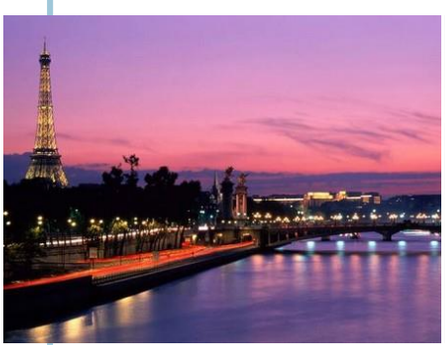
SWAT 2013
Toulouse France

UNIVERSITÉ TOULOUSE III PAUL SABATIER



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Paul Sabatier University, Toulouse, France

SWAT Awards Book

The Soil and Water Assessment Tool (SWAT) is a public domain model jointly developed by USDA Agricultural Research Service (USDA-ARS) and Texas A&M AgriLife Research, part of The Texas A&M University System.

SWAT is a small watershed to river basin-scale model to simulate the quality and quantity of surface and ground water and predict the environmental impact of land use, land management practices, and climate change. SWAT is widely used in assessing soil erosion prevention and control, non-point source pollution control and regional management in watersheds.

SWAT 2013 Awards

Every two years the SWAT community proposes awards in four categories to recognize outstanding efforts and achievements in the development and improvement of the SWAT model. The 2013 awards given include:

- Best SWAT 2013 Confirmed Research Award
- Best SWAT 2013 Young Researcher Award
- Best SWAT 2013 Student Award
- Best SWAT 2013 Team Award
- Honorary SWAT 2013 Award
- SWAT Ambassador 2013 Award

Best SWAT 2013 Confirmed Research Award

The Confirmed Research Award recognizes research contributions to the development of the SWAT model and its applications worldwide. Dr. Karim Abbaspour, a senior scientist at Eawag in Switzerland, is the recipient of this award for his continued development of the model, in addition to the development of SWAT-CUP.

Dr. Abbaspour and his research team developed SWAT-CUP, a computer program for the calibration of SWAT models. SWAT-CUP is a public domain program and it links GLUE, ParaSol, SUFI2, MCMC, and PSO procedures to SWAT. It enables sensitivity analysis, calibration, validation, and uncertainty analysis of a SWAT model.

Dr. Karim ABBASPOUR
Senior Scientist, EAWAG, Switzerland

Dr. Karim Abbaspour has an extensive mathematics and civil engineering background and in recent years he has been very active in hydrological modeling projects and systems analysis.

He is currently a senior scientist at the Swiss Federal Institute for Aquatic Science and Technology, Eawag, and leads the Soil, Groundwater, and Catchment Group. Dr. Abbaspour has applied SWAT to large-scale project simulating water resources and the impact of climate change on the whole of Africa and Europe. In recent years, he has developed the program SWAT-CUP for calibration and uncertainty analysis of SWAT projects.

Best SWAT 2013 Young Researcher Award

The Young Research Award recognizes those individuals and their research aimed at improving applications of the SWAT model. Dr. Balaji Narasimhan, an assistant professor in the department of civil engineering at the Indian Institute of Technology Madras, created new algorithms for the model improving sediment routing. In addition, he is working to add irrigation capabilities to SWAT.

Dr. Balaji NARASIMHAN
Assistant Professor, IIT, India

Balaji Narasimhan, has a Ph.D. (2004) in Agricultural Engineering from Texas A&M University (USA). He is currently a faculty in the Dept. of Civil Engineering at the Indian Institute of Technology Madras, INDIA and is part of Environmental and Water Resources Engineering Laboratory.

Balaji Narasimhan's expertise lies in the area of hydrology, hydrologic modelling and application of remote sensing and GIS in water resources engineering. He has made significant contributions to the development of sediment routing and irrigation algorithms for SWAT model. He has an on-going field based research to develop and verify energy balance models for assessment of crop water use and irrigation efficiency using thermal remote sensing. Balaji Narasimhan serves as a member of "Think Tank" constituted by the Ministry of Water Resources, Govt. of India, to provide consultation in the development of Water Resources Information System for India. For more details see: http://www.civil.iitm.ac.in/balaji_edu

Best SWAT 2013 Student Award

The Student Award recognizes the outstanding research applications and contributions to the SWAT model by a student. Hendrik Rathjens, a Ph.D. student at Kiel University in Germany, has worked to modify crop code characteristics of the SWAT model for different biomes in Brazil.

Hendrik RATHJENS
Ph.D. Student, Kiel University, Germany

Hendrik Rathjens holds a First State Examination (equivalent to Master's degree) with majors in Geography and Mathematics. He is currently a Ph.D. student in the working group for Remote Sensing and Environmental Modeling at the Department of Geography at Kiel University in Germany.

Hendrik Rathjens's research interests include modeling landscape flow and transport processes and integrating remote sensing data into hydrologic models. He develops hydrologic process modules that operate at the grid scale and incorporates them in SWAT.

Best SWAT 2013 Team Award

This award recognizes the implications of a team in the application and development of the SWAT model.

José Miguel Sanchez-Pérez and Sabine Sauvage, Ecolab Laboratory, Toulouse (France), developed applications of the SWAT model in different countries around the world, including training courses and seminars. Their team of 10 students works and improves new processes in the SWAT model.

