

# 2010 INTERNATIONAL SWAT CONFERENCE

AUGUST 4-6, 2010

*MAYFIELD HOTEL  
SEOUL, KOREA*

*CONFERENCE AGENDA*





Soil & Water Assessment Tool | **SWAT**

**Wednesday, August 4, 2010**

08:30 - 09:30 a.m.	<b>Participant check-in and Registration</b> Mayfield Hotel Grand Ballroom	
09:30 - 11:50 a.m.	<b>Opening Ceremony</b> Mayfield Hotel Grand Ballroom	<b>Moderator:</b> Philip Gassman Iowa State University
09:30 - 09:35 a.m.	<b>Opening Announcement:</b>	<i>Dr. Nam-Won Kim</i> <i>LOC-Chair, Korea Institute of Construction Technology, Korea</i>
09:35 - 09:40 a.m.	<b>Welcome Address:</b>	<i>Dr. Yong-Joo Cho</i> <i>President, Korea Institute of Construction Technology, Korea</i>
09:40 - 10:10 a.m.	<b>Keynote Speech 1:</b>	Outlook of SWAT Model as a Total Solution of Water, Pollutant, & Food Problem <i>Dr. Jeff Arnold</i> <i>USDA-ARS, USA</i>
10:10 - 10:40 a.m.	<b>Keynote Speech 2:</b>	Outcomes and Impacts by the Sustainable Water Resources Research Program (2001-2011) in Korea <i>Dr. Sung Kim</i> <i>Director, Sustainable Water Resources Research Center, Korea</i>
10:40 - 11:10 a.m.	<b>Model Development History:</b>	<i>Dr. Jimmy Williams</i> <i>Texas AgriLife Research, USA</i>
11:10 - 11:40 a.m.	<b>Recent Development and Features of ArcSWAT:</b>	<i>Dr. Raghavan Srinivasan</i> <i>Texas A&amp;M University, USA</i>
11:40 - 11:50 a.m.	<b>Group Photo</b> (Garden Hall, Mayfield Hotel)	
11:50 a.m. - 1:00 p.m.	<b>Lunch</b> (Orchid room, Mayfield Hotel)	
1:00 - 3:20 p.m.	<b>SESSION A1 - Large Scale Applications</b> <b>SESSION B1 - Model Development</b>	<b>(Room A)</b> <b>(Room B)</b>

**SESSION A1 - Large Scale Applications****Moderator:** Taesoo Lee  
Texas A&M University

1:00 - 1:20 p.m.	<b>A1-1</b> Hyunwoo Kang	<i>Improvement SWAT Auto-Calibration tool with Flow Clustering EI Estimation System using K-means</i>
1:20 - 1:40 p.m.	<b>A1-2</b> Taesoo Lee	<i>Application of SWAT to estimate inflow to bays from ungaged large watersheds</i>
1:40 - 2:00 p.m.	<b>A1-3</b> Pierluigi Cau	<i>A relational data paradigm to manage SWAT simulations on the GRID for the Black Sea Catchment observation and assessment system</i>
2:00 - 2:20 p.m.	<b>A1-4</b> Nguyen Duy Binh	<i>SWAT application coupled with web technology for soil erosion assessment in north western region of Vietnam</i>
2:20 - 2:40 p.m.	<b>A1-5</b> Elham Rouholahnejad	<i>Hydrological modeling of the Black Sea Catchment using SWAT</i>
2:40 - 3:00 p.m.	<b>A1-6</b> Christine Kuendig	<i>Application and calibration of a hydrological model in Europe</i>
3:00 - 3:20 p.m.	<b>A1-7</b> Hua Xie	<i>Hydrologic Calibration of the SWAT Model for African River Basins using GRACE data</i>

