

SUNDAY, MAY 3

4:00PM Registration Opens

LOCATION: Atrium- Mezzanine Level

5:30PM-7:30PM Climate Change Poster Session

Moderator: Ali Sadeghi

LOCATION: Atrium- Mezzanine Level

Poster #	Paper #	Title & Authors
1	2144028	Evaluating the cover crops as an climate change adaptation strategy Lei Gu, University of Wisconsin-Madison, Madison, WI United States (L. Gu, R. P. ANEX)
2	2124136	Farmer-Led Climate Change Adaptations for Agro-Ecosystems in the Mid-Atlantic U.S. Natalia Salazar, University of Maryland, College Park, Rockville, MD United States (N. Salazar, R. L. Hill, T. McCoy, G. Felton, K. Kroll, A. Shirmohammadi)
3	2118629	Effect of Biochar Application on Pakchoi (<i>B. chinensis</i> L.) Utilizing Nitrogen in Acid Soil Lihong Xue, Jiangsu Academy of Agricultural Sciences, Nanjing, China (L. Xue, Y. Yu, L. Yang, S. He, Y. Feng)
4	2117393	Climate change mitigation through environmental intensification a case study of Sub – Sahara African oyebola Elemide, Federal college of Agriculturer Akure Ondo state Nigeria, Federal college of Agriculturer Akure Ondo state Nigeria, Akure, Ondo state Nigeria (O. A. Elemide)
5	2120712	HOW TO MAKE OUR CITIES SELF-REGULATING Morteza Tavanaie Marvi, University of Illinois at Urbana-Champaign, Urbana, IL United States (S. Shahmoradi, M. Tavanaie Marvi)
6	2136528	EFFECT OF AEROPONIC GROWTH OF ALGAE FOR BIOFUEL PRODUCTION. Michael Johnson, Rutgers University, Branchburg, NJ United States (M. T. Johnson)
7	2086191	Transforming conventional sugarcane into sustainable biofuel feedstock production: Optimizing C4 grass feedstock selection through lignin analysis and conversion efficiency study Jon Wells, University of Hawaii at Manoa, Honolulu, HI United States (J. M. Wells, S. E. Crow, A. Hashimoto, R. Ogoshi, J. Kiniry)
8	2118583	Effects of continuous straw retention on the greenhouse gas emissions of rice-wheat rotation systems in the middle-lower reaches of Yangtze River, China Ganghua Li, Nanjing Agricultural University, , (P. Hou, Y. Ding, L. Xue, S. Wang, L. Yang, G. Li)
9	2100223	The Response of Benthic Macroinvertebrate Communities to Climate Change within the Saginaw River Watershed Fariborz Daneshvar, Michigan State University, East Lansing, MI United States (F. Daneshvar, A. Nejadhashemi, M. R. Herman)
10	2095102	Defining Drought in the Context of Stream Health Elaheh Esfahanian, Michigan State University, East Lansing, MI United States (E. Esfahanian, A. Nejadhashemi, S. A. Woznicki, F. Daneshvar)
11	2092860	Impacts of Climate Change on Fish Biological Integrity within the Saginaw Bay Watershed Matthew Herman, Michigan State University, East Lansing, MI United States (M. R. Herman, A. Nejadhashemi, F. Daneshvar)
12	2093181	Relationships between Livestock Production and Climate Change: Impacts, Adaptation, and Human Dimensions

