

fsUSHANT MEHAN, Ph.D.

Water Resources Engineer/Hydrologist/Hydro-informatician

Columbus, OH-43202 | sushantmehan@gmail.com | +1-605-592-0908

[LinkedIn](#) | [Twitter](#) | [List of Publications on Google Scholar](#) | [Research Gate](#)

QUALIFICATIONS SUMMARY

- Evaluate the quantity and quality of water resources at different spatial scales
- Computational hydrology and modeling simulating fate and transport of sediment and nutrient
- Stochastic weather generator and climate data synthesis
- Assessment of climate and weather variability, change, and policy
- Extreme event analysis and decision-making
- Risk assessment and mitigation of natural disasters (droughts/floods/land subsidence)
- Integrated water management and green infrastructure and technology
- Data science, sensitivity and uncertainty analysis
- Continuous improvement, project management, leadership, mentoring, and community service
- Isotopic tracer studies w.r.t. water quality

EDUCATION

Doctor of Philosophy (Agricultural and Biological Engineering) **Aug 2018**

Purdue University, West Lafayette, Indiana, USA

Impact of Changing Climate on Water Resources in the Western Lake Erie Basin Using SWAT

[Dr. Margaret W. Gitau](#)

Master of Technology (Agricultural Engineering, Soil and Water Engineering) **Aug 2014**

Punjab Agricultural University, Ludhiana, India

Studies on the Effect of Colored Mulches on Yield and Quality of Bell Pepper (Capsicum annum L.)

[Dr. Kamal Gurmit Singh](#) and [Dr. Rakesh Sharda](#)

Bachelor of Technology (Agricultural Engineering) **Jul 2011**

College of Agricultural Engineering and Technology, Punjab Agricultural University, Ludhiana, Punjab, India -141004

RESEARCH EXPERIENCE

Postdoctoral Research Scholar **Jun 2020 – Present**

Ohio State University, Columbus, OH, USA

- **Assessing and improving different hydrologic routines** within process-based computer modeling for assessment and mitigation of water resources
- **Watershed management and decision-making**
- **Sharing science and extension services**
- **Data mining, analysis, management, visualization, interpretation, and reporting**
- **Mentoring, project management, and inter-disciplinary collaboration**

Dr. Sushant Mehan

Agricultural Engineer/Hydrologist

Oct 2018 – May 2020

Formation Environmental LLC, Sacramento, California, USA

- **Nitrate leaching assessment** using process-based computer modeling
- **Groundwater quality assessment, management, and decision-making**
- **Actual Evapotranspiration estimation** using Geographic Information Systems and Remote Sensing
- **Data mining, analysis, management, visualization, interpretation, and reporting**

Bilsland Dissertation Fellow/Graduate Research Assistant

Jan 2016 – Aug 2018

Water Resources and Ecohydrological Engineering Group

Department of Agricultural and Biological Engineering, Purdue University, West Lafayette, Indiana, USA

- **Climate Data Generation and Analysis:** Generation of long-term climate data using stochastic weather generators, univariate analysis, missing data handling, and computation of various climate indices
- **Bias Correction:** Evaluation of different methods of bias correction for GCM (General Circulation Model) outputs to create a reliable future climate database for the assessment of the climate-changing impact on water resources
- **GIS and RS Application:** Studied the extent of algae temporally and spatially using aerial imagery
- **Hydrologic Modeling:** Assessment and estimation of Nutrient Transport and Water Quality using Soil and Water Assessment Tool (SWAT) and SWAT Calibration and Uncertainty Program (SWAT CUP)

Graduate Research Assistant

Jan 2015 – Dec 2015

Department of Plant Science, South Dakota State University, Brookings, South Dakota, USA

- **Hydrologic Drought Prediction:** Climate change implications on surface hydrology and predicting drought
- **Groundwater Assessment:** Groundwater and surface-water interactions using radioisotope Radon-222
- **GIS and RS Application:** Spatial analysis of rainfall distribution using interpolation techniques and the Thiessen polygon method

University Merit Fellow

Jul 2012 – Aug 2014

College of Agricultural Engineering and Technology, Punjab Agricultural University, Ludhiana, India

