



Beijing Normal University, China

INTERNATIONAL SOIL & WATER ASSESSMENT TOOL CONFERENCE Agenda





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.

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Conference Overview

Time	Wednesday, July 27	Thursday, July 28	Friday, July 29
8:00 8:30	Registration and check-in	 C1 InStream Sediment and Pollutant Transport C2 BMPs C3 Pesticides, Bacteria, Metals, and Pharmaceuticals 	 H1 Hydrology H2 Model Development H3 1. Climate Change Applications 2. SWAT Applications Incorporating Rice Production
9:30	Opening session	D1* Hydrology D2* Sediment, Nutrients, and Carbon	
10:30	Tea break / group photo	Tea break	Tea break
11:00	Keynote speakers	E1 Large Scale ApplicationsE2 Environmental ApplicationsE3 Hydrology	Closing discussions
12:30	Lunch	Lunch	Lunch
13:30	 A1 Hydrology A2 Environmental Applications A3 Sediment, Nutrients, and Carbon 	 F1 QSWAT Introduction F2 Model Development F3 1. EPIC/APEX Modeling System 2. SWAT Review Papers 	
15:00	Tea break	Tea break	Tours
15:30	 B1 Climate Change Applications B2 Sensitivity Calibration and Uncertainty B3 Database and GIS Application and Development 	G1 Poster SessionG2 Young SWAT scholars panel discussion	
19:00		Dinner gala	

* Sessions D1 and D2 start at 9:20

Download the Book of Abstracts at swat.tamu.edu/conferences/2016

Wednesday, July 27

8:30 – 9:30 **PARTICIPANT CHECK-IN AND REGISTRATION**

9:30 – 10:15 **OPENING SESSION** Jingshi Hall

9:30 - 9:45	Welcome Address	Zuoyu Zhou , Vice President, Beijing Normal University
9:45 - 10:15	SWAT+ Development	Raghavan Srinivasan , Professor, Texas A&M University

- 10:15 11:00 **TEA BREAK AND GROUP PHOTO**
- 11:00 12:30 **KEYNOTE SPEAKERS** Jingshi Hall

11:00 - 11:30	Zongxue Xu	From Nonpoint Source Pollution to Climate Change: Case Studies for the SWAT Application in China
11:30 - 11:50	Xuesong Zhang	Assessing Impacts and Mitigation of Climate Change with SWAT
11:50 - 12:10	Philip Gassman	SWAT Global Impact
12:10 - 12:30	Indrajeet Chaubey	SWAT best modeling practices, are we getting it right?

12:30 – 13:30 LUNCH

Wednesday, July 27

13:30 – 15:00	SESSION A1: HYDROLOGY Meeting Room No.3	Moderator: Zongxue Xu, Beijing Normal University, China
13:30 – 13:50	Ling Zhang	Hydrology prediction in Poyang Lake Ungauged Zone Using SWAT Model
13:50 – 14:10	Salam A Abbas	Studying of Perennial Changes of River Flow Regime in a Highly Managed Watershed, UK Case Study
14:10 - 14:30	Baoxiu Xing	The calculation of small bridges, culverts and fish habitat based on SWAT model
14:30 - 14:50	Lianhua Liu	Characteristics of nitrogen and phosphorus losses under extreme rainfall conditions in southern China
13:30 – 15:00	SESSION A2: ENVIRONME Meeting Room No.2	NTAL APPLICATIONS Moderator: Sushama Pradhan, North Carolina Department of Health and Human Services, USA
13:30 – 15:00 13:30 – 13:50	SESSION A2: ENVIRONME Meeting Room No.2	NTAL APPLICATIONSModerator: Sushama Pradhan, North Carolina Department of Health and Human Services, USAPhysically-based Watershed Health, Resilience, and Priority Assessment of Han River Basin in South Korea
13:30 – 15:00 13:30 – 13:50 13:50 – 14:10	SESSION A2: ENVIRONME Meeting Room No.2 So Ra Ahn Chung gil Jung	NTAL APPLICATIONSModerator: Sushama Pradhan, North Carolina Department of Health and Human Services, USAPhysically-based Watershed Health, Resilience, and Priority Assessment of Han River Basin in South KoreaEvaluation of CO2 Treatment and the Impact on Watershed Hydrology in SWAT Using Terra MODIS GPP
13:30 - 15:00 13:30 - 13:50 13:50 - 14:10 14:10 - 14:30	SESSION A2: ENVIRONME Meeting Room No.2 So Ra Ahn Chung gil Jung Alexander Strehmel	NTAL APPLICATIONSModerator: Sushama Pradhan, North Carolina Department of Health and Human Services, USAPhysically-based Watershed Health, Resilience, and Priority Assessment of Han River Basin in South KoreaEvaluation of CO2 Treatment and the Impact on Watershed Hydrology in SWAT Using Terra MODIS GPPEvaluation of land use, land management and soil conservation strategies to reduce non-point source pollution loads in the Three Gorges Region, China

