



# 2009 INTERNATIONAL SWAT CONFERENCE AGENDA

AUGUST 5-7, 2009

UNIVERSITY OF COLORADO AT BOULDER  
BOULDER, COLORADO

TEXAS AGRILIFE RESEARCH, TEXAS A&M UNIVERSITY  
USDA-AGRICULTURAL RESEARCH SERVICE

## Conference Overview

| Time             | Wednesday, August 5  | Thursday, August 6   | Friday, August 7                                      |
|------------------|--|--|---|
| 8:00 - 9:45 a.m. | Inaugural Session  | Session D1: Environmental Applications   | Session G1: Hydrology                                 |
|                  |  | Session D2: Sensitivity Calibration & Uncertainty                                  | Session G2: BMPs                                      |
|                  |  | Session D3: Bacteria, Metals & Pathogens   | Session G3: Metals & Pesticides                       |
| 10:15 - 12 p.m.  | Session A1: Large Scale Applications   | Session E1: Model Structures to Simulate Spatially Distributed Landscape Processes | Session H1: Model Development                         |
|                  | Session A2: Sensitivity Calibration & Uncertainty                            | Session E2: BMPs   | Session H2: Hydrology                                 |
|                  | Session A3: Urban Processes & Management                                     | Session E3: Biofuel Plant Simulation   | Session H3: SWAT Applications                         |
| 1:00 - 2:45 p.m. | Session B1: Comprehensive Modeling for Watershed Protection Plan Development | Session F1: Pharmaceuticals  | Session I1: SWAT Applications                         |
|                  | Session B2: Upper Mississippi River Basin                                    | Session F2: Sediments, Nutrients, Carbons  | Session I2: InStream Sediment and Pollutant Transport |
|                  | Session B3: Landscape Processes and Landscape/River Continuum                | Session F3: Conservation Effects Assessment Project (CEAP)                         | Session I3: Environmental Applications                |
| 3:15 - 5:00 p.m. | Session C1: Comprehensive Modeling for Watershed Protection Plan Development | *Outing & Dinner   | Closing Session & Discussion                          |
|                  | Session C2: Database and GIS Application & Development                       |  |   |
|                  | Session C3: Climate Change Applications                                      |  |   |
|                  | *Welcome Reception   |  |   |





Wednesday, August 5, 2009

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|------------------|--|---|
| 7:30 - 8:30 a.m. | Participant check-in and Registration<br>University Memorial Center - Room 235 |   |
| 8:30 - 10 a.m.   | Opening Ceremony<br>University Memorial Center - Room 235                      | Moderator: Jeff Arnold<br>USDA-ARS  |
|                  | Welcome Address:   | Dr. Bryan Kaphammer<br>USDA-ARS   |
|                  | Keynote Speakers:  | Dr. Steve Shafer<br>USDA-ARS  |
|                  |  | Dr. Bill Dugas<br>Texas AgriLife Research, Texas A&M University System                  |
|                  | Model Development History:   | Dr. Jimmy Williams<br>Blackland Research & Extension Center, Texas AgriLife Research    |
|                  | Closing:   | Dr. Raghavan Srinivasan<br>Texas A&M University & Blackland Research & Extension Center |

9:45 - 10:15 a.m. Coffee Break and Group Photo

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|----------------------|--|---|
| 10:15 a.m. - 12 p.m. | SESSION A1 - Large Scale Applications<br>University Memorial Center - Room 386 | Moderator: Karim Abbaspour<br>Eawag   |
| 10:15 - 10:35 a.m.   | Anthony Lehmann  | EnviroGRIDS - Integrating SWAT in the Black Sea Catchment Observation and Assessment System |
| 10:35 - 10:55 a.m.   | Samira Akhavan   | Application of SWAT Model to Investigate Nitrate Leaching in Hamadan-Bahar Watershed, Iran  |
| 10:55 - 11:15 a.m.   | Huan Meng<br>Aisha Sexton  | Modeling Chesapeake Bay Watershed Using SWAT  |
| 11:15 - 11:35 a.m.   | Kendra Riebschleager   | Application of SWAT for Water Quality Modeling of the Caddo Lake Watershed                  |
| 11:35 - 11:55 a.m.   | Monireh Faramarzi  | Integrated Water Resources Management: Implications for Water and Food Security in Iran     |
| 11:55 - 12:00 p.m.   | Discussion & Wrap Up   |   |

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| 10:15 a.m. - 12 p.m. | SESSION A2 - Sensitivity, Calibration and Uncertainty<br>University Memorial Center - Room 384 | Moderator: Ann van Griensven<br>UNESCO-IHE  |
| 10:15 - 10:35 a.m.   | Tamie L. Veith   | How To: Applying and Interpreting the SWAT Autocalibration Tools  |
| 10:35 - 10:55 a.m.   | Haw Yen<br>Mazdak Arabi  | Uncertainty Analysis of the SWAT Model Using Bayesian Techniques  |
| 10:55 - 11:15 a.m.   | Adam Freihoefer  | Event Based Hydrologic Calibration of Field-Scale Watersheds in Southwestern Wisconsin Using the SWAT Model |