- Maria Rojas Downing, Michigan State University, East Lansing, MI United States (M. M. Rojas Downing, A. Nejadhashemi)
- 13 2112695 **Climate Change and Eastern Africa: A Review of Impact on Major Crops**
Umesh Adhikari, Michigan State University, East Lansing, MI United States (U. Adhikari, A. Nejadhashemi, S. A. Woznicki)
- 14 2123528 **Prediction of climate change impacts on agricultural watersheds and the performance of winter cover crops: Case study of the upper region of the Choptank River Watershed**
Sangchul Lee, Univ. of Maryland, Glenn Dale, MD United States (S. Lee, I. Yeo, A. Sadeghi, G. W. McCarty, W. D. Hively, M. W. Lang)
- 15 2142439 **Coupling the Short-Term Global Forecast System Weather Data with Distributed Watershed Models: Implication for Landscape Management**
Andrew Sommerlot, Virginia Tech, Blacksburg, VA United States (A. Sommerlot, Z. M. Easton)
- 16 2123798 **Neural network analysis on the effect of heat fluxes on greenhouse gas emissions from anaerobic swine waste treatment lagoon**
Nanh Lovanh, usda-ars, Bowling Green, KY United States (N. Lovanh, J. Loughrin, M. Rysz, A. Quintanar, R. Mahmood)
- 17 2118647 **Climate changes on drainage systems: Effects on corn productivity in Brazil**
Nicole Resende, University of São Paulo, Piracicaba, Brazil (N. C. Resende, J. H. Miranda, S. C. Chou, R. Cooke)
- 18 2118964 **Soil conditions influence in seasonal forecasting of precipitation climate extremes in Brazil**
Nicole Resende, University of São Paulo, Piracicaba, Brazil (N. C. Resende, S. C. Chou)
- 19 2144303 **Climate Change Modeling and interface of Climate Models with the Interface of Climate Models with the Agro-ecosystem models**
Ramesh Rurda, University of Guelph, Guelph, ON Canada (R. Rurda, G. Golmohammadi, P. Goel)
- 20 2123009 **Evaluating the effect of climate change on crop yield in the St. Joseph River Watershed, Eastern Corn Belt**
Ruoyu Wang, Department of ABE, Purdue University, Lafayette, IN United States (R. Wang, L. Bowling, K. Cherkauer)
- 21 2101156 **Risk Based Multi Criteria Decision Analysis for Ranking Climate Change Mitigation Scenarios**
Pouyan Nejadhashemi, Michigan State University, East Lansing, MI United States (R. Javidi Sabbaghian, A. Nejadhashemi, M. Zarghami, M. Sharifi)
- 22 2143681 **Forecasting Streamflows in the Apalachicola-Chattahoochee-Flint River Basin Using Ensemble Streamflow Predictions (ESP)**
Puneet Srivastava, Auburn University, Auburn, AL United States (G. Mirhosseini, P. Srivastava)

5:30PM-7:30PM Welcome Reception

LOCATION: Atrium- Mezzanine Level

Welcome by Adel Shirmohammadi

MONDAY, MAY 4

8:00AM-9:00AM Keynote Speaker: Dr. Sonny Ramaswamy

Director of the USDA's National Institute of Food and Agriculture (NIFA)

CLIMATE CHANGE AND AGRICULTURE: A GLOBAL CHALLENGE

Introduced by Adel Shirmohammadi

LOCATION: Rivernorth Ballroom

9:00AM-12:00PM Concurrent Technical Sessions

9:00AM-12:00PM Session M1 - Climate Impacts on Water Resources - 1

Moderator: Ali Sadeghi

LOCATION: Lakeview

Time	Paper #	Title & Authors
9:00AM		Introduction
9:05AM	2122019	Soil Moisture and Climate Variability *Randal Koster, NASA/GSFC, Greenbelt, MD United States (R. Koster)
9:25AM	2124181	Evaluation of climate change impact on hydrological drought in Virginia Hyunwoo Kang, Virginia Tech, Blacksburg, VA United States (H. Kang, V. Sridhar)
9:40AM	2095906	What do climate projections say about future droughts in Alabama? Puneet Srivastava, Auburn University, Auburn, AL United States (N. Mishra, P. Srivastava)
9:55AM	2093305	A Frequency Analysis on Precipitation-Drought Pattern Across the USA in a Changing Climatic Environment Jia Liu, Michael Baker Cooperation, Manassas, VA United States (J. Liu, D. Sample, W. Thomas)
10:10AM		BREAK
10:20AM	2123799	Response of Subsurface Drainage Systems to Possible Changes in Climate in Illinois Rabin Bhattarai, University of Illinois at Urbana-Champaign, Urbana, IL United States (R. Bhattarai, S. Li, J. Monical, R. Cooke)
10:35AM	2114686	IMPACTS OF CLIMATE CHANGE ON RUNOFF FROM HIGHLY GLACIERIZED RIVER BASINS Nina Omani, Purdue University, West Lafayette, IN United States (N. Omani, R. Srinivasan)
10:50AM	2144275	Simulating climate change impacts on crop water use, surface runoff, and subsurface drainage in southern Quebec, Canada Zhiming Qi, McGill University, Sainte-Anne-de-Bellevue, QC Canada (Z. Qi)
11:05AM	2123797	Impacts of Climate Change on Water Resources in an Agricultural Watershed in Ontario Canada Ramesh Rurda, University of Guelph, Guelph, ON Canada (G. Golmohammadi, R. Rurda, S. Prasher, A. Madani, P. Goel)
11:20AM	2123881	Vulnerability of water resources to climate change in Kansas Aavudai Anandhi, Independant researcher, , (A. A. Anandhi, L. Diwakar, S. Upendram)

9:00AM-12:00PM Session M2 - Adaptation Strategies - I

Moderator: Indrajeet Chaubey

LOCATION: Lincoln Park

Time	Paper #	Title & Authors
9:00AM		Introduction
9:05AM	2084732	Usable Climate Information for Agriculture *Linda Prokopy, Purdue University, West Lafayette, IN United States (L. Prokopy)
9:25AM	2124221	Farm-Scale Integrated Assessment to Identify Profit-Maximizing Adaptations to