13:30 – 15:00	SESSION A3: SEDIMENT Meeting Room No.1	, NUTRIENTS, AND CARBON	Moderator: Philip Gassman, Iowa State University, USA
13:30 - 13:50	Philip Gassman	Implications of Different No Techniques for Testing SW/ the Boone River Watershee	utrient Load Estimation AT: An Example Assessment for d in North Central Iowa
13:50 - 14:10	Nora Herdiana Pandjaitan	Analysis of check dam effec using SWAT model	ctiveness in reducing sediment
14:10 - 14:30	Wenchao Li	Spatial Distribution Variation of Diffuse Source Pollution Yunnan Plateau Lakes Area	on of the Generation and Export of a Typical Watershed in
14:30 - 14:50	Hua Lingling	The integration of export comodel for identifying the comodel for identifying the comogricultural sources for nor Gorges Reservoir Area	oefficient method and SWAT ontribution of different n-point pollution in the Three
15:00 - 15:30	TEA BREAK		
15:30 – 17:00	SESSION B1: CLIMATE C Meeting Room No.3	HANGE APPLICATIONS	Moderator: Wei Ouyang, Beijing Normal University, China
15:30 - 15:50	Indrajeet Chaubey	Linking regional climate simulations and hydrologic models for climate-change impact studies – A case study in central Indiana (USA)	
15:50 - 16:10	Saeid Ashraf Vaghefi	Introducing Climate Change CMIP5 database	e Toolkit (CCT) and online
16:10 - 16:30	Tirupathi Chanapathi	Impact of climate change o river basin	n Water Resources of Krishna
16:30 - 16:50	Depeng Zuo	Changes in climate and land water and sediment yields basin, China	d use and their impacts on in the Huangfuchuan River

Wednesday, July 27

15:30 – 17:00	SESSION B2: SENSITIVITY UNCERTAINTY Meeting Room No.1	CALIBRATION AND	Moderator: Zhenyao Shen, Beijing Normal University, China
15:30 – 15:50	Ji Wan Lee	The SWAT Calibration during Small Catchment	g Drought Years in a Rural
15:50 - 16:10	Shuang Li	Improvement of model eval prediction and measuremer	uation by incorporating at uncertainty
16:10 - 16:30	Hui Xie	Time-varying analysis of par evaluation scales for hydrolo	ameter sensitivity at multiple ogic and sediment modeling
16:30 - 16:50	Baobab Kimengich	Evaluation of SWAT Hydrolo Simulation in Yasu River Bas	gical Model for Streamflow in, Japan
15:30 – 17:00	SESSION B3: DATABASE A DEVELOPMENT Meeting Room No.2	AND GIS APPLICATION AND	Moderator: Ruimin Liu, Beijing Normal University, China
15:30 - 15:50	Qingrui Wang	Effect on Water Environmer Land Use at Xiangxi River Ba Measures	nt Due to the Conversion of sin and Pollution Control
15:50 - 16:10	Raj Mohan Singh	Assessment of Hydrological	Responses using Arc SWAT
16:10 - 16:30	Fei Xu	Impacts of Manure Applicat the Xaingxi River Watershed	ion on SWAT Model Outputs in l
16:30 - 16:50	Jesus Uresti-Gil	Development of climate, so management data to suppo	il, plant growth and rt the use of SWAT in México