- **Precision Agriculture/Protected Agriculture:** Characterization and evaluation of the working of a mulch laying machine with drip irrigation (micro-irrigation) installation at field scale; water conservation under extreme climate conditions using different colored plastic mulches
- **Passive Remote Sensing:** Manipulating plant light environment and recording the phenotypic and physiological growth using a spectroradiometer

Bharti Field Fresh Undergraduate Scholar

Jul 2007 – Jul 2011

College of Agricultural Engineering and Technology, Punjab Agricultural University, Ludhiana, India

- **Food Processing and Packaging:** Modified atmosphere packaging on minimally processed baby corn; applications of different edible coatings on food products
- **Remote Sensing Application:** Identification of the inter-annual land-use changes in Moga District, Punjab, India
- **Agricultural System Management:** Application of the use of flowmeters in fuel lines of a heavy-duty vehicle to improve the fuel efficiency of off-road vehicles

Dr. Sushant Mehan

Summer Practical Intern at MSUEE (Moscow State University of Environmental Engineering) Jun 2010

CALIBER Business Center, Bldg. 9 St. Godovikova, Moscow 129085

- **Land reclamation and hydropower generation**
- **Diversity and inclusion in research**
- **Agricultural system management, cold chains, and agricultural economics**

INDUSTRIAL EXPERIENCE

Agricultural Engineer/Hydrologist

Oct 2018 – Present

Formation Environmental LLC, Sacramento, California, USA

- **Project Management:** Managing direct deliverables of projects on-time and within budget
- **Meeting Client Expectations and Providing Solutions:** Listing and providing solutions to exceed client expectations
- **Proposal/Grant Writing:** Drafting outlines and writing full proposals for research funding from state and national agencies, including California Department of Food and Agriculture (CDFA); USDA
- **Extension and Outreach:** Sharing and communicating findings at a high-level to stakeholders and users for informed decision-making

Graduate Engineer Trainee

Aug 2011 – Dec 2011

John Deere Pune Works Pvt. Ltd., Pune, India

- **Lean Management and Continuous Improvement (CI)/ Six Sigma:** Reduced the time and increased efficiency in a manufacturing line and supply chain
- **International Business Management:** Provided product design according to customer-base need, locally and globally
- **Product Outreach:** Supported extension activities with farmers to familiarize them with the company's new technologies, thereby increasing the customer base to enhance the market for new product/s

TEACHING AND MENTORING EXPERIENCE

- **Instructor, Continuous Professional Development (CPD) Workshop** **July 2020**
Number of registrants: 106
Agricultural and Biological Engineering Data Handling Using R
Facilitated application of Language “R” in agriculture during a workshop, sponsored by the Young Professional Community (YPC) at Annual International Meeting (AIM) organized by the American Society of Agricultural and Biological Engineers (ASABE) 2020.[Virtual]
- **Guest Instructor, University of California, Davis, CA** **Winter 2020**
Number of Students: 30 +
Demonstrated application of Hydrologic Modeling in Irrigation and Water Resource Management, specific discussion of Soil Water and Assessment Tool (SWAT) in a **graduate-level** course: “ABT 182 / HYD 182 Environmental Analysis using GIS” Course Instructor: Dr. Isaya Kisseka.
- **Instructor, Continuous Professional Development (CPD) Workshop** **July 2019**
Number of Participants: 41
Data analytics using Python in Agricultural and Biological Engineering
Facilitated application of Python and Machine Learning in agriculture during a workshop at Boston, MA, sponsored by the Young Professional Community (YPC) at Annual International Meeting (AIM) organized by the American Society of Agricultural and Biological Engineers (ASABE) 2019.