**SESSION B1 - Model Development****Moderator:** Daniel Moriasi  
USDA-ARS

1:00 - 1:20 p.m.	<b>B1-1</b> Jichul Ryu	<i>Enhancement of the SWAT-REMM system for simulation of NO<sub>3</sub>-N reduction efficiency with riparian buffer system in a subwatershed of the Doam-Dam Watershed</i>
1:20 - 1:40 p.m.	<b>B1-2</b> Youn Shik Park	<i>Development of the integrated SWAT-VFSMOD model</i>
1:40 - 2:00 p.m.	<b>B1-3</b> Daniel Moriasi	<i>New shallow water table depth algorithm in SWAT2005: recent modifications</i>
2:00 - 2:20 p.m.	<b>B1-4</b> Jaehak Jeong	<i>Modelling onsite wastewater systems in SWAT</i>
2:20 - 2:40 p.m.	<b>B1-5</b> Karim Abbaspour	<i>SWAT-CUP: A calibration and uncertainty analysis program for SWAT</i>
2:40 - 3:00 p.m.	<b>B1-6</b> Jaehak Jeong	<i>Development of subdaily erosion and sediment transport models in SWAT</i>
3:00 - 3:20 p.m.	<b>B1-7</b> Philip Gassman	<i>Simulation trends and other insights regarding the worldwide use of the SWAT model</i>

3:20 - 3:40 p.m. **Coffee Break**

3:40 - 5:00 p.m.	<b>SESSION A2 : Hydrology (1)</b>	<b>(Room A)</b>
	<b>SESSION B2: InStream Sediment and Pollutant Transport</b>	<b>(Room B)</b>
	<b>SESSION B3: BMPs</b>	<b>(Room B)</b>

**SESSION A2 - Hydrology (1)****Moderator:** Nam-Won Kim  
Korea Institute of Construction Technology

3:40 - 4:00 p.m.	<b>A2-1</b> Eunjin Han	<i>Surface soil moisture assimilation with SWAT</i>
4:00 - 4:20 p.m.	<b>A2-2</b> Geun Ae Park	<i>The Spatial Analysis between SWAT Soil Moisture and MODIS LST (Land Surface Temperature) and NDVI (Normalized Difference Vegetation Index)</i>
4:20 - 4:40 p.m.	<b>A2-3</b> Ki-Wook Park	<i>Evaluation of SWAT model for irrigation reservoir operation</i>

**SESSION B2: InStream Sediment and Pollutant Transport****SESSION B3: BMPs****Moderator:** Kwangsik Yoon

Chonnam National University

3:40 - 4:00 p.m.	<b>B2-1</b> Chulgyum Kim	<i>Using SWAT for estimating impact of sediment and pollutant export in the Chungju Dam watershed, Korea</i>
4:00 - 4:20 p.m.	<b>B2-2</b> Nguyen Kim Loi	<i>Assessing the impacts of land use/ land cover changes and practices on soil erosion and sedimentation using SWAT: Case study in Dong Nai watershed – Vietnam</i>
4:20 - 4:40 p.m.	<b>B3-1</b> Jae Ho Jang	<i>The study of water quality management in Kyeongan Stream Watershed with SWAT Model</i>
4:40 - 5:00 p.m.	<b>B3-2</b> Tae Geun Kim	<i>Estimation of pollutants removal efficiency in the buffer strip using SWAT Model</i>

6:00- 8:00 p.m.

**Welcome Dinner**  
(Garden Hall)**Thursday, August 5, 2010**

9:00 - 10:00 a.m.

**SESSION A2: Hydrology (2)****(Room A)****SESSION B4: Database and GIS Application and Development (1) (Room B)****SESSION A2: Hydrology (2)****Moderator:** Tae Geun Kim  
Cheongju University

9:00 - 9:20 a.m.	<b>A2-4</b> Paul D. Wagner	<i>Analyzing water resources in a monsoon-driven environment – an example from the Indian Western Ghats</i>
9:20 - 9:40 a.m.	<b>A2-5</b> Hyung-Kyung Joh	<i>Evaluation of mixed forest evapotranspiration and soil moisture using measured and SWAT simulated results in a hillslope watershed</i>
9:40 - 10:00 a.m.	<b>A2-6</b> Il-Moon Chung	<i>Integrated surface-groundwater analysis considering groundwater use in Pyoseon region, Jeju island, Korea</i>