		Climate Change in the Corn Belt
		Benjamin Gramig, Purdue University, West Lafayette, IN United States (B. M. Gramig, S. E.M., J. Andresen, E. Takle, S. Patton, D. Niyogi, L. Biehl)
9:40AM	2095877	“Intelligent Ensemble” Projections of Precipitation and Surface Radiation in support of Agricultural Climate Change Adaptation
		Patrick Taylor, NASA Langley Research Center, Hampton, VA United States (P. C. Taylor, N. C. Baker)
9:55AM	2090192	Water Resources Planning and Management to Mitigate Drought in a Changing Climate: Monitoring, Management and Outlooks
		Jae Ryu, University of Idaho, Boise, ID United States (J. Ryu)
10:10AM		BREAK
10:20AM	2143452	Mist- cooling to delay bloom and prevent frost damage- old idea new technology
		Ishara Rijal, Michigan State University, East Lansing, MI United States (I. Rijal, J. Flore, J. Andresen)
10:35AM	2141740	Coping with Climate Change in the Philippines: Advancements and Challenges in Rice R&D
		Manuel Jose Regalado, Philippine Rice Research Institute, Science City of Munoz, Philippines (M. C. Regalado, R. F. Orge)
10:50AM	2144076	The importance of maintenance in Green Infrastructure (GI): A study of GI performance under extreme precipitation and site maintenance conducted through community programming
		Maria Raquel Catalano de Sousa, Drexel Univeristy, Philadelphia, PA United States (M. Catalano de Sousa, L. Smalls-Mantey, F. Montalto)

9:00AM-12:00PM Session M3 - Climate Impacts on Agro-Ecosystem - 1

Moderator: Adel Shirmohammadi

LOCATION: De Paul

Time	Paper #	Title & Authors
9:00AM		Introduction
9:05AM	2123670	Climate Change Impacts on U.S. Agricultural Total Factor Productivity
		*Xin-Zhong Liang, University of Maryland, College Park, MD United States (X. Liang, Y. Wu, R. G. Chambers, W. Gao, C. Sun)
9:25AM	2142062	Climate Change Impacts on Maize-yield Potential in the Southwestern United States
		Seung Hee Kim, Chapman University, Orange, CA United States (S. Kim, J. Kim, R. Walko, B. Myoung, D. Stack, M. Kafatos)
9:55AM	2088440	Application of the CERES-Maize Model for Climate Change Impact Assessment in Rainfed Corn Production in Isabela, Philippines
		Orlando Balderama, Isabela State University, Echague, Isabela Philippines (O. F. Balderama, E. Tongson, L. Alejandro, L. Caraan, M. Pedrablanca)
10:10AM		BREAK
10:20AM	2143764	Live Weight Gain Reduction Due to Heat Stress in Broilers: A Meta-Analytic Study of the Environment Thresholds that Impact Production Losses
		Daniella Moura, State University of Campinas, Campinas, Sao Paulo Brazil (M. M. Vale, J. A. Santos, D. J. Moura, R. A. Vercellino)
10:35AM	2144188	USDA Hub-SEED : Preparing seasonal-scale ensemble weather and climate products that are useful and usable for decisions in agriculture
		Caspar Ammann, National Center for Atmospheric Research, Boulder, CO United States (C. M. Ammann, L. Buja, R. Johnson, R. Steele)
10:50AM	2121235	Farm simulation: a tool for evaluating the mitigation of greenhouse gas emissions and the adaptation of dairy production systems to climate change
		C. Rotz, USDA-ARS, University Park, PA United States (C. A. Rotz, H. Skinner, A. Stoner, K. Hayhoe)

11:05AM 2122545 **Agro-Climatic Risk Management for better decision making in Latin America**
Camilo Barrios Perez, CIAT - International Center for Tropical Agriculture, Cali,