Dr. Sushant Mehan

- **Guest Instructor**, University of California, Davis, CA **Spring 2019**
Number of Students: 10
Demonstrated application of Hydrologic Modeling in Irrigation and Water Resource Management, specific discussion of Soil Water and Assessment Tool (SWAT) in a **graduate-level** course: “Irrigation Systems and Water Management HYD 110 (Every spring)” Course Instructor: Dr. Isaya Kisseka.
- **Instructor**, Continuous Professional Development Workshop **July 2018**
Number of Participants: 30
Introduction to Data Science in Agriculture with Python
Facilitated application of Python and Machine Learning in agriculture during a workshop in Detroit, MI, sponsored by the Young Professional Community at the Annual International Meeting organized by the American Society of Agricultural and Biological Engineers (ASABE) 2018.
- **Volunteer Instructor**, Purdue University, West Lafayette, IN **Spring 2018**
Number of Students: 10
Demonstrated application of Soil Water and Assessment Tool (SWAT) in a **graduate-level** course ABE 52700: “Computer Models in Environmental and Natural Resources Engineering” under the supervision of Dr. Margaret W. Gitau.
- **Workshop Facilitator**, Purdue University, West Lafayette, IN **Fall 2017/ Spring 2018**
Number of Students: 30+
“**R for Beginners: I & II**” open to all the **graduate students** at Purdue University, West Lafayette, IN
The workshop included loading different files, visualizing data, applying fundamental statistical significance, understanding how to compute univariate statistics and introductory knowledge about handling missing data. **Feedback: 1) “Clearly explain what they would like to deliver” 2) “Presenter was very accommodating.”**
- **Mentor**, Purdue University, West Lafayette, IN **Summer 2017**
Number of Students: 4
Supported undergraduate students in their summer internship program in Water Resources and Eco hydrologic engineering research group.
- **Lab Assistant and Facilitator**, Department of Plant Science, South Dakota State University, Brookings, South Dakota, USA **Fall 2015**
Number of Students: 10
Developed and instructed the laboratory modules for the **graduate-level** course: “**Hydrologic Modeling**” (PS 723-L). **Feedback: “All the modules were clear and self-explanatory for the beginner to have hands-on practice.”**
- **Tutor**, College of Agricultural Engineering and Technology, Punjab Agricultural University, Ludhiana, Punjab, India **Fall 2013**
Number of Students: 4
Tutored freshmen for the course: “**Soil and Water Conservation.**” **Outcome: All students scored A’s and B’s in the class. Mentees got recruited by multinational companies and still mentoring them.**
- **Lecturer**, School of Mechanical Engineering, North West Institute of Engineering and Technology, Dhudike, Moga, India **Spring 2012**
Number of Students: 120 (Sophomores); 80 (Juniors)
Developed active learning modules and arranged industrial tours.

Dr. Sushant Mehan

RESEARCH GRANTS ACTIVITY

- **Blosser Environmental Travel Grant** (2017-18) awarded by The Purdue Graduate School: **\$1,500.00**
- **Purdue Graduate Student Government (PGSG) Student Travel Grant** (2017): **\$250.00**
- **American Geophysical Union Student Travel Grant** provided by the AGU Student Travel Grant Endowment (2017): **\$500.00**
- **Purdue Climate Change Research Center Spring Student Travel Grant (2017): \$1100.00**
- **Purdue Climate Change Research Center Spring Student Travel Grant (2018): \$1000.00**
- **Bilsland Dissertation Fellowship**, College of Engineering, Purdue University, West Lafayette, Indiana 47907 (2017-18) **\$20,000.00** Annually, plus benefits
- **Indian Council of Agricultural Research International Fellowship** (2014): To pursue Ph.D. at University of Nebraska Lincoln for three years at **\$2,000.00 per month**
- **University Merit Fellowship** (2012-2014) from Punjab Agricultural University, Ludhiana, Punjab, India: To pursue Master's research in soil and water engineering at Punjab Agricultural University at **12,000.00 INR** per 6 months
- **Bharti Field Fresh Fellowship** (2007-2011) offered by Bharti Group to pursue undergraduate studies and complete major project during senior year at **25,000.00 INR** per year

PATENTS FILED (U.S. Provisional Patent for Bio-Based HVAC Filter)

1. **Filed US Provisional Patent for Bio-Based HVAC Filter**, Patent Number: 62/476/894, Filed: 03/27/2017 (Team Members: Sushant Mehan, Samaneh Saadat, Anderson Smith, Andrew Huang)
2. **PCT Application for Soy-Based Filtration System**, Application Number: PCT/US18/24434, Filed with USPTO on March 27, 2018 (Team Members: Sushant Mehan, Samaneh Saadat, Anderson Smith, Andrew Huang)