**SESSION B4: Database and GIS Application and Development (1)****Moderator:** Pierluigi CauCenter for Advanced Studies, Research and  
Development in Sardinia

9:00 - 9:20 a.m.	<b>B4-1</b> Simone Manca	<i>The MVC client server architecture of the BSC-OS portal to digest, manage, and query SWAT data collections</i>
9:20 - 9:40 a.m.	<b>B4-2</b> Sudipta K. Mishra	<i>Development of a field based Decision support Tool integrated with socio-economical model for managing Water Quality and Quantity</i>
9:40 - 10:00 a.m.	<b>B4-3</b> Seong Joon Kim	<i>Evaluation of streamflow and water quality in a typical agricultural watershed of South Korea using SWAT model and 2 m KOMPSAT-2 detailed land use information</i>

10:00 - 10:20 a.m.

**Coffee Break**

10:20 a.m. - 11:40 p.m. **SESSION A3: Climate Change Applications (1)**

**(Room A)**

**SESSION B4: Database and GIS Application and Development (2)**

**(Room B)**

**SESSION A3: Climate Change Applications (1)**

**Moderator:** Seong Joon Kim  
Konkuk University

10:20 - 10:40 a.m.	<b>A3-1</b> Hyun-Han Kwon	<i>Multivariate Nonstationary Markov Chain Model and its use for SWAT rainfall-runoff Model</i>
10:40 - 11:00 a.m.	<b>A3-2</b> Debjani Deb	<i>Hydrologic response to climate and landuse change in the Minnesota River Basin</i>
11:00 - 11:20 a.m.	<b>A3-3</b> Se-Woong Chung	<i>Impact of climate change on water and soil loss in Daecheong Reservoir Watershed</i>
11:20 a.m. - 11:40 p.m.	<b>A3-4</b> Jong-Yoon Park	<i>Assessment of MIROC3.2 hires climate change and CLUE-s land use change impact on watershed hydrology using SWAT</i>

**SESSION B4: Database and GIS Application and Development (2)**

**Moderator:** Kyoungjae Lim  
Kangwon National University

10:20 - 10:40 a.m.	<b>B4-4</b> Won-Ho Nam	<i>Development of Web-GIS based SWAT Data Generation System</i>
10:40 - 11:00 a.m.	<b>B4-5</b> Yunseok Choi	<i>Development of an interface system to couple HyGIS and SWAT2005</i>
11:00 - 11:20 a.m.	<b>B4-6</b> Ali Najafinejad	<i>The effect of map spatial resolution on simulation result of SWAT, case study: chelchay watershed, Golestan province in Iran</i>

11:40 - 1:00 p.m.

**Lunch**  
(Orchid room, Mayfield Hotel)

1:00 - 6:00 p.m.

**Depart for Conference Tour (Seoul City Tour)**  
- Gyeongbokgung Palace (The oldest palace of Joseon Dynasty)  
- Insadong (Experiencing the traditional culture of Korea)  
Arrival at Mayfield Hotel

7:00 - 9:00 p.m.

**Gala Dinner**  
(Grand Ballroom)

## Friday, August 6, 2010

9:00 - 10:20 a.m.      **SESSION A3: Climate Change Applications (2)**      **(Room A)**  
**SESSION B5: Biofuel and Plant Growth**      **(Room B)**  
**SESSION B6: Landscape Processes and Landscape / River Continuum**      **(Room B)**

**SESSION A3: Climate Change Applications (2)**      **Moderator:** Karim Abbospour  
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9:00 - 9:20 a.m.	<b>A3-5</b> Woo Young Choi	<i>Estimation of climate change effect on nonpoint source pollution in Juam Lake Watershed</i>
9:20 - 9:40 a.m.	<b>A3-6</b> Soo Jun Kim	<i>The evaluation of climate change impacts on water resources system by using SWAT model</i>
9:40 - 10:00 a.m.	<b>A3-7</b> Hyung Jin Shin	<i>Projection of future watershed hydrology by applying SWAT through the prediction of vegetation community under MIROC3.2 hires climate change condition</i>
10:00 - 10:20 a.m.	<b>A3-8</b> Min Ji Park	<i>Comparison of watershed streamflows by using the predicted MIROC3.2 hires GCM data and the observed weather data for the period of 2000-2009 under SWAT simulations</i>