2:00PM-5:00PM Concurrent Technical Sessions

2:00PM-5:00PM Session M4 - Mitigation Strategies - 1

Moderator: Rafael Muñoz-Carpena

LOCATION: Lakeview

Time	Paper #	Title & Authors
2:00PM		Introduction
2:05PM	2094646	Carbon Capture and Sequestration---the Role of Agriculture and Soils *Bill Stout, Texas A&M University, Meridian, ID United States (B. A. Stout, R. Lal)
2:25PM	2141437	Measuring GHG and Water Quality Improvements from Crop Land in the Chesapeake Bay Watershed. Jonathan Winsten, Winrock International, University of Maryland, Shelburne, VT United States (J. Winsten)
2:40PM	2095015	Large-scale identification of hot spots for soil carbon demand under climate change and bioenergy production Martin Volk, UFZ-Helmholtz-Centre for Environmental Research, Leipzig, Germany (U. Franko, F. Witing, G. Jaeckel, M. Volk)
2:55PM	2143830	Creating Marketable Carbon Offset Credits Using the Grazing Land and Livestock Management (GLLM) Methodology Jonathan Winsten, Winrock International, Shelburne, VT United States (N. Martin, T. Pearson, N. Harris, J. Winsten, L. Nichols)
3:10PM	2124156	An Avenue for Mitigation: Lessons from California's Offset Program Dawn Chianese, ENVIRON International Corporation, Los Angeles, CA United States (D. S. Chianese, D. T. Kim, D. D. Daugherty)
3:25PM		BREAK
3:35PM	2143388	A Proposed Alternative Measure for Climate Change Potential F. DeGroff, CCSF, San Francisco, CA United States (F. DeGroff)
3:50PM	2119799	Evaluating Biomass Productivity and Pollution Mitigation using a Pilot-Scale Revolving Algal Biofilm (RAB) Cultivation System Martin Gross, Iowa State University, Ames, IA United States (M. Gross)
4:05PM	2095063	Trade-offs of biogas production: comparing crop rotations under different climate scenarios Martin Volk, UFZ-Helmholtz-Centre for Environmental Research, Leipzig, Germany (M. Volk, S. Lautenbach, M. Strauch, G. W. Whittaker, R. Seppelt)
4:20PM	2146697	Statistical Downscaling of Precipitation Processes for Climate-Related Impact and Adaptation Studies Van-Thanh-Van Nguyen, McGill University, Montreal, QC Canada (V. Nguyen)
4:35PM	2142010	Role of Bioenergy Feedstocks in Climate Change Adaptation and Mitigation Vijaya Gopal Kakani, Oklahoma State University, Stillwater, OK United States (V. Kakani, R. L. Huhnke, K. Dhakal, P. Wagle, A. J. Foster)

2:00PM-5:00PM Session M5 - Agro-Ecosystem Sustainability (Economic, Environmental, and Human Health)

Moderator: Daren Harmel

LOCATION: Lincoln Park

Time	Paper #	Title & Authors
2:00PM		Introduction
2:05PM	2150932	The CO2 losses from grassland soils: effects of atmospheric CO2 enrichment and

		implications for climate change adaptation
		*Philip Fay, USDA-ARS, Temple, TX United States (P. Fay, V. L. Jin, M. J. Aspinwall, L. G. Reichmann, A. C. Procter, D. Hui, R. B. Jackson, H. W. Polley)
2:25PM	2143848	A holistic workflow development for agricultural supply chain analysis: Integration of meteorological forecasting, crop simulation, and supply chain optimization models Tao Lin, University of Illinois, Urbana, IL United States (T. Lin, D. LeBauer, L. Rodriguez, S. Wang)
2:40PM	2095479	Landscape Conservation Cooperatives: Identifying climate challenges and opportunities for wildlife conservation and water quality in working lands. Robert Clevensine, US Fish and Wildlife Service, Moline, IL (G. M. White, G. Salmon)
2:55PM	2113540	Climate and land-use changes at the Third Pole: Reciprocal influence between climate and land-use changes & the impact on future development policy Ritodhi Chakraborty, University of Wisconsin, Madison, WI United States (T. L'ecuyer, R. Chakraborty, A. S. Daloz)
3:10PM	2122717	Climate Change Impact on Critical Source Area Identification in a Maryland Watershed Jaison Renkenberger, University of Maryland, , (J. Renkenberger, H. Montas, P. Leisnham, V. Chanse, A. Shirmohammadi, A. Sadeghi, K. Brubaker, A. Rockler, T. Hutson, D. Lansing)
3:25PM		BREAK
3:35PM	2145036	Impacts of climate change for sustainable bioenergy production in the South fork of Iowa River watershed, IA Miaie Ha, Argonne National Laboratory, Lemont, IL United States (M. Ha, M. Wu)
3:50PM	2143306	Agricultural Land Transition in the American West: Societal and Ecological Pressures and Implications Monica Hubbard, Boise State University, Boise, ID United States (M. Hubbard)
4:05PM	2134789	Impact of global warming on beef cattle production cost in Brazil Daniella Moura, State University of Campinas, Campinas, Sao Paulo Brazil (D. J. Moura, I. A. Naas, D. D. Salgado, C. B. Romanini, M. M. Vale, S. R. Souza)
4:20PM	2143025	Changes in water footprint of beef cattle production in Southern Great Plains under changing climate Narayanan Kannan, Tarleton State University, Stephenville, TX United States (N. Kannan, A. A. Anandhi, E. Osei, A. Saleh)
4:35PM	2143047	Computer modeling of beef cattle grazing under changing climate, land use, and markets Ali Saleh, Tarleton State University, , TX United States (A. Saleh, E. Osei, N. Kannan, O. Gallego, M. Arango)