PUBLICATIONS

Peer-Reviewed Published Articles

1. Schull, Z.V., Daher, B.T., Gitau, M.W., **Mehan, S.**, and Flanagan, D.C. (2019). Analyzing FEW Nexus Modeling Tools for Water Resources Decision-Making and Management Applications. *Food and Bioproduct Processing*. Accessed online 11/25/2019: <https://doi.org/10.1016/j.fbp.2019.10.011>.
2. **Mehan, S.**, Aggarwal, R., Gitau, M.W., Flanagan, D.C., and Frankenberger, J. (2019). Assessment of Hydrology and Nutrient Losses in a Changing Climate in a Subsurface-drained Watershed. *Science of the Total Environment*, 688, 1236-51. (**Impact Factor: 5.589**)
3. Kannan, N., Santhi, C., White, M.J., **Mehan, S.**, Arnold, J.G., and Gassman, P.W. (2019). Some Challenges in Hydrologic Model Calibration for Large-Scale Studies: A Case Study of SWAT Model Application to Mississippi-Atchafalaya River Basin. *Hydrology*, 6, 17.
4. **Mehan, S.**, Gitau, M.W., and Flanagan, D.C. (2019). Reliable Future Climatic Projections for Sustainable Hydro-Meteorological Assessments in the Western Lake Erie Basin. *Water*, 11, 581. (**Impact Factor: 3.324**)
5. Gitau, M.W., **Mehan, S.**, and Guo, T. (2018). Weather Generator Effectiveness in Capturing Climate Extremes. *Environmental Processes*, 1-13.
6. Gitau, M.W., **Mehan, S.**, and Guo, T. (2017). Weather Generator Utilization in Climate

Dr. Sushant Mehan

- Impact Studies: Implications for Water Resources Modelling. *European Water*, 59(3), 69-75.
7. Guo, T., **Mehan, S.**, Gitau, M.W., Wang, Q., Kuczek, T., and Flanagan, D.C. Impact of Number of Realizations on the Suitability of Simulated Weather Data for Hydrologic and Environmental Applications. *Stochastic Environmental Research and Risk Assessment*, 1-17.
 8. **Mehan, S.**, Neupane, R.P., and Kumar, S. (2017). Coupling of SUFI 2 and SWAT for Improving the Simulation of Streamflow in an Agricultural Watershed of South Dakota. *Hydrology Current Research*, 8, 280.
 9. Neupane, R.P., **Mehan, S.**, and Kumar, S. (2017). Use of Geochemical Tracers for Estimating Groundwater Influxes to the Big Sioux River, Eastern South Dakota, USA. *Hydrogeology Journal*, 1-14.
 10. **Mehan, S.**, Guo, T., Gitau, M.W., and Flanagan, D.C. (2017). Comparative Study of Different Stochastic Weather Generators for Long-Term Climate Data Simulation. *Climate*, 5(2), 26.
 11. **Mehan, S.**, Kannan, N., Neupane, R.P., McDaniel, R., and Kumar, S. (2016). Climate Change Impacts on the Hydrological Processes of a Small Agricultural Watershed. *Climate*, 4(4), 56.
 12. **Mehan, S.**, Kaur, P., and Singh, M. (2015). Studies on Effect of Storage on Quality of Minimally Processed Babycorn. *Journal of Food Processing & Technology*.

Review Articles/Book Chapter

1. Srinivasan, A., Femeena, P., **Mehan, S.**, and Raj, C. (2019). Environmental Impacts of Bioenergy Crop Production and Benefits of Multifunctional Bioenergy Systems. *Bioenergy with Carbon Capture and Storage*, pp. 195-217, Academic Press.
2. **Mehan, S.**, and Singh, K.G. (2015). Use of Mulches in Soil Moisture Conservation: A Review. *Best Management Practices for Drip Irrigated Crops*, 2(24), 283.

Peer-Reviewed Published Abstracts

1. **Mehan, S.**, Singh, K.G., and Sharda, R. (2017). Impact of Colored Plastic Mulches on Plant Light Environment, Soil Temperature, and Yield of Bell Pepper Under Field Conditions. *Agricultural Mechanization in Asia, Africa and Latin America*, 48(1), 2014-83.
2. **Mehan, S.**, and Singh, K.G. (2013). Use of Colored Mulches in Sustaining Indian Agricultural Production. National Seminar on Advances in Protected Cultivation Technical Session, New Delhi, India. *Proceedings of National Seminar on Advances in Protected Cultivation Technical Session: Protected Infrastructures & Allied Issues*. p. 138.