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|--------------------|---|---|
| 11:15 - 11:35 a.m. | John Joseph   | Preliminaries to Assessing the Quality of SWAT Parameter Confidence Intervals |
| 11:35 - 11:55 a.m. | Xuesong Zhang<br>Jeff Arnold<br>Raghavan Srinivasan | Simultaneous Calibration of Surface Flow and Baseflow Simulations of SWAT     |
| 11:55 - 12:00 p.m. | Discussion & Wrap Up                                |   |

10:15 a.m. - 12 p.m. SESSION A3 - Urban Processes and Management Moderator: Allan Jones  
University Memorial Center - Room 382 Texas A&M AgriLife

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|--------------------|--|---|
| 10:15 - 10:35 a.m. | Roger H. Glick                               | Issues in Modeling Physical Systems with the SWAT Model in Urban Areas                            |
| 10:35 - 10:55 a.m. | Jaehak Jeong                                 | Development of urban modeling tools in SWAT   |
| 10:55 - 11:15 a.m. | Tony Spencer<br>Brian Walker<br>Mazdak Arabi | Hydrologic response of watershed systems to land use/land cover change                            |
| 11:15 - 11:35 a.m. | Yihun Dile Taddele                           | Hydrological Response of Gilgel Abay River Flow to Climate Change, Lake Tuna Basin, Ethiopia      |
| 11:35 - 11:55 a.m. | Roger H. Glick                               | Predicting Aquatic Life Potential under Various Development Scenarios in Urban Streams using SWAT |
| 11:55 - 12:00 p.m. | Discussion & Wrap Up                         |   |

12 p.m. - 1 p.m. Lunch  
Restaurants located on the first floor of the University Memorial Center include: Alferd Packer Grill, Al’s Fresco, El Canibal, Slumgullion, Soup/Chili & Salad Bar, The Tabor, Subway, Wok & Roll and more.

1:00 p.m. - 2:45 p.m. SESSION B1 - Comprehensive Modeling for Watershed Protection Plan Development - A Water Supply Perspective: Moderator: Darrel Andrews  
Tarrant Regional Water District Case Study, North-Central Texas  
University Memorial Center - Room 386

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|------------------|----------------------------------|---|
| 1:00 - 1:20 p.m. | Darrel Andrews                   | Watershed sediment contribution to SWAT Modeling: A Case Study of the Challenges Faced in a Watershed Application |
| 1:20 - 1:40 p.m. | Balaji Narasimhan                | Hydrologic Modeling of Cedar Creek Watershed using SWAT   |
| 1:40 - 2:00 p.m. | Mark Ernst                       | Steady State Nutrient Modeling in Streams   |
| 2:00 - 2:20 p.m. | Darrel Andrews<br>Jennifer Owens | Sediment: Translating Between Physical Measurements and SWAT Parameters   |
| 2:20 - 2:40 p.m. | Balaji Narasimhan                | Channel Erosion and Water Quality Modeling using SWAT   |
| 2:40 - 2:45 p.m. | Discussion & Wrap Up             |   |

1:00 p.m. - 2:45 p.m. SESSION B2 - Upper Mississippi River Basin Moderator: Philip Gassmann  
University Memorial Center - Room 384 Iowa State University

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|------------------|----------------------|---|
| 1:00 - 1:20 p.m. | Gerald Whittaker     | Comparison of water quality effects of biofuel production in the Upper Mississippi River Basin using a Malmquist index                              |
| 1:20 - 1:40 p.m. | Paul Hummel          | Water Quality Modeling Efforts to Assess the Impacts of Ethanol Corn Production in the Upper Mississippi River Basin                                |
| 1:40 - 2:00 p.m. | C. Santhi            | An integrated modeling approach used for assessment of conservation practices on water quality conditions in the Upper Mississippi River Basin      |
| 2:00 - 2:20 p.m. | Philip Gassmann      | Effect of potential future climate change on the cost-effective nonpoint source pollution reduction strategies in the Upper Mississippi River Basin |
| 2:20 - 2:40 p.m. | Rich Alexander       | Advances in Tracking Nutrient Sources in the Mississippi and Atachafalaya River Basin Using the SPARROW Model                                       |
| 2:40 - 2:45 p.m. | Discussion & Wrap Up |   |

1:00 p.m. - 2:45 p.m.