8:00 - 9:10	SESSION C1: INSTREAM S TRANSPORT Meeting Room No.3	EDIMENT AND POLLUTANT	Moderator: He Chen, <i>Beijing</i> Normal University, China
8:00 - 8:20	Zhonglong Zhang	Plug-in water quality module	s within the SWAT model
8:20 - 8:40	Ying Xue	Effects of rainfall and topogra from purple soil under simula	aphy on total phosphorus loss ated rainfall conditions
8:40 - 9:00	Marta Luz	Effects of land use changes a transport yields: HPP Itumbia	round a reservoir on sediment ara, Brazil
8:00 - 9:10	SESSION C2: BMPs Meeting Room No.2		Moderator: Lei Chen, <i>Beijing</i> Normal University, China
8:00 - 8:20	Jiali Qiu	The simulation of watershee agricultural best manageme resource area of Beijing, Chi	d-scale effectiveness of ent practices in a drinking water ina
8:20 - 8:40	Chengchun Sun	Nitrate leaching characteris production area under diffe management practices in th	tics in typical high-yielding rent irrigation and fertilization le North China Plain
8:40 - 9:00	Chengchun Sun	Comparison of water leakag three land use types in the I	e and nitrate leaching under North China Plain
8:00 – 9:30	SESSION C3: PESTICIDES, PHARMACEUTICALS Meeting Room No.1	BACTERIA, METALS, AND	Moderator: Pramod Pandey, UC Davis, USA
8:00 - 8:20	Sangsoo Baek	Watershed-scale modeling of Polycyclic Aromatic Hydroca	of the Fate and Transport of arbons (PAHs)
8:20 - 8:40	Kyunghwa Cho	Review on Modeling Fate ar Microorganisms at the Wate	nd Transport of Fecally-derived ershed Scale.
8:40 - 9:00	Lingfeng Zhou	A Heavy Metal Module Cou Application in the Upstream China	pled in SWAT Model and Its Basin of the Liuyang River in
9:00 - 9:20	Pramod Pandey	Development of Bacteria Tr Predicting In-stream Bacteri	ansport Model for SWAT for a Concentrations

9:20 - 10:30	SESSION D1: HYDROLOGY Meeting Room No.3		Moderator: Seonggyu Park, Colorado State University, USA
9:20 - 9:40	Seonggyu Park	Quantifying Surface Water a the Middle Bosque, Texas W SWAT-MODFLOW Model	nd Groundwater Resources in atershed using the Coupled
9:40 - 10:00	Syed Zubair	Application of satellite based measurement of middle Inde model	d precipitation for discharge us River, Pakistan using SWAT
10:00 - 10:20	Yu Zhao	Black Soil Loss Simulation an Water Assessment Tool in th	d Prediction Using the Soil and ne Middle Reaches of Ashihe
9:20 – 10:30	SESSION D2: CLIMATE CHA Meeting Room No.2	ANGE APPLICATIONS	Moderator: Indrajeet Chaubey, <i>Purdue University, USA</i>
9:20 - 9:40	Ömer Güngör	Modeling the Impacts of Clir Using the Soil and Water Ass	nate Change on Streamflow sessment Tool (SWAT)
9:40 - 10:00	Amarnath C R	Assessment of Ecosystem se future Climate scenarios for	rvices under present and Godavari basin
10:00 - 10:20	Tiezhu Yan	Assessment of climate chang nitrogen flux in the Miyun R	ge impacts on hydrology and eservoir Catchment