**SESSION B5: Biofuel and Plant Growth**      **Moderator:** Jeff Arnold  
**SESSION B6: Landscape Processes and Landscape / River Continuum**      USDA-ARS

9:00 - 9:20 a.m.	<b>B5-1</b> Miae Ha	<i>Hydrologic effects of bio-char applications on corn production fields in Illinois</i>
9:20 - 9:40 a.m.	<b>B5-2</b> Bikesh Shrestha	<i>Evaluating the impact of biofuel production on watershed hydrology using SWAT</i>
9:40 - 10:00 a.m.	<b>B6-1</b> Jeff Arnold	<i>An efficient delineation structure in SWAT to simulate the landscape/ river continuum</i>

10:20 - 10:40 a.m.      **Coffee Break**

10:40 - 12:00 p.m.      **SESSION A4: Pesticides, Bacteria, Metals and Pharmaceuticals**      **(Room A)**  
**SESSION B7: Environmental Applications**      **(Room B)**

**SESSION A4: Pesticides, Bacteria, Metals and Pharmaceuticals**      **Moderator:** Chehra Aboukinane / Virginia Jin  
Al Akhawayn University / USDA-ARS

10:40 - 11:00 a.m.	<b>A4-1</b> Chehra Aboukinane	<i>Modification of the SWAT code to model Veterinary Medicines in large scale watersheds</i>
11:00 - 11:20 a.m.	<b>A4-2</b> Virginia Jin	<i>Modeling b-Estradiol Transport from Land Applications of Municipal Biosolid</i>
11:20 - 11:40 a.m.	<b>A4-3</b> Joon Ha Kim	<i>Modeling approach on resuspension of E. coli from streambed using Soil and Water Assessment Tool (SWAT)</i>

**SESSION B7: Environmental Applications****Moderator:** Jaehak Jeong  
Texas AgriLife Research

10:40 - 11:00 a.m.	<b>B7-1</b> Min Hwan Shin	<i>Analysis of runoff characteristics of NPS pollutants using the SWAT-K model at Upper Daecheong Reservoir</i>
11:00 - 11:20 a.m.	<b>B7-2</b> Jitae Kim	<i>Modification of stream water temperature calculation equation of SWAT for the Han River Korea using regression analysis</i>
11:20 - 11:40 a.m.	<b>B7-3</b> Christopher L. Shope	<i>Simulating water quantity and quality and sediment transport under varying land use and climatic conditions in a monsoonal driven watershed</i>
11:40 - 12:00 p.m.	<b>B7-4</b> Katrin Bieger	<i>Modelling the impact of land use change on the water balance in the Xiangxi catchment (Three Gorges Region, China) using SWAT</i>

12:00 - 1:20 p.m.      **Lunch**  
(Orchid Room, Mayfield Hotel)1:20 - 3:00 p.m.      **SESSION A5: Sediment, Nutrients and Carbon**      **(Room A)**  
**SESSION B8: Urban Processes and Management**      **(Room B)**  
**SESSION B9: Sensitivity Calibration and Uncertainty**      **(Room B)****SESSION A5: Sediment, Nutrients and Carbon****Moderator:** Philip Gassman  
Iowa State University – CARD

1:20 - 1:40 p.m.	<b>A5-1</b> Khanh Linh Hoang	<i>Comparison of the SWAT model versus the DAISY-MIKE-SHE model for simulating the flow and nitrogen processes</i>
1:40 - 2:00 p.m.	<b>A5-2</b> Hiroaki Somura	<i>Application of SWAT for nutrient load discharge estimation</i>
2:00 - 2:20 p.m.	<b>A5-3</b> Jong-Pil Moon	<i>Study on setting appropriate size of riparian buffer zone in urban basin by using SWAT model</i>
2:20 - 2:40 p.m.	<b>A5-4</b> Phan Dinh Binh	<i>Land use change effects on discharge and sediment yields of Song Cau River in Northern VietNam</i>