SESSION B3 - Landscape Processes and Landscape/River Continuum  
University Memorial Center - Room 382

Moderator: Martin Volk, Helmholtz Centre  
for Environmental Research - UFZ, Germany

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|------------------|---|--|
| 1:00 - 1:20 p.m. | <i>Ann van Griensven</i>  | <i>Modelling wetland functions and services using SWAT</i>   |
| 1:20 - 1:40 p.m. | <i>Emily Boyd<br/>Mazdak Arabi</i>                                    | <i>Role of spatial aggregation on sediment processes in SWAT</i>   |
| 1:40 - 2:00 p.m. | <i>Kyle Flynn</i>   | <i>Validation of the SWAT Model for Sediment Prediction in a Mountainous, Snowmelt-dominated Catchment</i> |
| 2:00 - 2:20 p.m. | <i>LJ Thibodeaux</i>  | <i>An Earth-Surface Landscape Evolution Model with a Biological Life Signature (poster or platform)</i>    |
| 2:20 - 2:40 p.m. | <i>Prasad Daggupati<br/>Aleksey Sheshukov<br/>Kyle Douglas-Mankin</i> | <i>Field-Scale Targeting of Cropland Sediment Yields Using ArcSWAT</i>                                     |
| 2:40 - 2:45 p.m. | <i>Discussion &amp; Wrap Up</i>                                       |  |

2:45 p.m. - 3:15 p.m.

Break (beverages & snacks in UMC 235)

3:15 a.m. - 5:00 p.m.

SESSION C1 - Comprehensive Modeling for Watershed Protection Plan Development - A Water Supply Perspective:  
TRWD Case Study, North-Central Texas  
University Memorial Center - Room 386

Moderator: Darrel Andrews  
Tarrant Regional Water District

|                  |                                 |   |
|------------------|---------------------------------|---|
| 3:15 - 3:35 p.m. | <i>Mark Ernst</i>               | <i>Development and Application of a WASP Model on a large Texas Reservoir to Assess Eutrophication Control Strategies</i> |
| 3:35 - 3:55 p.m. | <i>Allen Sturdivant</i>         | <i>Integrating SWAT Modeling and Economic Considerations to Develop an Economic-Based Watershed Management Plan</i>       |
| 3:55 - 4:15 p.m. | <i>Taesoo Lee</i>               | <i>Assessment of Cost-Effective BMPs to Reduce Total Phosphorous Level Using SWAT in Cedar Creek Reservoir, TX</i>        |
| 4:15 - 4:35 p.m. | <i>Clint Wolfe</i>              | <i>Utilizing SWAT to Enhance Stakeholder-based Watershed Protection Planning</i>  |
| 4:35 - 4:55 p.m. | <i>Clint Wolfe</i>              | <i>Integrating SWAT Modeling and Economic Considerations to Develop an Economic-Based Watershed Protection Plan</i>       |
| 4:55 - 5:00 p.m. | <i>Discussion &amp; Wrap Up</i> |   |

3:15 p.m. - 5 p.m.

SESSION C2 - Database and GIS Application and Development  
University Memorial Center - Room 384

Moderator: Raghavan Srinivasan  
Texas AgriLife Research

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|------------------|---|---|
| 3:15 - 3:35 p.m. | <i>Jeyakanthan Veluppilai</i>   | <i>Migrating a complex environmental modeling system from a proprietary to an open source GIS platform</i>                                      |
| 3:35 - 3:55 p.m. | <i>Jingshan Yu</i>  | <i>SWAT Application Tool Development for Water Resources Management at County Level in Beijing, China</i>                                       |
| 3:55 - 4:15 p.m. | <i>Aleksey Sheshukov<br/>Prasad Daggupati<br/>Kyle Douglas-Mankin</i> | <i>ArcMap Tool for Pre-processing SSURGO Soil Database for ArcSWAT</i>  |
| 4:15 - 4:35 p.m. | <i>Lan Zhao</i>   | <i>A web based interface for SWAT modeling on the TeraGrid</i>  |
| 4:35 - 4:55 p.m. | <i>Pierluigi Cau</i>  | <i>A multi model and multiscale, GIS oriented Web framework based on the SWAT model to face issues of water and soil resource vulnerability</i> |
| 4:55 - 5:00 p.m. | <i>Discussion &amp; Wrap Up</i>                                       |   |

3:15 p.m. - 5 p.m.

SESSION C3 - Climate Change Applications  
University Memorial Center - Room 382

Moderator: Xuesong Zhang  
Joint Global Change Research Inst.  
Pacific Northwest Laboratory

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|------------------|---|--|
| 3:15 - 3:35 p.m. | <i>Tirupati Bolisetti</i>   | <i>Effect of climate change on low flow conditions in Ruscom River watershed, Ontario</i>  |
| 3:35 - 3:55 p.m. | <i>Pranay Sanadhya<br/>Mehdi Ahmadi<br/>Mazdak Arabi</i>              | <i>Consequences of climate change on water yield in mountainous snow-dominated Colorado watersheds</i>   |
| 3:55 - 4:15 p.m. | <i>Fred F. Hattermann<br/>Shaochung Huang<br/>Valentina Krysanova</i> | <i>Changes in plant phenology and physiology under climate change and related impacts on regional water resources</i>                                      |
| 4:15 - 4:35 p.m. | <i>Jae Ryu</i>  | <i>Application of SWAT to climate-driven low flow (drought) frequency analysis</i>   |
| 4:35 - 4:55 p.m. | <i>Michael Strauch</i>  | <i>Simulating the effects of climate change and energy crop production on water balance and water quality of the Parthe catchment (Germany) using SWAT</i> |
| 4:55 - 5:00 p.m. | <i>Discussion &amp; Wrap Up</i>                                       |  |

6:00 p.m. - 8:00 p.m.