Dr. José Miguel SANCHEZ PEREZ
Research Director, CNRS, France

Jose Miguel Sánchez-Pérez, has a Ph.D. (1992) in Hydrogeochemistry in the University of Strasbourg (France); M.S. (1985) in Geology from University of the Basque Country in Spain. He is currently a research director assigned to ECOLAB Laboratory (CNRS - Université Paul Sabatier - Institut National Polytechnique de Toulouse) in Biogeochemical functioning of buffers zones.

José Miguel Sánchez-Pérez studies pollutant transport in hydrosystems, using extensive field data and modeling. He specializes in the functioning of wetlands, riparian zones, and groundwater systems, with particular interests in the modeling of catchment-scale pollutant transport, to predict how ecosystem functions will change under various climate change scenarios. For more details see: https://gmod.olympe.in/index.html

Dr. Sabine SAUVAGE
Research Engineer, CNRS, France

Sabine Sauvage holds a Ph.D. from the Institut National Polytechnique, Toulouse University, FRANCE. She is currently a Research Engineer at the National Center for Scientifical Research (CNRS) in the National Institute of Ecology and Environment. She is currently assigned to ECOLAB laboratory at Toulouse, and has been working on transfer modeling of contaminants in river water systems for 13 years.

Her research interests are focused on the adaptation and development of models that describe the bio-physical interactions between flows, biology and chemistry processes involved in biogenic elements and contaminants transfers in rivers at different time and space scale. More specifically, she aims to integrate by modeling the particular role of interfaces zones (ex: water/land, water/sediment) and specific buffer zones (ex: wetlands) in the dynamic of element transfer at large scale. For more details see: https://gmod.olympe.in/index.html

Honorary SWAT 2013 Award

For his leadership and vision with the SWAT model, Dr. Allan Jones, a senior research scientist at Texas A&M University is the recipient of the Honorary SWAT 2013 Award. Dr. Jones has more than 30 years experience in agriculture and natural resource research from hands-on field work to overseeing and organizing teams of scientists. His experience includes biophysical and economic modeling, natural resource and agriculture information systems, and developing water relations, plant growth, and plant nutrient cycling.

He has played an integral role with the development of SWAT workshops and conferences and his ongoing leadership has contributed to the models status with increased attendance at each conference. Dr. Jones has been essential to the development of global partnerships with the model as well as increased research opportunities to improve the model. He is always available to offer suggestions or answer questions to new and seasoned modeling researchers.

Dr. Allan JONES
Senior Research Scientist, Texas, USA

Dr. Allan Jones is currently a Senior Research Scientist with the Texas A&M University Spatial Sciences Laboratory. He has a long history of using biophysical models in tropical agriculture and developing countries, including: rice in Brazil with EMBRAPA, tropical forages in Colombia with CIAT, and sugarcane in Hawaii (with Hawaiian Sugar Planters' Association) and Australia (with CSIRO).

He served as a plant physiologist in the USDA-Texas AgriLife Research team at Temple, Texas that developed the CERES-Maize, EPIC, and SWAT models (1980-1988), as well as Resident Director of Research of AgriLife's Blackland Research Center at Temple (1988-1996). He moved from Temple to College Station in 1996, where he served as Associate Director of the Texas Agricultural Experiment Station (1996-2000) and Director of the Texas Water Resources Institute (2000-2009). Since 2009 he has assisted the Texas A&M University Spatial Sciences Laboratory and the USDA-Texas AgriLife Research team in Temple to apply the SWAT and APEX models to a wide variety of agricultural and urban natural resource issues in both developing and developed countries.

SWAT Ambassador 2013 Award

Dr. Philip Gassman is the recipient of the SWAT Ambassador 2013 Award for his integral role in documenting all major SWAT model events, reviewing papers, and helping to conduct several SWAT conferences in Asia. The third SWAT South East Asia conference in Indonesia, held one month prior to the Toulouse SWAT conference, would not have succeeded without Dr. Gassman's leadership and organization.

Dr. Philip GASSMAN
Associate Scientist, CARD, Iowa State University, USA

Phil Gassman is an environmental scientist in the Resource and Environmental Policy (REP) Division at CARD, which he joined in 1987. He received his B.S. and M.S. degrees in agricultural engineering from Iowa State Univ. in 1984 and 1986, respectively, and his Ph.D. in environmental science from Iowa State Univ. in May 2008. His research efforts support the integration of environmental and economic models that are used to assess policy scenario impacts for watersheds in Iowa and other regions, and the testing of field- and watershed-scale models.

He has worked on a variety of projects including soil erosion and soil nitrogen loss studies, atrazine leaching in the U.S. Midwest and the impacts of alternative practices of livestock operations in Texas and Iowa. He collaborated with scientists from several institutions in a project funded by the U.S. National Science Foundation that resulted in the development of refined large-scale SWAT models for the Upper Mississippi and Ohio-Tennessee river basins. He continues to collaborate with scientists from multiple institutions, per the application of these large-scale SWAT models and other research efforts, within two major USDA-funded research consortiums at http://www.sustainablecorn.org/ and http://cenusa.iastate.edu/.

swat.tamu.edu/conferences/2013

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