Published and Cited Datasets

1. **Mehan, S.**, and Gitau, M. (2019). Climate Time Series Analysis using R [Data set]. Purdue University Research Repository. <https://doi.org/10.4231/R77H1GTX>
2. **Mehan, S.**, & Gitau, M. (2019). Climate Projections for the Western Lake Erie Basin for medium and high emission scenarios for hydrologic modeling assessment studies (Indiana, Ohio, and Michigan) [Data set]. Purdue University Research Repository. <https://doi.org/10.4231/R7C53J3W>
3. **Mehan, S.**, and Gitau, M. (2019). Climate Projection Data for 21st Century for the Western Lake Erie Basin (Indiana, Ohio, and Michigan) [Data set]. Purdue University Research Repository. <https://doi.org/10.4231/R7GX48SF>
4. **Mehan, S.**, and Gitau, M.W. (2019). Spatial-Temporal Climate Projection Data for 21st Century for the Western Lake Erie Basin (WLEB) for Hydrologic Studies [Data set]. Purdue University Research Repository. <https://doi.org/10.4231/R73R0R42>

Conference Proceedings Paper

1. Gitau, M.W. and **Mehan, S.** (2019). Impacts of Changing Precipitation Patterns on Hydrology and Pollutant Transport in a Subsurface-Drained Watershed. *11th World Congress on Water Resources and Environment (EWRA 2019): Managing Water Resources for a Sustainable Future.* Madrid, Spain, June 25-29. http://ewra.net/pages/EWRA2019_Proceedings.pdf Pp43-44

CONFERENCE PRESENTATIONS

Attended, Presented, Co-authored

1. Mehan, S., Kalcic, M.C., and Hood, J.M. (2020) Review of water quality models simulating in-stream nutrient dynamics. American Geophysical Union Fall Meeting, Virtual Meeting, December 1-17.
2. **Mehan, S.**, Amatya, D., and Aggarwal, R. (2020) Meteorological Data Challenges and Opportunities in Designing Matrices Relating Climatology Impacting Changes in Woodland Ecosystems. American Society of Agricultural and Biological Engineers – Annual International Meeting (ASABE-AIM), Virtual Meeting, July 12-15.
3. Paul, G., Dickey, J., Miller, K., **Mehan, S.**, Hartz, T., Schmid, A., and Kellar, C. (2019). Declining Groundwater Quality and Quantity in Central Valley California – Assessing Impact of Crop Management Practices. ASA-CSSA-SSSA International Annual Meeting, San Antonio, TX, November 10-13.
4. Miller, K., Dickey, J., Paul, G., **Mehan, S.**, Kellar, C., Yimam, Y.T., Cassman, K., Harter, T.K., and Ikemeya, D. (2019). Site-Specific Management Effects on Nitrate Leaching. FREP/WPHA Nutrient Management Conference. Fresno, CA, October 28-30.
5. Miller, K., Dickey, J., Paul, G., **Mehan, S.**, Kellar, C., Yimam, Y.T., Cassman, K., Harter, T.K., Ikemeya, D., Geiseller, D., Cahn, M., and Schmid, A. (2019). Tools for Site-Specific Crop Management to Maximize Recovery of Applied Nitrogen Fertilizer. FREP/WPHA Nutrient Management Conference. Fresno, CA, October 28-30.
6. Hoffman, I.R., **Mehan, S.**, Miller, K., Paul, G., Dickey, J., Hartz, T., Harter, T.K., and Kisekka, I. (2019). A Multi-scale Modeling Assessment of Nitrogen Leaching from Central Valley Irrigated Processing Tomatoes. FREP/WPHA Nutrient Management Conference. Fresno, CA, October 28-30.
7. **Mehan, S.**, Miller, K., Paul, G., Yimam, Y.T., Dickey, J., Schmid, A., Hartz, T.K., Schmid, B., and Roberson, M. (2019). Quantification of Nitrate Budget from Irrigated Lands in Central Valley of California Using SWAT. American Geophysical Union (AGU) Fall Meeting, San Francisco, CA, December 9-13.
8. **Mehan, S.**, Paul, G., Yimam, Y.T., Dickey, J., Schmid, A., Hartz, T.K., and Schmid, B. (2019). Quantification of Nitrate Leaching from Almond Fields in Central Valley of California Using SWAT. American Society of Agricultural and Biological Engineers – Annual International Meeting (ASABE-AIM), Boston, MA, July 7-11.
9. **Mehan, S.**, Yimam, Y., Paul, G., Hartz, T., Dickey, J., Cassman, K., and South San Joaquin Valley Management Practices Evaluation Program Team Members. (2018). Quantifying Nitrate Leaching from Central Valley Irrigated Lands Using the Soil & Water Assessment Tool (SWAT). FREP/WPHA Conference held at the Embassy Suites in Seaside, California. October 23-24.
10. Gitau, M.W., **Mehan, S.**, Sekaluvu, L., Kiggundu, N., Moriasi, D., and Mishili, F. (2018). Water