2:00PM-5:00PM Session M6 - Climate Change Impacts

Moderator: Ali Madani

LOCATION: De Paul

Time	Paper #	Title & Authors
2:00PM		Introduction
2:05PM	2123964	Multi-scale satellite assessment of water availability and agricultural drought:from field to global scales *Martha Anderson, USDA-ARS, Beltsville, MD United States (M. Anderson, C. Hain, F. Gao, Y. Yang, W. Kustas)
2:25PM	2143960	Modelling and Assimilation of Root-zone Soil moisture using Near-Surface Observations from Soil Moisture Ocean Salinity (SMOS) Satellite Rabindra Panda, School of Earth, Ocean and Climate Sciences, Indian Institute of Technology Bhubaneswar, School of Earth, Ocean and Climate Sciences, Indian

		Institute of Technology Bhubaneswar, Bhubaneswar, Odisha India (G. Singh, R. K. Panda)
2:40PM	2144157	Methods for Producing Charcoal for Climate improvement Purposes. Thomas Miles, Principal, T.R.Miles Technical Consultants, Inc, Board Member, USBI (United States Biochar Initiative), Portland, OR United States (T. R. Miles, R. W. Larson)
2:55PM	2141843	Investigation of Spatial and Temporal Variability of Precipitation using the Entropy Theory Maya Atieh, University of Guelph, Guelph, ON Canada (M. Atieh, B. Gharabaghi, R. Rurda)
3:10PM	2143920	Development and Use of a Dual Purpose Biochar Retort Wayne Teel, James Madison University, Harrisonburg, VA United States (W. S. Teel)
3:25PM		BREAK
3:35PM	2144192	Biochar Importance from a Combined Soils and Climate Perspective Thomas Miles, TR Miles Technical Consultants, Inc., Board Member, USBI (United States Biochar Initiative), Portland, OR United States (T. R. Miles, R. W. Larson)
3:50PM	2143839	Trophic Conversion of Facultative Microalgae for High-Ammonium Removal from Wastewaters Wenguang Zhou, University of Minnesota, Saint Paul, MN United States (W. Zhou, J. Wang, M. Min, Q. Lu, C. Chen, P.E. Urriola, G.C. Shurson, H.R. Gislserod, P. Chen, R. Ruan)
4:05PM	2145294	Effectiveness of Controlled Drainage as a climate change adaptation strategy for the Western Lake Erie Basin Lindsay Pease, The Ohio State University, Columbus, OH United States (L. Pease, N. Fausey, J. F. Martin)

TUESDAY, MAY 5

8:00AM-9:00AM Keynote Speaker: Dr. Chris Milly

Research Hydrologist for the U.S. Geological Survey (USGS)

QUANTIFYING POTENTIAL EVAPOTRANSPIRATION IN A CHANGING CLIMATE

Introduced by Rafael Muñoz-Carpena

LOCATION: Rivernorth Ballroom

9:00AM-12:00PM Concurrent Technical Sessions

9:00AM-12:00PM Session T1 - Climate Impacts on Water Resources - 2

Moderator: Puneet Srivastava

LOCATION: Lakeview

Time	Paper #	Title & Authors
9:05AM		Introduction
9:10AM	2122054	What changes do the CMIP5 climate models predict for South Asia and what are some potential impacts on managed ecosystems and water resources Aavudai Anandhi, Kansas State University, Manhattan, KS United States (A. A. Anandhi, N. Omani, I. Chaubey, R. Horton, D. Bader, R. Nanjundiah)
9:25AM	2143212	Baseflow Response to Climate Variability Induced Droughts in the Apalachicola-Chattahoochee-Flint River Basin Sarmistha Singh, Auburn University, Auburn, AL United States (S. Singh, P. Srivastava,

9:40AM	2123838	A. Abebe, S. Mitra) Change in stream flow and winter precipitation regimes in Ontario Ramesh Rurda, University of Guelph, Guelph, ON Canada (R. Rurda, T. Dickinson, A. Bhutt, A. Amili)
9:55AM	2143182	Effect of ENSO induced Climate Variability on Groundwater Levels in the Lower Apalachicola-Chattahoochee-Flint River Basin Subhasis Mitra, Auburn University, Auburn, AL United States (S. Mitra, P. Srivastava, S. Singh)
10:10AM		BREAK
10:40AM	2144134	Assessment of water availability for conterminous United States under changing climate Narayanan Kannan, Tarleton State University, Stephenville, TX United States (N. Kannan, A. A. Anandhi, S. Roy, J. Rath)
10:55AM	2144305	Exploring Water Management Options with COWA: A Coupled Human-Climate-Water Model Safa Motesharrei, SESYNC (National Socio-Environmental Synthesis Center), University of Maryland, College Park, MD United States (S. Motesharrei, C. Gustafson, J. Rivas, E. Kalnay, F. Miralles-Wilhelm)