**SESSION B8: Urban Processes and Management**  
**SESSION B9: Sensitivity Calibration and Uncertainty****Moderator:** Allan Jones  
Texas AgriLife Research

1:20 - 1:40 p.m.	<b>B8-1</b> Jeongwoo Lee	<i>Hydrologic modeling of the White Rock Creek Watershed with SWAT-SWMM</i>
1:40 - 2:00 p.m.	<b>B8-2</b> Allan Jones	<i>Use of SWAT for urban water management projects in Texas</i>
2:00 - 2:20 p.m.	<b>B9-1</b> Jeongkon Kim	<i>Analysis of the impacts of spatial input data quality on determination of runoff and suspended sediment in the Imha Watershed using SWAT model</i>
2:20 - 2:40 p.m.	<b>B9-2</b> Sara Moftian	<i>Calibration of a SWAT hydrologic model for the Tamer Watershed in Northern Iran</i>
2:40 - 3:00 p.m.	<b>B9-3</b> Jaewoon Jung	<i>Simulation of streamflow using SWAT Auto Calibration Tool over the Saemangeum Watershed</i>

3:00 - 3:30 p.m.      **Break**3:30 - 4:30 p.m.      **Plenary Discussion**4:30 - 5:00 p.m.      **Closing**

## Poster Presentations

**Moderator :** IL Moon Chung  
Korea Institute of Construction Technology

### SESSION PA1: Large Scale Applications

<b>PA1-1</b> Jeong Eun Lee	<i>Runoff simulation using Global Data in the Hwacheon Dam Watershed, Korea</i>
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### SESSION PA2: Hydrology

<b>PA2-1</b> Sangkeun Ha	<i>Runoff potential and water storage capacity of Korean Soil Mapping Units as affected by different topographic categories</i>
<b>PA2-2</b> Sung-Kee Yang	<i>Analysis of impact of land use change on runoff through several Streams in Jeju Island, Korea</i>
<b>PA2-3</b> Do-Hun Lee	<i>The impact of soil hydraulic conductivity variations on the simulated responses of SWAT model</i>
<b>PA2-4</b> Wongeun Lee	<i>Estimation of Reasonable CAPPI Mesh Size Using SWAT Model</i>
<b>PA2-5</b> Gyo-Cheol Jeong	<i>Analysis of Hydrologic Component and Water Resource Increase for the Watershed Management and Groundwater Dam Construction in Osipcheon</i>
<b>PA2-6</b> Jaewan Choi	<i>Evaluation of Runoff Prediction at Upper Watershed of Daecheong Reservoir using SWAT-K Model</i>
<b>PA2-7</b> Pushpa Tuppad	<i>Multi-site landuse based calibration of SWAT simulated hydrologic components</i>

### SESSION PA3: Climate Change Applications

<b>PA3-1</b> Youngdon Choi	<i>Water supply reliability assessment considering climate changes</i>
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### SESSION PA5: Sediment, Nutrients and Carbon

<b>PA5-1</b> Sangjun Im	<i>Effects of landuse on nonpoint sources pollutant loadings at small watersheds</i>
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### SESSION PB2: InStream Sediment and Pollutant Transport

<b>PB2-1</b> Ah-Hyun Shin	<i>Modification of BOD simulation module in SWAT for proper water quality management in Korea</i>
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### SESSION PB7: Environmental Applications

<b>PB7-1</b> Dongil Kim	<i>A study of modeling using linkage of watershed model and river water quality model</i>
<b>PB7-2</b> Dongil Kim	<i>Study for protection of water resources from pollution using SWAT</i>
<b>PB7-3</b> Y-H Jin	<i>Simulation of runoff and water quality data in the Jiseok Stream, Korea by SWAT model</i>



Soil & Water  
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