28

侯爱中, 倪广恒, 丛振涛, 雷志栋. 耦合城市冠层模型对暴雨模拟精度的影响. 水利学报, 2013, 32(6):31-35

章诞武, 丛振涛,倪广恒. 基于中国气象资料的趋势检验方法对比分析. 水科学进展, 2013(04): 490-496.

丛振涛, 张晓颖. 基于 Poisson 分布的降水模型及其在潮白河密云水库上游流域的应用. 清华大学学报(自然科学版), 2013(01): 36-41.

吕华芳,丛振涛. 土壤入渗测定教学实验装置设计. 实验技术与管理, 2012(09): 75-78.

杨红娟, 丛振涛, 赵岩等. 叶尔羌河流域绿洲蒸散量的遥感估算. 干旱区研究, 2012(03): 479-486.

施亚栋, 丛振涛. 洞庭湖四口河系地区水资源需求及配置研究. 水利发电学报, 2011, 30(5): 35-39

刘卡波, 丛振涛, 栾震宇. 长江向洞庭湖分水演变规律研究. 水利发电学报, 2011, 30(5): 16-19

丛振涛, 杨静, 雷慧闽, 冯保清. 位山灌区四水转化模型模拟研究. 人民黄河. 2011, 33(3): 70-72

丛振涛, 姚本智, 倪广恒. SRA1B 情景下我国主要作物需水预测. 水科学进展. 2011, 22(1): 38-43

杨大文，雷慧闽，丛振涛，2010. 流域水文过程与植被相互作用研究评述.水利学报, 41(10),8-15.

丛振涛, 辛儒, 姚本智, 雷志栋. 基于 HadCM3 模式的气候变化下北京地区冬小麦耗水研究. 水利学报, 2010, 41(9), 1101-1107

杨汉波, 杨大文, 雷志栋, 孙福宝, 丛振涛. 蒸发互补关系在不同时间尺度上的变化规律及其机理. 中国科学(E 辑:技术科学), 2009, 39(2): 333-340

杨红娟, 丛振涛, 雷志栋. 谐波法与双源模型耦合估算土壤热通量和地表蒸散发. 武汉大学学报·信息科学版, 2009, 34(6): 706-710

刘钰, 汪林, 倪广恒, 丛振涛. 中国主要作物灌溉需水量空间分布特征. 农业工程学报, 2009, 25(12): 6-12

杨红娟, 丛振涛, 雷志栋. 利用遥测地表温度模拟土壤热通量. 干旱区研究. 2009.3: 21-25

姚本智, 丛振涛, 倪广恒. SWAP 模型在灌溉制度优化中的应用. 现代农业水土资源高效利用理论与实践（中国农业工程学会农业水土工程专业委员会第五届全国学术会议论文集, 2008.8, 新疆石河子）, 478-482

丛振涛, 辛儒, 王舒展. 气候变化对作物耗水影响的模型模拟研究. 现代农业水土资源高效利用理论与实践（中国农业工程学会农业水土工程专业委员会第五届全国学术会议论文集, 2008.8, 新疆

石河子）, 38-42
杨大文, 丛振涛. 生态水文学：植被形态与功能的达尔文表达. 冰川冻土, 2008, 30(5): 903-905
姚本智, 丛振涛, 倪广恒. SWAP 模型在位山灌区的应用. 灌溉排水学报, 2008, 27(2B): 31-33
杨红娟, 刘志武, 雷志栋, 丛振涛. 一种简易遥感腾发模型在干旱区平原绿洲的应用. 水利学报, 2008, 38(4): 483-489
杨汉波, 杨大文, 雷志栋, 孙福宝, 丛振涛. 蒸发互补关系的区域变异性. 清华大学学报(自然科学版) , 2008, 48(9): 33-36
丛振涛, 倪广恒, 杨大文, 雷志栋. “蒸发悖论”在中国的规律分析. 水科学进展,2008, 19(2):147-151
丛振涛, 王舒展, 倪广恒. 气候变化对冬小麦潜在产量影响的模型模拟分析. 清华大学学报（自然科学版）, 2008, 48(9): 46-50
孙福宝, 杨大文, 刘志雨, 丛振涛. 基于 Budyko 假设的黄河流域水热耦合平衡规律研究. 水利学报, 2007, 38(4):409-416
孙福宝, 杨大文, 刘志雨, 丛振涛, 雷志栋. 海河及西北内陆河流域的水热平衡研究. 水文, 2007, 27(2):7-10
丛振涛, 倪广恒. 生态水权的理论与实践. 中国水利, 2006.19: 21-24
丛振涛, 倪广恒, 雷志栋, 师峰军. 塔里木河干流河道水均衡模型研究. 冰川冻土, 2006.8, 28(4): 543-548
倪广恒, 李新红, 丛振涛, 孙福宝, 刘钰. 中国参考作物腾发量时空变化特性分析. 农业工程学报, 2006.5, 22(5):1-4
雷志栋, 倪广恒, 丛振涛, 杨诗秀. 干旱区绿洲水资源可持续利用中的几个热点问题的认识. 水利水电技术, 2006.2, 37(2): 31-33
雷志栋, 杨汉波, 倪广恒, 杨诗秀, 丛振涛, 李平, 张玉平, 朱刚, 王教堂, 陈俊鹏. 干旱区绿洲耗水分析. 水利水电技术, 2006.1, 37(1): 15-20
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丛振涛, 雷志栋, 胡和平, 杨诗秀. 冬小麦生长与土壤－植物－大气连续体水热运移的耦合研究 I: 模型. 水利学报, 2005.5, 36(5): 575-580
买合木提, 丛振涛, 吾买尔江等. 塔里木河下游应急生态输水的四水转化研究. 人民黄河, 2005.4, 27(4): 22-24
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丛振涛, 周海鹰, 雷志栋等. 塔里木河下游输水过程的分析与模拟. 水科学进展, 2003.05, 14(3): 276-279
丛振涛, 周智伟, 雷志栋. Jensen 模型水分敏感指数的新定义与新解法. 水科学进展, 2002.11, 13(6): 730-735