Welcome Reception - Millennium Harvest House  
(Reception will be located in the Hotel Gardens area - map included in registration packet - 1.0 miles)

Thursday, August 6, 2009

8:00 a.m. - 9:45 a.m.

SESSION D1 - Environmental Applications  
University Memorial Center - Room 386

Moderator: Hiroaki Somura  
Shimane University, Japan

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| 8:00 - 8:20 a.m. | <i>Benedikt Notter</i>                         | <i>Setting up SWAT to quantify water-related ecosystem service availability in a large data-scarce watershed in East Africa</i>                              |
| 8:20 - 8:40 a.m. | <i>Nicola Fohrer</i>                           | <i>Adapting SWAT to a lowland catchment and using model results for ecohydrological assessments</i>  |
| 8:40 - 9:00 a.m. | <i>Karolina Smarzynska<br/>Maria Smietanka</i> | <i>Application for SWAT model to small agricultural catchment in Poland</i>  |
| 9:00 - 9:20 a.m. | <i>Dharmendra Saraswat</i>                     | <i>Development and Evaluation of An Algorithm for Generating Field Based Output From SWAT</i>  |
| 9:20 - 9:40 a.m. | <i>Milo Anderson</i>                           | <i>Combining a conceptual hydrologic model (SWAT) and a hydrodynamic model (Telemac 3D) to simulate reservoir dynamics in Eagle Creek Reservoir, Indiana</i> |
| 9:40 - 9:45 a.m. | <i>Discussion &amp; Wrap Up</i>                |  |

8:00 a.m. - 9:45 a.m.

SESSION D2 - Sensitivity, Calibration and Uncertainty  
University Memorial Center - Room 384

Moderator: Mazdak Arabi  
Colorado State University

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|------------------|---|---|
| 8:00 - 8:20 a.m. | <i>Martin Volk</i>                            | <i>Influence of uncertainties in nitrate-N monitoring data on SWAT model calibration and evaluation</i> |
| 8:20 - 8:40 a.m. | <i>Ann van Griensven</i>                      | <i>Multi-Objective calibration to improve pesticide simulations</i>                                     |
| 8:40 - 9:00 a.m. | <i>Barmak Azizimoghaddam<br/>Mazdak Arabi</i> | <i>A framework for sensitivity analysis of distributed watershed models</i>                             |
| 9:00 - 9:20 a.m. | <i>Tamie L. Veith</i>                         | <i>How To: Understanding SWAT Model Uncertainty Relative to Measured Results</i>                        |
| 9:20 - 9:40 a.m. | <i>Mahdi Ahmadi<br/>Mazdak Arabi</i>          | <i>Multisite-Multivariate Calibration of Watershed Models</i>   |
| 9:40 - 9:45 a.m. | <i>Discussion &amp; Wrap Up</i>               |   |

8:00 a.m. - 9:45 a.m.

SESSION D3 - Bacteria, & Pathogens  
University Memorial Center - Room 382

Moderator: Claire Baffaut; Ali Sadeghi  
USDA-ARS

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| 8:00 - 8:20 a.m. | <i>Claire Baffaut<br/>Ali Sadeghi</i> | <i>Bacteria modeling with SWAT for assessment and remediation studies - A review</i> |
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| 8:20 - 8:40 a.m. | <i>Michelle Soupir</i>          | <i>Predicting in-field decay and edge-of-field transport of fecal indicators</i>                                       |
| 8:40 - 9:00 a.m. | <i>Mehran Niazi</i>             | <i>Watershed-Scale Fate and Transport of Bacteria Using the Arc-SWAT Model</i>   |
| 9:00 - 9:20 a.m. | <i>Jung-Woo Kim</i>             | <i>Including sediment-associated bacteria resuspension and settling in SWAT predictions of microbial water quality</i> |
| 9:20 - 9:45 a.m. | <i>Discussion &amp; Wrap Up</i> |  |

9:45 a.m. - 10:15 a.m. **Break** (beverages & snacks in UMC 235)

10:15 a.m. - 12 p.m.      **SESSION E1 - Model Structures to Simulate Spatially Distributed Landscape Processes with SWAT**      **Moderator:** Fred Hattermann  
Potsdam Institute for Climate Impact Research  
University Memorial Center - Room 386

