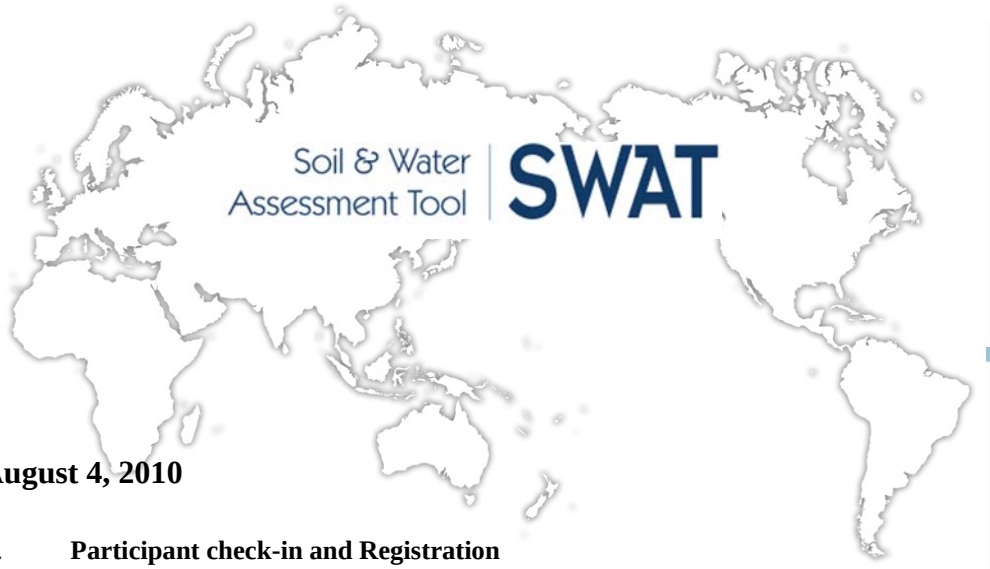
# 2010 International SWAT Conference

## August 4-6, 2010

*Mayfield Hotel*
*Seoul, Korea*

## *Conference AGENDA*




## Wednesday, August 4, 2010

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

**SESSION A1 - Large Scale Applications**

**Moderator:** Taesoo Lee
Texas A&M University

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|---|---|---|
| 1:00 - 1:20 p.m. | **A1-1** Hyunwoo Kang | *Improvement SWAT auto-calibration tool with flow clustering EI estimation system using K-means* |
| 1:20 - 1:40 p.m. | **A1-2** Taesoo Lee | *Application of SWAT to estimate inflow to bays from ungaged large watersheds* |
| 1:40 - 2:00 p.m. | **A1-3** Pierluigi Cau | *A relational data paradigm to manage SWAT simulations on the GRID for the Black Sea Catchment observation and assessment system* |
| 2:00 - 2:20 p.m. | **A1-4** Nguyen Duy Binh | *SWAT application coupled with web technology for soil erosion assessment in north western region of Vietnam* |
| 2:20 - 2:40 p.m. | **A1-5** Elham Rouholahnejad | *Hydrological modeling of the Black Sea Catchment using SWAT* |
| 2:40 - 3:00 p.m. | **A1-6** Christine Kuendig | *Preliminary results of the application and calibration of a hydrological model in Europe* |
| 3:00 - 3:20 p.m. | **A1-7** Hua Xie | *Hydrologic calibration of the SWAT model for African river basins using GRACE data* |

**SESSION B1 - Model Development**

**Moderator:** Daniel Moriasi
USDA-ARS

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|---|---|---|
| 1:00 - 1:20 p.m. | **B1-1** Jichul Ryu | *Enhancement of the SWAT-REMM system for simulation of T-N reduction efficiency with riparian buffer system at a Bonggok watershed* |
| 1:20 - 1:40 p.m. | **B1-2** Youn Shik Park | *Development of the integrated SWAT-VFSMOD model* |
| 1:40 - 2:00 p.m. | **B1-3** Daniel Moriasi | *New shallow water table depth algorithm in SWAT2005: recent modifications* |
| 2:00 - 2:20 p.m. | **B1-4** Jaehak Jeong | *Modelling onsite wastewater systems in SWAT* |
| 2:20 - 2:40 p.m. | **B1-5** Karim Abbaspour | *SWAT-CUP: A calibration and uncertainty analysis program for SWAT* |
| 2:40 - 3:00 p.m. | **B1-6** Jaehak Jeong | *Development of subdaily erosion and sediment transport models in SWAT* |
| 3:00 - 3:20 p.m. | **B1-7** Philip Gassman | *Simulation trends and other aspects regarding the worldwide use of the SWAT model* |

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

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

**SESSION A2 - Hydrology (1)**

**Moderator:** Nam-Won Kim
Korea Institute of Construction Technology

| | | |
|---|---|---|
| 3:40 - 4:00 p.m. | **A2-1** Eunjin Han | *Surface soil moisture assimilation with SWAT* |
| 4:00 - 4:20 p.m. | **A2-2** Geun Ae Park | *The spatial analysis between SWAT simulated soil moisture, and MODIS LST and NDVI products* |
| 4:20 - 4:40 p.m. | **A2-3** Ki-Wook Park | *Evaluation of SWAT model for irrigation reservoir operation* |

