



Prof. Dr. Z. Su

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Background

Professor Dr. Zhongbo (Bob) Su is Professor of Spatial Hydrology and Water Resources Management, and Chairman of Department of Water Resources in Faculty of Geo-Information and Earth Observation (ITC) of University of Twente, Enschede, The Netherlands.

Professor Bob Su is a recognized international expert in land surface processes and interactions with the atmosphere and earth observation of water cycle. His current research focuses on remote sensing and numerical modeling of land surface processes and interactions with the atmosphere, earth observation of water cycle and applications in climate, ecosystem and water resources studies, as well as monitoring food security and water-related disasters. He has coordinated and participated in many international experiments and served as committee member of many science communities.

Bob Su has served on various international committees. He was Netherlands representative to the intergovernmental ad hoc Group on Earth Observation (GEO). He chaired the sub-division of Remote Sensing and Data Assimilation of European Geosciences Union (EGU) and was a member of the Hydrology Section Technical Committee of American Geophysical Union (AGU). He was also a member of the Earth Science Advisory Committee (ESAC) of the European Space Agency (a 12-member senior advisory body to advise the director of earth observation for satellite mission selections and earth sciences) and served as the chair of land panel in the Earth Explorer 8 selection. He acted as a member of the science evaluation panel for the Earth Observation Envelope Programme of ESA to evaluate its 1490 million EURO EOEP-3 programme 2008-2012 (A 8-member body lead by Dr. G. Asar, director of World Climate Research Programme). Recently, he was elected vice president of the International Commission on Remote Sensing of the International Association of Hydrological Sciences (IAHS) and serves as a member of the NWO VIDI committee for earth and life sciences.

Activities in education

Professor Bob Su provides leadership and direction to education in the Department of Water Resources and renewed the Water Resources and Environmental Management MSc course with emphases on in-situ and satellite observation of water cycle processes, numerical modeling and data assimilation. He has led the ESA TIGER capacity building facility (2007-2012) that supports African scientists and practitioners in managing water resources using earth observation techniques and data. He currently leads the ESA Dragon advanced training courses (2005-present) that provide training for PhD and postdocs researchers in using advanced earth observation for atmosphere, ocean and land research and applications.

He supervises PhD students and postdocs (graduated 11 doctorates and currently promotor of 23 PhD candidates) and lectures in water resources and environmental management.

Recent projects

Bob Su has directed 19 externally funded contract research projects by EU, ESA, KNAW, NWO in the period 2004-2014, some current ones are as follows:

- PI: NWO/GO Modelling Freeze-Thaw Processes with Active and Passive Microwave Observations, 2015-2019 (Co-Is: R. van der Velde, Y. Zeng, Dr. M. Schwank, ETH Zürich, Prof. Dr. P. Ferrazzoli, TVU, Rome, Prof. Dr. J Wen, CAREERI/CAS, Prof. Dr. Y. Ma, ITP/CAS)
- PI: EU FP7 CORE-CLIMAX - COordinating Earth observation data validation for RE-analysis for CLIMAtE ServiceS, 2013-2015 (coreclimax.eu/) (CO-Is: J. Schulz, EUMETSAT; P. Poli, ECMWF; F. Kaspar, DWD; E. Swinnen, VITO; J.-C. Calvet; H. Gregow, FMI; Y. Ma, ITP/CAS; J. Wen, CAREERI/CAS)
- PI: KNAW-CEP: Understanding plateau and monsoon interactions, 2013-2015.
- PI: ESA-MOST Dragon Programme I-II-III Advanced Training, 2005-2015 (dragon3.esa.int/)

Selected publications

Bob Su has published actively in refereed journals, book chapters and conference proceedings. (261 publications in total including: - Peer reviewed journal papers (127); - Contribution to Encyclopaedia (2); - Books/book chapters (58); - Papers in proceedings (59); - Technical communications (7); - Technical reports (8), dd. March 2014) - most available at http://www.itc.nl/about_itc/resumes/b_su.aspx. Some recent ones are:

- Su, Z., de Rosnay, P., Wen, J., Wang, L. and Zeng, Y., 2013, Evaluation of ECMWF's soil moisture analyses using observations on the Tibetan Plateau, *J. Geophys. Res. Atmos.*, 118 (11), 5304–5318.
- Su, Z., Wen, J., Dente, L., van der Velde, R., Wang, L., Ma, Y., Yang, K., and Hu, Z. 2011, The Tibetan Plateau observatory of plateau scale soil moisture and soil temperature (Tibet-Obs) for quantifying uncertainties in

coarse resolution satellite and model products, *Hydrol. Earth Syst. Sci.*, 15, 2303–2316.

- Su, Z., Timmermans, W. J., van der Tol, C., Dost, R. J. J., Bianchi, R., Gómez, J. A., House, A., Hajnsek, I., Menenti, M., Magliulo, V., Esposito, M., Haarbrink, R., Bosveld, F. C., Rothe, R., Baltink, H. K., Vekerdy, Z., Sobrino, J. A., Timmermans, J., van Laake, P., Salama, S., van der Kwast, H., Claassen, E., Stolk, A., Jia, L., Moors, E., Hartogensis, O., and Gillespie, A., 2009, EAGLE 2006 - multi-purpose, multi-angle and multi-sensor in-situ, airborne and space borne campaigns over grassland and forest. *Hydrology and Earth System Sciences*, 13, 833–845.
- Su, Z., Timmermans, W., Gieske, A., Jia, L., Elbers, J. A., Olioso, A., Timmermans, J., Van Der Velde, R., Jin, X., Van Der Kwast, H., Nerry, F., Sabol, D., Sobrino, J. A., Moreno, J. and Bianchi, R., 2008, Quantification of land-atmosphere exchanges of water, energy and carbon dioxide in space and time over the heterogeneous Barrax site. *Int. J. Remote Sens.*, 29:17, 5215-5235.
- Su Z., Roebeling, R.A., Schulz, J., Holleman, I., Levizzani, V., Timmermans, W.J., Rott, H., Mognard-Campbell, N., de Jeu, R., Wagner, W., Rodell, M., Salama, M.S., Parodi, G.N. and Wang, L., 2011, Observation of Hydrological Processes Using Remote Sensing. In: Peter Wilderer (ed.) *Treatise on Water Science*, Oxford: Academic Press, vol. 2, pp. 351–399.