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| 10:15 - 10:35 a.m. | <i>Jeff Arnold<br/>Peter Allen<br/>Martin Volk<br/>Cole Rossi<br/>Jimmy Williams<br/>David Bosch</i> | <i>Simulation of Landscape Processes in SWAT</i>   |
| 10:35 - 10:55 a.m. | <i>David D. Bosch</i>  | <i>Simulation of a Heavily Buffered Watershed using the SWAT Landscape Model</i>         |
| 10:55 - 11:15 a.m. | <i>Stefan Liersch<br/>Fred F. Hattermann</i>   | <i>Integration of tropical and sub-tropical wetlands in regional catchment modelling</i> |
| 11:15 - 11:35 a.m. | <i>Jorge Escurra</i>   | <i>SWAT Application for Adaptation Strategies in Cocibolca Basin</i>                     |
| 11:35 - 12:00 p.m. | <i>Discussion &amp; Wrap Up</i>  |  |

10:15 a.m. - 12 p.m.      **SESSION E2 - BMPs**      **Moderator:** Mike White  
University Memorial Center - Room 384      USDA-ARS

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| 10:15 - 10:35 a.m. | <i>Heather B. Hill<br/>Mehdi Ahmadi<br/>Mazdak Arabi</i>              | <i>A Targeting Strategy for Cost-Effective Implementation of Watershed Plans</i>               |
| 10:35 - 10:55 a.m. | <i>Indrajeet Chaubey<br/>Chetan Maringanti</i>                        | <i>Development of a tool to estimate Best Management Practices (BMP) efficiency using SWAT</i> |
| 10:55 - 11:15 a.m. | <i>Lizhong Wang</i>   | <i>Water Quality Impacts of Agricultural BMPs in a Suburban Watershed in New Jersey</i>        |
| 11:15 - 11:35 a.m. | <i>Gerardina Santese</i>  | <i>Evaluation of BMPs effectiveness on water quality in an intermittent Italian River</i>      |
| 11:35 - 11:55 a.m. | <i>Aleksey Sheshukov<br/>Kyle Douglas-Mankin<br/>Prasad Daggupati</i> | <i>Evaluating Effectiveness of Unconfined Livestock BMPs using SWAT</i>                        |
| 11:55 - 12:00 p.m. | <i>Discussion &amp; Wrap Up</i>                                       |  |

10:15 a.m. - 12 p.m.      **SESSION E3 - Biofuel Plant Simulation**      **Moderator:** Jim Kiniry  
University Memorial Center - Room 382      USDA-ARS

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| 10:15 - 10:35 a.m. | <i>Jim Kiniry</i>               | <i>Experiences with simulating switchgrass in diverse latitudes in the U.S.</i>                         |
| 10:35 - 10:55 a.m. | <i>Peter Schweizer</i>          | <i>Use of the SWAT Model to Evaluate the Sustainability of Bioenergy Production at a National Scale</i> |
| 10:55 - 11:15 a.m. | <i>Rob Mitchell</i>             | <i>Agronomic considerations for simulating switchgrass for biomass energy</i>                           |
| 11:15 - 11:35 a.m. | <i>Ken Vogel</i>                | <i>Switchgrass genetics: status, future directions and implications for simulations</i>                 |
| 11:35 - 12:00 p.m. | <i>Discussion &amp; Wrap Up</i> |   |

12 p.m. - 1 p.m.      **Lunch**  
Restaurants located on the first floor of the University Memorial Center include: Alferd Packer Grill, Al’s Fresco, El Canibal, Slumgullion, Soup/Chili & Salad Bar, The Tabor, Subway, Wok & Roll and more.

1:00 p.m. - 2:45 p.m.      **SESSION F1 - Pharmaceuticals**      **Moderator:** Virginia Jin  
University Memorial Center - Room 386      USDA-ARS

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|------------------|---|--|
| 1:00 - 1:20 p.m. | <i>LJ Thibodeaux</i>                    | <i>Conceptual Chemical Fate and Transport Models for Emerging Contaminants and SWAT Submodel Development</i>                   |
| 1:20 - 1:40 p.m. | <i>Kenneth Carlson<br/>Mazdak Arabi</i> | <i>Irrigation Ditch Facilitated Transport of Veterinary Pharmaceutical Compounds in a Semi-Arid Watershed</i>                  |
| 1:40 - 2:00 p.m. | <i>Dr. Thomas Heberer</i>               | <i>Behavior and redox sensitivity of pharmaceutical residues during bank filtration - Final lessons from the NASRI project</i> |
| 2:00 - 2:20 p.m. | <i>Larry Barber</i>                     | <i>Watershed Scale Chemical Signaling Networks, Endocrine Disruption, and Ecosystem Responses</i>                              |
| 2:20 - 2:45 p.m. | <i>Discussion &amp; Wrap Up</i>         |  |

1:00 p.m. - 2:45 p.m.      **SESSION F2 - Sediments, Nutrients, Carbons**      **Moderator:** Armen Kemanian  
University Memorial Center - Room 384      Texas AgriLife Research