10:30 – 11:00 **TEA BREAK**

11:00 - 12:30	SESSION E1: LARGE SCAL	E APPLICATIONS	Moderator: Raghavan Srinivasan, <i>Texas A&M</i> University, USA
11:00 - 11:20	Raghavan Srinivasan	Evaluation of the Effects of A Practice Scenarios on Water West Basin	gricultural Conservation Quality in the Pacific North
11:20 - 11:40	Shuvra Sangeeta	Estimation of flow for ungau Godavari river basin in India	ged watersheds in Pranhita of using SWAT
11:40 - 12:00	Zhonglong Zhang	Hydrological and water quali River basin	ty modeling for the Missouri
12:00 - 12:20	Xueting Xu	Effect of slope gradients on r under rainfall-runoff process	nonpoint source pollutant
11:00 - 12:30	SESSION E2: ENVIRONME Meeting Room No.2	ENTAL APPLICATIONS	Moderator: Yong Liu, <i>Peking</i> University, China
11:00 – 12:30 11:00 – 11:20	SESSION E2: ENVIRONME Meeting Room No.2 Charles Allan Jones	ENTAL APPLICATIONS Simulation of Vegetation in F	Moderator: Yong Liu, <i>Peking</i> <i>University, China</i> AO Ecoflorist Zones
11:00 – 12:30 11:00 – 11:20 11:20 – 11:40	SESSION E2: ENVIRONME Meeting Room No.2 Charles Allan Jones Chih-Mei Lu	ENTAL APPLICATIONS Simulation of Vegetation in F Evaluation of watershed resp disturbance and anthropogen Watershed, Taiwan	Moderator: Yong Liu, Peking University, China AO Ecoflorist Zones ponses to multiple natural nic activities in the Chenyulan
11:00 – 12:30 11:00 – 11:20 11:20 – 11:40 11:40 – 12:00	SESSION E2: ENVIRONME Meeting Room No.2 Charles Allan Jones Chih-Mei Lu Yaobin Meng	ENTAL APPLICATIONS Simulation of Vegetation in F Evaluation of watershed resp disturbance and anthropoger Watershed, Taiwan A Composite Method to Gen Scenarios for SWAT as an Env Tool	Moderator: Yong Liu, Peking University, China AO Ecoflorist Zones bonses to multiple natural nic activities in the Chenyulan erate Meteorological Field vironmental Risk Simulation

11:00 - 12:30	SESSION E3: HYDROLOGY Meeting Room No.3	Moderator: Ali Sadeghi, USDA-ARS, USA
11:00 - 11:20	Xiaolu Wei	Applying the SWAT model to a Managed Irrigated Watershed in a Semi-Arid Region: Model Construction
11:20 - 11:40	Yongjian Qu	Analysis of runoff variation of the Qujiang River basin based on SWAT model
11:40 - 12:00	Wilson Phiri	A modified SWAT model set-up for a complex tropical catchment, Western Zambia
12:00 - 12:20	Shujiang Pang	The identification of critical source area of total nitrogen in Chao river basin with SWAT model

12:30 – 13:30 LUNCH

13:30 – 15:00 SESSION F1: QSWAT INTRODUCTION Meeting Room No.3

Chris George, Professor (retired) from UN University, will give an introduction to QSWAT—a QGIS interface for SWAT.

13:30 - 15:00	SESSION F2: MODEL DEVI Meeting Room No.2	ELOPMENT	Moderator: Xuesong Zhang, Pacific Northwest National Laboratory, USA
13:30 - 13:50	Xuesong Zhang	Terrestrial Carbon Cycle Mo	deling in SWAT
13:50 – 14:10	Qichun Yang	Improving SWAT for simulat cropping systems	ing N2O emissions from three
14:10 - 14:30	Guoyuan Wei	An auto-calibration platform watershed models	n for the application of
14:30 - 14:50	Bloodless Dzwairo	Soil Profiling the Rietspruit S SWAT Modelling: Applicatio	Sub-Basin, (Vaal Basin) for n of the pedo transfer function
12.20 14.15			Mederatory laobak loops
15.50 - 14.15	Meeting Room No.1	MODELING SYSTEM	Texas A&M AgriLife Research, USA
13:30 – 13:50	Qingyu Feng	Effects of Conservation Prace Reduction from an Indiana	tices on Phosphorus Loss Agricultural Watershed
13:50 – 14:10	Bahareh Kamali	An introduction to EPIC+SUI model at different scales	FI2 for calibrating EPIC crop
14:15 – 15:00	SESSION F3.2: SWAT REV Meeting Room No.1	IEW PAPERS	Moderator: Philip Gassman, Iowa State University, USA
14:15 – 14:35	Philip Gassman	Overview of the SWAT Litera Developments and Updated	ature Database: Current Literature Trends
14:35 – 14:55	Mao Feng	The impact of non-point soun nitrate in shallow aquifer with the shallow approximates a second structure of the shall be shall b	rce pollution on groundwater th SWAT applications -a review