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

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

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:** Do Hun Lee
Kyunghee University

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

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

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|---|---|---|
| 9:00 - 9:20 a.m. | **B4-1** Simone Manca | *The MVC client server architecture of the BSC-OS portal to digest, manage, and query SWAT data collections* |
| 9:20 - 9:40 a.m. | **B4-2** Sudipta K. Mishra | *Development of a field based decision support tool integrated with socioeconomical model for managing water quality and quantity* |
| 9:40 - 10:00 a.m. | **B4-3** Seong Joon Kim | *Evaluation of streamflow and water quality in an agricultural watershed of South Korea using SWAT and KOMPSAT-2 detailed land use information* |

10:00 - 10:20 a.m. **Coffee Break**

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

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

**Moderator:** Kyoungjae Lim
Kangwon National University

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

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 Abbaspour
EAWAG

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

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

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

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

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|---|---|---|
| 10:40 - 11:00 a.m. | **A4-1** Chehra Aboukinane | *Manipulation of the SWAT code to model veterinary antibiotics in the environment* |
| 11:00 - 11:20 a.m. | **A4-2** Virginia Jin | *Potential soil transport of 17β-estradiol in a beneficial reuse system land-applying class B municipal biosolids for forage production in Central Texas* |
| 11:20 - 11:40 a.m. | **A4-3** Joon Ha Kim | *Modeling approach on resuspension of E. coli from streambed using Soil and Water Assessment Tool (SWAT)* |

**SESSION B7: Environmental Applications**

**Moderator:** Jaehak Jeong
Texas AgriLife Research

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|---|---|---|
| 10:40 - 11:00 a.m. | **B7-1** Jitae Kim | *Modification of stream water temperature calculation equation of SWAT for the Han River Korea using regression analysis* |
| 11:00 - 11:20 a.m. | **B7-2** Christopher L. Shope | *Simulating water quantity and quality and sediment transport under varying land use and climatic conditions in a monsoonal driven watershed* |
| 11:20 - 11:40 a.m. | **B7-3** Katrin Bieger | *Modelling the impact of land use change on the water balance in the Xiangxi catchment (Three Gorges Region, China) using SWAT* |

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

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

**SESSION B8: Urban Processes and Management**
**SESSION B9: Sensitivity Calibration and Uncertainty**

**Moderator:** Allan Jones
Texas AgriLife Research

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

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

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|---|---|
| **PA1-1** Jeong Eun Lee | *Runoff simulation using Global Data in the Hwacheon Dam Watershed, Korea* |

### SESSION PA2: Hydrology

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| **PA2-1** Sangkeun Ha | *Runoff potential and water storage capacity of Korean Soil Mapping Units as affected by different topographic categories* |
| **PA2-2** Sung-Kee Yang | *Analysis of impact of land use change on runoff through several Streams in Jeju Island, Korea* |
| **PA2-3** Do-Hun Lee | *The impact of soil hydraulic conductivity variations on the simulated responses of SWAT model* |
| **PA2-4** Wongeun Lee | *Estimation of reasonable CAPPI mesh size using SWAT model* |
| **PA2-5** Gyo-Cheol Jeong | *Analysis of hydrologic component and water resource increasement for the watershed management and groundwater dam construction in Osipcheon* |
| **PA2-6** Jaewan Choi | *Evaluation of runoff prediction at upper watershed of Daecheong Reservoir using SWAT-K model* |
| **PA2-7** Pushpa Tuppad | *Multi-site landuse based calibration of SWAT simulated hydrologic components* |
| **PA2-8** Ashish Pandey | *Assessment of hydropower potential using the SWAT model for southern Mizoram, India* |

### SESSION PA3: Climate Change Applicatoins

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|---|---|
| **PA3-1** Youngdon Choi | *Water supply reliability assessment considering climate changes* |
| **PA3-2** Masoud Taheriyoun | *Assessment of the impact of climate change on watershed phosphorus load and reservoir eutrophication* |
| **PA3-3** *Yakob Mohammed* | *Climate change impact assessment on soil water availability and crop yield in Blue Nile Basin (Case Study Anjeni Watershed), Ethiopia* |

### SESSION PA5: Sediment, Nutrients and Carbon

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|---|---|
| **PA5-1** Sangjun Im | *Effects of landuse on nonpoint sources pollutant loadings at small watersheds* |
| **PA5-2** Jong-Pil Moon | *Estimation of runoff unit area loads for nutrients from sloping cropland and forest using SWAT model* |

### SESSION PB2: InStream Sediment and Pollutant Transport

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| **PB2-1** Ah-Hyun Shin | *Modification of BOD simulation module in SWAT for proper water quality management in Korea* |

### SESSION PB7: Environmental Applications

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





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