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| 1:00 - 1:20 p.m. | <i>Solomon Folle</i>            | <i>Modeling Upland and Channel Sources of Sediment in the Le Sueur River Watershed, Minnesota</i>   |
| 1:20 - 1:40 p.m. | <i>Ann van Griensven</i>        | <i>In-Stream water quality processes in SWAT with different routing methods and adapted water quality modules for daily or sub-daily time steps</i> |
| 1:40 - 2:00 p.m. | <i>Armen Kemanian</i>           | <i>Integrating Nitrogen and Phosphorus Carbon Cycling in SWAT</i>   |
| 2:00 - 2:20 p.m. | <i>Nicola Fohrer</i>            | <i>Assessing the impact of point and diffuse sources pollution on nitrate load in a rural lowland catchment using the SWAT model</i>                |
| 2:20 - 2:40 p.m. | <i>Hiroaki Somura</i>           | <i>Numerical analyses on seasonal variations of nutrient salts and load discharges in Abashiri River Basin</i>                                      |
| 2:40 - 2:45 p.m. | <i>Discussion &amp; Wrap Up</i> |   |

1:00 p.m. - 2:45 p.m.      **SESSION F3 - Conservation Effects Assessment Project (CEAP)**      **Moderator:** Jay Atwood  
University Memorial Center - Room 382      USDA-NRCS

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| 1:00 - 1:20 p.m. | <i>Jay D. Atwood</i>            | <i>The CEAP National Cropland Assessment: Conversion of Crop Management Survey Data into APEX Simulation Input</i> |
| 1:20 - 1:40 p.m. | <i>Michael Shannon</i>          | <i>ARS CEAP Watershed Assessment Study Overview</i>  |
| 1:40 - 2:00 p.m. | <i>Indrajeet Chaubey</i>        | <i>Effectiveness of BMPs in controlling nonpoint source pollutant losses from a CEAP watershed</i>                 |
| 2:00 - 2:20 p.m. | <i>David Bosch</i>              | <i>Little River Watershed Conservation Practice Assessment with SWAT</i>   |
| 2:20 - 2:40 p.m. | <i>Susan Wang</i>               | <i>APEX simulation of CEAP sample points</i>   |
| 2:40 - 2:45 p.m. | <i>Discussion &amp; Wrap Up</i> |  |

2:45 p.m. - 3:00 p.m.      **Break and depart for Conference Outing**  
3:30 p.m. to 6:30 p.m. - **Bus 1** - tour Celestial Seasonings Tea Factory and the Shops on Pearl Street (<http://www.celestiaseasonings.com>)    (<http://www.boulderdowntown.com/>)

3:30 p.m. to 7:00 p.m. - **Bus 2** - depart to Chautauqua Historic District (hiking trails; picnic/park area) Naturalist, Dave Gustafson, (at Ranger Cottage) will give an overview covering the history and ecology of Boulder’s Open Space and Mountain Parks. (<http://www.chautauqua.com/>)

7 p.m. to 9 p.m. - Dinner at Chautauqua Dining Hall  
9 p.m. - buses will drop off at various locations



Friday, August 7, 2009

8:00 a.m. - 9:45 a.m.

SESSION G1 - Hydrology  
University Memorial Center - Room 386

Moderator: Nam Won Kim  
Korea Institute of Construction Technology

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|------------------|---|--|
| 8:00 - 8:20 a.m. | <i>Aisha M. Sexton</i>                                | <i>Comparison of Flow Calibration Using NEXRAD and Surface Rain Gauge Data in ArcSWAT</i>                        |
| 8:20 - 8:40 a.m. | <i>Rajesh Shrestha</i>                                | <i>Application of SWAT in Hydrologic and Nutrient Transport Modelling of the Lake Winnipeg Watershed</i>         |
| 8:40 - 9:00 a.m. | <i>Nam Won Kim<br/>Il Moon Chung<br/>Jeongwoo Lee</i> | <i>An analysis on the spatio-temporal variation of groundwater-surface water interactions in small watershed</i> |
| 9:00 - 9:20 a.m. | <i>Ilyas Masih</i>                                    | <i>Assessing the benefit of improved precipitation input in SWAT model simulations</i>                           |
| 9:20 - 9:40 a.m. | <i>Matjaz Glavan</i>                                  | <i>Application of SWAT Model in small flysch catchments in Slovenia</i>  |
| 9:40 - 9:45 a.m. | <i>Discussion &amp; Wrap Up</i>                       |  |

8:00 a.m. - 9:45 a.m.

SESSION G2 - BMPs  
University Memorial Center - Room 384

Moderator: Indrajeet Chaubey  
Purdue University

|                  |                                 |  |
|------------------|---------------------------------|--|
| 8:00 - 8:20 a.m. | <i>David Waidler</i>            | <i>Conservation Practice Modeling Manual for SWAT and APEX</i>   |
| 8:20 - 8:40 a.m. | <i>Michael White</i>            | <i>Development of a Simple Conservation Practice Evaluation Tool using SWAT</i>  |
| 8:40 - 9:00 a.m. | <i>Carl Amonett</i>             | <i>Modeling Nutrient Loads From Poultry Operations in the Toledo Bend Reservoir and Sam Rayburn Reservoir watersheds of East Texas</i> |
| 9:00 - 9:20 a.m. | <i>Pushpa Tuppad</i>            | <i>Modeling Environmental Benefits of Conservation Practices in Richland-Chambers Watershed, Texas</i>                                 |
| 9:20 - 9:45 a.m. | <i>Discussion &amp; Wrap Up</i> |  |

8:00 a.m. - 9:45 a.m.