15:00 – 15:30 **TEA BREAK**

15:30 – 17:00 **SESSION G1: POSTERS**

Meeting Rooms No.1 & 3

Junfeng Dai	Application of SWAT99.2 in the Sensitivity Analysis of Water Balance Components in the Unique Plots in Hilly Region
Cheng Feng	Environmental Flow Assessment by Linking Hydrological Characteristics in a Basin Scale
Xiaohui He	Impacts of land use change on hydrology using SWAT model in the Huangshui River Basin, China
Sheng Hu	Applicability evaluation of CFSR climate data for hydrologic simulation : A case study in the Bahe River Basin
Xuan Ji	Hydrological Impacts of Hydropower Development in the Headwater of the Yellow River Basin
Wu Kai	Spatial Landscape Pattern and Runoff Response of Typical Area in Xiliao River Basin
Minjeong Kim	Hydrologic Modeling of Fecal Indicator Bacteria in a Tropical Mountain Catchment
Zhe Li	Effects of Land-use and Landscape Pattern on Non-point Source Pollution: A Case Study of the Songhua River Harbin section
Jihui Liu	Hydrologic Impacts of Cascade Dams in a Small Headwater Watershed, Southeast China
Zifang Liu	Fragmentation of Endangered Migratory Fishes by Giant Hydropower Leap in Songhua River Basin
Jiangtao Liu	Simulation of runoff and sediment processes in a semi-arid reservoir catchment using SWAT model
Jianzhong Lu	Assessment of hydrologic impacts on Yangtze River Watershed of Three Gorges Reservoir (TGR) based on CFSR weather data driven SWAT model
Jie Ma	Research on Application of Hydrological Model -HSPF
Slim Mtibaa	Modeling of sediment dynamics using SWAT model: case of Joumine river basin, Tunisia
Ali Sadeghi	Improving SWAT Model Prediction Using an Upgraded Denitrification Scheme and Constrained Auto Calibration

Pin-Chih Shih	Assessing the effectiveness of organic farming practices on stream health in the Upper Houlong River Basin, Taiwan
Xiaolu Wei	Comprehensive Simulation of Nitrate Transport in Surface-Subsurface Hydrologic Systems using linked SWAT-MODFLOW-RT3D Model
Abeyou Worqlul	Assessing Irrigation Potential and Land Suitability in Ethiopia
Lei Wu	Simulation and regulation of adsorbed nonpoint source pollution processes in a small watershed of the Loess Plateau
Yi Xu	Modified SWAT Model for Water-Saving Irrigation in Paddy areas
Tiezhu Yan	Assessments of Impacts of Climate Change and Human Activities on Runoff with SWAT and heuristic segmentation algorithm for the Miyun Reservoir Catchment, China
Tiezhu Yan Ning Yang	Assessments of Impacts of Climate Change and Human Activities on Runoff with SWAT and heuristic segmentation algorithm for the Miyun Reservoir Catchment, China A mult-year AquaCrop model simulation and assessment on plastic-film-mulched maize yield response to precipitation and supplemental irrigation in sandy and semi- arid region of Northeast China

15:30 – 17:00 SESSION G2: YOUNG SWAT SCHOLARS PANEL DISCUSSION Meeting Room No.2

Distinguished developers and SWAT users are brought together to offer knowledge to young professionals. Topics discussed will include the general philosophy of SWAT development, actual and future challenges of SWAT development and use and career prospects in watershed modeling. The discussion will also provide the opportunity for new users to provide feedback to the guests.