9:00AM-12:00PM Session T2 - Adaptation Strategies - 2

Moderator: Adel Shirmohammadi

LOCATION: Lincoln Park

Time	Paper #	Title & Authors
9:00AM		Introduction
9:05AM	2114755	Increasing the Adaptive Capacity of Agriculture to Climate Change *Jerry Hatfield, USDA ARS ONP, Beltsville, MD United States (C. L. Walthall, J. L. Hatfield, S. Schneider)
9:25AM	2143555	Effect of climate change on groundwater recharge and long term sustainable utilisation of groundwater in the sub-humid, sub-tropical region of Eastern India Rabindra Panda, Indian Institute of Technology Bhubaneswar, Indian Institute of Technology Bhubaneswar, Bhubaneswar, Odisha India (S. Jena, R. K. Panda, S. Tripathy)
9:40AM	2142971	Adapting Nitrogen Management to the Increasing Climatic Uncertainty Benjamin Dumont, ULg - Gembloux Agro-Bio Tech, Dpt. Biosystems Engineering, Precision Agriculture unit, Michigan State University, Dpt. Geological Sciences, Gembloux, Namur Belgium (B. Dumont, B. Basso, J. Destain, B. Bodson, M. Destain)
9:55AM	2127051	On-Farm Water Recycling as an Adaptation Strategy for Drained Agricultural Land Jane Frankenberger, Purdue University, West Lafayette, IN United States (J. Frankenberger, B. Allred, D. Gamble, L. Brown)
10:10AM		BREAK
10:20AM	2122128	Adaptation Strategies for Livestock Production Enterprises on Western Rangelands *Herbert Polley, USDA/Agricultural Research Service, Temple, TX United States (H. W. Polley, L. A. Joyce, D. D. Briske, J. R. Brown, B. A. McCarl, D. W. Bailey)
10:40AM	2122791	Effectiveness of Best Management Practices with Changing Climate in a Maryland Watershed Jaison Renkenberger, University of Maryland, (J. Renkenberger, H. Montas, V. Chanse, P. Leisnham, A. Sadeghi, A. Shirmohammadi, K. Brubaker, A. Rockler, T. Hutson, D. Lansing)
10:55AM	2091353	Making Farm Management Decisions Based on Global Weather Events Tyler Mark, University of Kentucky, Lexington, KY United States (T. Mark, T. Griffin, J. D'Antoni)

11:10AM **2108109** **Determining Adaptability Factor in Modern Controlled Plant Production Systems**
Raman Shamshiri, Universiti Putra Malaysia, Serdang Selangor (R. Shamshiri, W. Wan Ismail, D. B. Ahmad)

9:00AM-10:30AM Session T3-a - Mitigation Strategies - 2

Moderator: Pouyan Nejadhashemi

LOCATION: De Paul

Time	Paper #	Title & Authors
9:00AM		Introduction
9:05AM	2147635	Reduction of Greenhouse Gas Emissions and C footprint of CAFO's by Anaerobic Digestion and Nutrient Recovery. *Harold Collins, USDA_ARC, Temple, TX United States (H. P. Collins)
9:25AM	2121469	Capture of methane by biofilter fungi - A chromatographic isotherm study Jason Oliver, University of Minnesota, St. Paul, MN United States (J. P. Oliver, J. S. Schilling)
9:40AM	2124152	A computational fluid dynamics model of methane and ammonia emissions from tie-stall dairy barns Jessica Drewry, University of Wisconsin, Madison, WI United States (J. Drewry, M. Powell, C. Y. Choi)
9:55AM	2139345	Global Potential for Carbon Sequestration via Biochar Ronald Larson, Larson Consulting, Board, United States Biochar Initiative (USBI), Golden, CO United States (R. W. Larson)
10:10AM		BREAK

10:30AM-12:00PM Session T3-b - Climate Impacts on Agro-Ecosystem - 2

Moderator: Pouyan Nejadhashemi

LOCATION: De Paul

Time	Paper #	Title & Authors
10:30AM		Introduction
10:35AM	2142267	Impact of Elevated Temperature and CO2 on Productivity of Peanut in Eastern India Rabindra Panda, Indian Institute of Technology Bhubaneswar, Indian Institute of Technology Kharagpur, Bhubaneswar, Odisha India (D. Halder, R. K. Panda, R. K. Srivastava)
10:50AM	2144198	Implications of a changing agro-ecosystem on the nascent wine grape production industry in Idaho Eric Lindquist, Boise State University, Boise, ID United States (E. Lindquist, V. Fry)
11:05AM	2142718	The Impact of ENSO-Based Climate Variability on Grain Sorghum Production in the Southeast Xi Liang, University of Georgia, University of Idaho, Aberdeen, ID United States (X. Liang, G. Vellidis, G. Hoogenboom)
11:20AM	2142779	Climate variability and Extreme weather events and global crop production Deepak Ray, University of Minnesota, Saint Paul, MN United States (D. Ray, J. Gerber)