SESSION G3 - Metals & Pesticides  
University Memorial Center - Room 382

Moderator: Cole Rossi  
USDA-ARS

|                  |   |   |
|------------------|---|---|
| 8:00 - 8:10 a.m. | <i>Cole Rossi</i>   | <i>Metal Transport in SWAT</i>  |
| 8:10 - 8:50 a.m. | <i>Madgi Selim</i>  | <i>Transport and Retention of Heavy Metals in Soils: An Overview</i>  |
| 8:50 - 9:10 a.m. | <i>Michael Winchell</i>   | <i>Evaluation of a SWAT parameterization strategy for pesticide concentration predictions without site-specific calibration</i> |
| 9:10 - 9:30 a.m. | <i>Heather B. Hill<br/>Maya Motorova<br/>Tony Spencer<br/>Mehdi Ahmadi<br/>Mazdak Arabi</i> | <i>Modeling the Fate and Transport of Pesticides in Agricultural Watersheds Using SWAT</i>                                      |
| 9:30 - 9:45 a.m. | <i>Discussion &amp; Wrap Up</i>   |   |

9:45 a.m. - 10:15 a.m. Break (beverages & snacks in UMC 235)

10:15 a.m. - 12 p.m.

SESSION H1 - Model Development  
University Memorial Center - Room 386

Moderator: Jeff Arnold  
USDA-ARS

|                    |  |   |
|--------------------|--|---|
| 10:15 - 10:35 a.m. | <i>Getnet Betrie<br/>Ann van Griensven</i> | <i>Migration of SWAT 2005 in to Open Modeling Interface (OpenMI) and its Application on the Simulation of Sediment Transport in the Blue Nile</i> |
| 10:35 - 10:55 a.m. | <i>Josiane Belanger</i>                    | <i>Freeze/Thaw Dynamics in Soils on the Boreal Plain: Comparison of SWAT Predictions to Measured Data</i>   |
| 10:55 - 11:15 a.m. | <i>Balaji Narasimhan<br/>Peter Allen</i>   | <i>Improved Physically Based Approaches for Channel Erosion Modelling SWAT</i>  |
| 11:15 - 11:35 a.m. | <i>Daniel R. Fuka</i>                      | <i>Integration of a simple process-based snowmelt model into SWAT</i>   |

|                    |                                 |   |
|--------------------|---------------------------------|---|
| 11:35 - 11:55 a.m. | <i>Gabriel Vazquez-Amabile</i>  | <i>AGRIRISK -SWAT: an add-on application for AVSWAT2000 to compute hydrologic and NPS pollution risk analysis in rural watersheds</i> |
| 11:55 - 12:00 p.m. | <i>Discussion &amp; Wrap Up</i> |   |

10:15 a.m. - 12 p.m.

SESSION H2 - Hydrology  
University Memorial Center - Room 384

Moderator: Claire Baffaut  
USDA-ARS

|                    |   |   |
|--------------------|---|---|
| 10:15 - 10:35 a.m. | <i>Alejandra Stehr</i>                  | <i>Evaluation of different spatial discretizations schemes in the hydrological response of an Andean watershed</i>                  |
| 10:35 - 10:55 a.m. | <i>Jiayu Wu</i>                         | <i>Estimating Hydrologic Budgets for Gravity Irrigation District under Semiarid Climate Condition in the Yellow River basin</i>     |
| 10:55 - 11:15 a.m. | <i>Imuwahen Priscilla<br/>Igbinosun</i> | <i>Integration of satellite data in the SWAT watershed water quality model: A case study of Roxo reservoir watershed, Portugal.</i> |
| 11:15 - 11:35 a.m. | <i>Johnathan R. Bumgarner</i>           | <i>Challenges in Calibrating a Large Watershed Model with Varying Hydrogeologic Conditions</i>                                      |
| 11:35 - 11:55 a.m. | <i>Zachary M. Easton</i>                | <i>SWAT-Water Balance: Development and application of a physically based landscape water balance in the SWAT model</i>              |
| 11:55 - 12:00 p.m. | <i>Discussion &amp; Wrap Up</i>         |   |

10:15 a.m. - 12 p.m.