19:00

DINNER GALA

Tongchunyuan Restaurant (5 minute walk from Beijing Normal University) Xinjiekouwai Street No. 14, Xicheng District, Beijing

Friday, July 29

8:30 - 10:20	SESSION H1: HYDROLOG Meeting Room No.3	(Moderator: C. Allan Jones, <i>Texas A&M University, USA</i>
8:30 - 8:50	Lanhui Zhang	Comparison of SWAT and DLE of a mountainous watershed	BRM for hydrological modelling in arid Northwest China
8:50 - 9:10	Nana Mulyana	SWAT Model Application for Artificial Recharge Trough Infi Replenishment at Senjoyo Sp	Hydrological Study of iltration Pond in The Water ring Salatiga Indonesia
9:10 - 9:30	Jie Shi	Sub-daily hydrological modell validation and uncertainty stu catchment in the UK	ing, multi-site calibration, udies: a case study in a lowland
9:30 – 9:50	Li Wang	Water resource (quantity) ba SWAT model Application in Sp	lance calculation by using pongicity
9:50 - 10:10	Jin Liu	Charactering effects of landso a typical urbanized watershee	cape factors on water quality in d in Beijing, China
8:30 - 10:20	SESSION H2: MODEL DEV Meeting Room No.2	ELOPMENT	Moderator: Chris George, Professor (retired), UN University
8:30 - 8:50			
	Xiaolu Wei	SWATMOD-Prep: A graphica coupled SWAT-MODFLOW si	l user interface for preparing imulations
8:50 - 9:10	Xiaolu Wei Yin Chu	SWATMOD-Prep: A graphica coupled SWAT-MODFLOW si Further development of SW/ from forested watersheds in Natural Subregion of Alberta	l user interface for preparing imulations ATBF to simulate streamflow the Central Mixedwood a, Canada
8:50 - 9:10 9:10 - 9:30	Xiaolu Wei Yin Chu Zhengqing Lai	SWATMOD-Prep: A graphica coupled SWAT-MODFLOW si Further development of SW/ from forested watersheds in Natural Subregion of Alberta Development and applicatio irrigation module of polders	l user interface for preparing imulations ATBF to simulate streamflow the Central Mixedwood a, Canada n of the drainage and in plain river network region
8:50 - 9:10 9:10 - 9:30 9:30 - 9:50	Xiaolu Wei Yin Chu Zhengqing Lai Qingyu Feng	SWATMOD-Prep: A graphica coupled SWAT-MODFLOW si Further development of SW/ from forested watersheds in Natural Subregion of Alberta Development and applicatio irrigation module of polders Watershed Calibration with Data Using SWAT/IPEAT-SD	I user interface for preparing imulations ATBF to simulate streamflow the Central Mixedwood a, Canada n of the drainage and in plain river network region Incorporation of Soft/Hard

Friday, July 29

8:30 – 9:20	SESSION H3.1: CLIMATE Meeting Room No.1	CHANGE APPLICATIONS	Moderator: Xuesong Zhang, Pacific Northwest National Laboratory, USA
8:30 - 8:50	Ambika Khadka	From the Mountains to the Pl Change on Water Resources of	lains: Impact of Climate of the Koshi Basin
8:50 - 9:10	Xiaoying Yang	Impacts of Climate Change or in the Upper Huai River Basin	n Nitrogen Load and its Control , China
9:20 - 10:20	SESSION H3.2: SWAT AP INCORPORATING RICE PI Meeting Room No.1	PLICATIONS RODUCTION	Moderator: Wei Ouyang, Beijing Normal University, China
9:20 – 9:40	Asep Sapei	Evaluation of Paddy Field Alge Water Yield Prediction of Wa in Indonesia	orithm in SWAT Program for tershed Containing Paddy Field
9:40 - 10:00	Di Fang	Simulating Evapotranspiration Paddy Field Dominated Basin	n Using the SWAT Model in a
10:20 - 11:00	TEA BREAK		
11:00 - 12:30	CLOSING DISCUSSIONS Jingshi Hall		
15:00 – 17:30	TOURS		

Two tours will be offered following closing discussions: **Beijing Olympic Park** and **Shicha Lake** (The Three Rear Lakes). The bus will leave Beijing Normal University at **15:00**, and returns at **17:30**. Please visit the registration/check-in desk for more information.

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