12:00PM-2:00PM LUNCHEON

Welcome by David Bosch

Keynote Speaker: Dr. Cynthia Rosenzweig

Senior Research Scientist at the NASA Goddard Institute for Space Studies

**THE AGRICULTURAL MODEL INTERCOMPARISON AND IMPROVEMENT
PROJECT: LESSONS LEARNED AND WAYS FORWARD**

Introduced by Rafael Muñoz-Carpena

Remarks by Adel Shirmohammadi

LOCATION: Rivernorth Ballroom

2:00PM-5:00PM Concurrent Technical Sessions

2:00PM-5:00PM Session T4 - Climate Impacts on Water Resources - 3

Moderator: David Bosch

LOCATION: Lakeview

Time	Paper #	Title & Authors
2:00PM		Introduction
2:05PM	2141136	Deterministic modeling of future soil erosion within a framework of uncertain climate change and unpredictable producer adaptation *Jurgen Garbrecht, ARS, El Reno, OK United States (J. Garbrecht, M. Nearing, J. Zhang)
2:25PM	2123078	Quantifying Extreme Rainfall Events and their Hydrologic Response in the Walnut Gulch Experimental Watershed in Southeastern Arizona David Goodrich, USDA-ARS, Tucson, AZ United States (T. O. Keefer, K. G. Renard, D. C. Goodrich, P. Heilman, C. L. Unkrich)
2:40PM	2144930	New model for capturing heterogeneity of fertilizer-induced N₂O emission factors FENG ZHOU, PEKING UNIVERSITY, Beijing, BEIJING China (Z. Shang, F. ZHOU)
2:55PM	2143843	Climate Change Impacts on Water Quality from the USDA-ARS CEAP Beasley Lake and Goodwin Creek Experimental Watersheds, Mississippi Ronald Bingner, USDA-ARS, Oxford, MS United States (R. Bingner, J. Garbrecht, M. Locke, S. Dabney, J. Rigby, H. Momm, P. Busted)
3:10PM	2124135	Long-term trends in climate and hydrology in an agricultural, headwater watershed of central Pennsylvania, USA Anthony Buda, USDA, University Park, PA United States (A. Buda, H. Lu, R. Bryant, A. Collick, G. Folmar, P. Kleinman)
3:25PM		BREAK
3:35PM	2143978	Remote Sensing Characterization of Upper Great Lakes Forest Disturbance and Recovery to Improve Modeled Impacts on Land Surface Energetic and Hydrologic Fluxes Matthew Garcia, University of Wisconsin - Madison, Madison, WI United States (M. Garcia, P. A. Townsend)
3:50PM	2123915	Impacts of Variability of Climate Datasets on Watershed Hydrology under Changing Climate Aleksey Sheshukov, Kansas State University, Manhattan, KS United States (J. Gao, A. Y. Sheshukov, S. Sinnathamby)
4:05PM	2123495	Linking regional climate simulations and hydrologic models for climate-change impact studies: a data processing framework Hendrik Rathjens, Purdue University, West Lafayette, IN United States (H. Rathjens, R. Cibir, R. Srinivasan, J. G. Arnold, I. Chaubey)
4:20PM	2087809	Projected Climate Change for the Coastal Plain Region of Georgia, USA David Bosch, USDA-ARS SEWRL, Tifton, GA United States (D. D. Bosch, J. Garbrecht, P. Busted)

