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Simulation of the Hydrological, Thermal and Energy Budgets

Guest Editors:

Prof. Dr. Claudio Cassardo

Department of General Physics
“Amedeo Avogadro”, Faculty of
Sciences, University of Torino, Via
Pietro Giuria 1, 10125 Torino, Italy

Dr. Valentina Andreoli

Dept. of Physics, Univ. of Turin,
via P. Giuria 1, 10125 Torino, Italy

Dr. Sujeong Lim

Center for Climate/Environment
Change Prediction Research
(CCPCR), Ewha Womans
University, 52 Ewhayodae-gil,
Seodaemun-gu, Seoul 03760,
Korea

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Message from the Guest Editors

Dear Colleagues,

Recently, the scientific community has recognized the importance of land surface as a key component of the climate system. The soil represents a source term for hydrologic and energy budgets, as it partitions incoming net radiation into sensible and latent heat flux, and conductive heat flux, and redistributes the precipitation into evapotranspiration, surface or underground storage, runoff, and gravitational drainage. Latent heat flux, being proportional to evapotranspiration, links energy and hydrologic budgets. With these premises, the assessment of the energy and hydrologic budgets is crucial. However, only a few cases of extensive field campaigns using in situ measurements have been carried out to measure soil temperature and moisture, or turbulent fluxes. Satellite measurements may allow for extensive measurements of soil temperature and moisture in the skin layer, but not in the root zone, thus making it very difficult to evaluate the budgets. [...]

For further reading, please follow the link to the Special Issue Website at:

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Special Issue



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Dr. Jean-Luc PROBST

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Scientifique (CNRS), University of
Toulouse, Campus ENSAT,
Auzeville Tolosane, Toulouse,
France

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Contact Us

Water Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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