SESSION H3 - SWAT Applications  
University Memorial Center - Room 382

Moderator: Antonio Lo Porto  
Water Research Institute (IRSA), Italy

|                    |  |   |
|--------------------|--|---|
| 10:15 - 10:35 a.m. | <i>Dr. Vinay K. Pandey</i>   | <i>Development of Effective Management Plan for a Small Watershed Using AVSWAT</i>  |
| 10:35 - 10:55 a.m. | <i>Shaochun Huang<br/>Valentina Krysanova<br/>Fred F. Hattermann</i> | <i>Assessment of Spatial-Temporal Dynamics of Water Fluxes in Germany under Climate Change</i>  |
| 10:55 - 11:15 a.m. | <i>Emmanuel Obuobie</i>  | <i>Climate Change Inpacts on Hydrology and Water Resources in the White Volta River Basin, West Africa</i>  |
| 11:15 - 11:35 a.m. | <i>Hua Xie</i>   | <i>The Use of Global Databases in Developing SWAT Applications to Sub-Saharan Africa and South Asia for Large-scale Hydrological and Crop Simulation: Preliminary Results of Data Preprocessing and Harmonization</i> |
| 11:35 - 11:55 a.m. | <i>Pedro Chambel Leitao</i>  | <i>Satellite Data and New Methodolgoies for SWAT Validation in Euthrophication Studies</i>  |
| 11:55 - 12:00 p.m. | <i>Discussion &amp; Wrap Up</i>                                      |   |

12 p.m. - 1 p.m.

Lunch  
Restaurants located on the first floor of the University Memorial Center include: Alferd Packer Grill, Al’s Fresco, El Canibal, Slumgullion, Soup/Chili & Salad Bar, The Tabor, Subway, Wok & Roll and more.

1:00 p.m. - 2:45 p.m.

SESSION I1 - SWAT Applications  
University Memorial Center - Room 386

Moderator: Pushpa Tuppad  
Texas AgriLife Research

|                  |  |   |
|------------------|--|---|
| 1:00 - 1:20 p.m. | <i>Maya Motorova<br/>Mahdi Ahmadi<br/>Barmak Azizimoghaddam<br/>Mazdak Arabi</i> | <i>Spatiotemporal Variability of Nutrient Processes under Changing Climate</i>                                  |
| 1:20 - 1:40 p.m. | <i>Michael W. Van Liew</i>   | <i>A post processing tool to assess sediment and nutrient source allocations from SWAT stimulations</i>         |
| 1:40 - 2:00 p.m. | <i>Pedro Chambel Leitao</i>  | <i>Land Use Resolution Impact on Modelling Water Quantity and Quality - Tagus Watershed</i>                     |
| 2:00 - 2:20 p.m. | <i>Dave Bubenheim</i>  | <i>Modeling River Flows and Sediment Dynamics for the Laguna de Santa Rosa Watershed in Northern California</i> |
| 2:20 - 2:45 p.m. | <i>Discussion &amp; Wrap Up</i>  |   |

1:00 p.m. - 2:45 p.m.

SESSION I2 - InStream Sediment & Pollutant Transport  
University Memorial Center - Room 384

Moderator: Pedro Chambel Leitao  
IST-MARETEC, Portugal

|                  |   |   |
|------------------|---|---|
| 1:00 - 1:20 p.m. | Kim Loi Nguyen  | Application of SWAT Model for Sediment and Water Quality Assessment in La NGA Watershed - Vietnam |
| 1:20 - 1:40 p.m. | Xuesong Zhang   | GIS-based Spatial Precipitation for SWAT  |
| 1:40 - 2:00 p.m. | Claire Baffaut<br>E. John Sadler<br>Robert Lerch<br>Newell Kitchen<br>Kenneth Sudduth | SWAT development for simulating flow and pesticide movement in a large clay-pan watershed         |
| 2:00 - 2:20 p.m. | Michael W. Van Liew   | Streamflow, Sediment, and Nutrient Simulation of the Bitterroot Watershed Using SWAT              |
| 2:20 - 2:45 p.m. | Discussion & Wrap Up  |   |

1:00 p.m. - 2:45 p.m.

SESSION I3 - Environmental Applications  
University Memorial Center - Room 382

Moderator: Nicola Fohrer  
Christian-Albrechts-University, Kiel, Germany

|                  |  |  |
|------------------|--|--|
| 1:00 - 1:20 p.m. | Lula T. Ghebremichael<br>T. L. Veith<br>M. C. Watzin | SWAT modeling of Critical Source Area for Runoff and Phosphorus loss: Lake Champlain Basin   |
| 1:20 - 1:40 p.m. | Aditya Sood  | Using SWAT as a Tool for Sustainable Landuse Policy Development  |
| 1:40 - 2:00 p.m. | Gerald Whittaker                                     | Calculation of optimal trade-offs between farm profit, water quality and fish diversity  |
| 2:00 - 2:20 p.m. | Stefan Julich  | Management scenarios for reduced nitrate loads in a small catchment in Brittany (France) - the problem of data scarcity and the resulting predictive uncertainty |
| 2:20 - 2:45 p.m. | Discussion & Wrap Up                                 |  |

2:45 p.m. - 5:00 p.m.

Open Forum for Future SWAT Discussion  
University Memorial Center - Room 235

Moderator: Raghavan Srinivasan; Jeff Arnold  
Texas AgriLife Research; USDA-ARS

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SWAT

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