2:00PM-5:00PM Session T5 - AgMIP- Invited Session*

Moderator: Senthold Asseng

LOCATION: Lincoln Park

Time	Paper #	Title & Authors
2:00PM		Introduction
2:05PM	2141321	Climate Scenarios for AgMIP Assessments *Cynthia Rosenzweig, NASA Goddard Institute for Space Studies, Columbia University, New York, NY United States (C. Rosenzweig)
2:20PM	2116393	The AgMIP Potato Model Intercomparison Pilot – First Responses *David Fleisher, USDA-ARS, Beltsville, MD United States (D. H. Fleisher, B. Condori, R. Quiroz)
2:35PM	2143120	AgMIP Crop Modeling Teams - Testing Multiple Models for Accurate Prediction of Evapotranspiration and Growth Response to Climatic Factors *Kenneth Boote, Dept of Agric & Biol. Engr, Univ. of Florida, Gainesville, FL United States (K. J. Boote, J. Durand, S. Asseng, J. L. Hatfield, L. Ahuja)
2:50PM	2119457	The crucial role of soil when modeling the impact of climate change on crop production *Bruno Basso, Michigan State University, East Lansing, MI United States (B. Basso)
3:05PM	2123922	AgMIP Water: Integrating Water Scarcity into Future Agricultural Assessments *Jonathan Winter, Dartmouth College, Hanover, NH United States (J. Winter, A. Ruane, C. Rosenzweig)
3:20PM		BREAK
3:35PM	2144189	AgMIP - Crop Regional Assessments *Gerrit Hoogenboom, Washington State University, Prosser, WA United States (G. Hoogenboom, C. Mutter, A. Chattha)
3:50PM	2141364	New Methods to Assess Climate Change Impacts, Vulnerability and Adaptation of Agricultural Production Systems: The experience of AgMIP Regional Integrated Assessments in Sub-Saharan Africa and South Asia *Cynthia Rosenzweig, NASA Goddard Institute for Space Studies, Columbia University, New York, NY United States (R. O. Valdivia, J. Antle)
4:05PM	2124282	The AgMIP Global Gridded Crop Model Intercomparison *Michael Glotter, University of Chicago, Chicago, IL United States (M. Glotter, J. Elliott)
4:20PM	2143916	AgMIP -- Global Economic Assessments *Keith Wiebe, International Food Policy Research Institute, Washington, DC United States (K. Wiebe)

2:00PM-3:30PM Session T6-a - Ecosystem Health and Ecosystem Services

Moderator: Daren Harmel

LOCATION: De Paul

Time	Paper #	Title & Authors
2:00PM		Introduction
2:05PM	2119001	Linking Ecosystem Services to Food Security in a Changing Planet: assessing Peruvian Amazon deforestation using Artificial Intelligence for Ecosystem Services (ARIES) modeling *Wendy Francesconi, International Centre for Tropical Agriculture, Cali, Valle del Cauca Colombia (W. Francesconi, E. Perez-Minana, S. Willcocks)
2:25PM	2120049	The Future of Ecosystem Services in the Upper Mississippi River Basin Rebecca Logsdon, Purdue University, West Lafayette, IN United States (R. A. Logsdon, R. Cibin, I. Chaubey, R. Srinivasan)
2:40PM	2121620	Ecosystem services evaluation of futuristic bioenergy based land use change and their uncertainty from climate change and variability

		raj Cijin, Purdue University, West Lafayette, IN United States (R. Cijin, R. A. Logsdon, I. Chaubey, K. Cherkauer)
2:55PM	2144038	Vulnerability of Green Infrastructure Vegetation to Climate Change Lauren Smalls-Mantey, Drexel Univeristy, Philadelphia, PA United States (L. Smalls-Mantey, M. Catalano de Sousa, F. Montalto)
3:10PM	2092734	Development of a comprehensive framework to assess the impacts of climate change on stream health Sean Woznicki, Michigan State University, East Lansing, MI United States (S. A. Woznicki, A. Nejadhashemi)
3:25PM		BREAK

3:35PM-5:00PM Session T6-b - Climate Impacts on Water Resources - 4

Moderator: Pouyan Nejadhashemi

LOCATION: De Paul

Time	Paper #	Title & Authors
3:35PM	Introduction	
3:40PM	2123855	Climate Change has Impacted Winter Hydrology in Ontario Ramesh Rurda, University of Guelph, Guelph, ON Canada (R. Rurda, T. Dickinson)
3:55PM	2113764	Effects of cotton production systems on water and soil quality under potential climate change Robin Taylor, Blackland Research and Extension Center, (S. Wang, R. Taylor, S. Plotkin, T. Gerik)
4:10PM	2128432	Climate change and biogeochemical cycling, building models to predict field and watershed scale changes in nitrogen cycling. Zachary Easton, Virginia Tech, Blacksburg, VA United States (Z. M. Easton, R. Najjar, D. Sample)
4:25PM	2141629	Long-term Changes in the Pattern of Rainfall Events: Implications in the Context of Climate Change Scenarios Maria Librada Chu, University of Illinois at Urbana-Champaign, Urbana, IL, United States (M. Chu, J. A. Guzman, J. Garbrecht, J. Schneider, P. Starks, J. L. Steiner, D. Moriasi)
4:40PM	2079256	Predicting Impacts of Climate Change on Maumee River Discharge Andreas Culbertson, Food, Agricultural and Biological Engineering, The Ohio State University, Dublin, OH United States (A. Culbertson, S. Gebremariam, J. F. Martin, S. A. Ludsin)

5:00PM-7:00PM Closing Wrap-Up Session and Reception

Final Remarks by David Bosch

LOCATION: Atrium- Mezzanine Level

* -Indicates Invited Author selected by the symposium committee.