Dr. Sushant Mehan

Resources Modeling in East Africa: Access and Suitability of Rainfall Data. Global Water Security Conference for Agriculture and Water Resources. Hyderabad, India. October 3-6.

11. **Mehan, S.**, Gitau, M.W., and Flanagan, D.C. (2018). Impact of Changing Climate on Surface Flow and Nutrients in an Agricultural Dominated Tile Drained Watershed for Sustainable Water Resources. Global Water Security Conference for Agriculture and Water Resources. Hyderabad, India. October 3-6.
12. **Mehan, S.**, and Gitau, M.W. (2018). Bias-Corrected Climate Data for Western Lake Erie Basin (WLEB): Implications for Hydrologic and Water Quality Modeling for 21st Century Using SWAT. ASABE Annual International Meeting in Detroit, MI. July 29-August 1.
13. **Mehan, S.**, Gitau, M.W., and Flanagan, D.C. (2018). Assessment of Changing Climatic Conditions on Nutrients Fate, and Transport in Tile Drained Watershed for Sustained Water Quality. Monroe Convention Center, Bloomington, Indiana. June 27-29.
14. **Mehan, S.**, and Gitau, M.W. (2018). Estimation and Correction of Bias of Long-Term Simulated Climate Data from Global Circulation Models (GCMs)-II. The 5th Annual ABE-GSA Industrial Research Symposium, Purdue University, West Lafayette, IN, February 8.
15. **Mehan, S.**, and Gitau, M.W. (2017). Estimation and Correction of Bias of Long-Term Simulated Climate Data from Global Circulation Models (GCMs). American Geophysical Union Fall Meeting 2017, New Orleans, LA, December 11-15.
16. **Mehan, S.**, Guo, T., Gitau, M.W., and Flanagan, D.C. (2017). Weather Generator Performance in Representing Statistical Characteristics of Observed Data. ASABE Annual International Meeting at Spokane, WA, July 16-19.
17. **Mehan, S.**, Guo, T., Gitau, M.W., Wallace, C., and Flanagan, D.C. (2017). Hydrologic Model Performance as Related to Different Realizations of the Climate Generator Simulated Weather Data. ASABE Annual International Meeting at Spokane, WA, July 16-19, 2017.
18. Gitau, M.W., **Mehan, S.**, and Guo, T. (2017). Weather Generator Utilization in Climate Impact Studies: Implications for Water Resources Modelling. 10th World Congress on Water Resources and Environment. European Water Resource Association (EWRA), Athens, Greece, July 5-9.
19. **Mehan, S.**, and Gitau, M.W. (2017). Quantification of Bias from Global Circulation Model Outputs and its Correction. 38th Annual Indiana Water Resources Association Symposium – Evaluating the Restoration of Indiana’s Water Resources at Turkey Run State Park, IN, June 28-30.
20. **Mehan, S.**, and Gitau, M.W. (2017). Extent of Uncertainty in Statistically Downscaled Climate Data. The 4th Annual ABE-GSA Industrial Research Symposium, Purdue University, West Lafayette, IN, February 16.
21. **Mehan, S.**, Guo, T., Gitau, M.W., and Flanagan, D.C. (2016). Performance Capability of Different Weather Generators in Simulating Long-Term Climate Data in the Great Lakes Region. University and Industrial Consortium at Dows Agro Science, Indianapolis, IN, October 25.
22. **Mehan, S.**, Guo, T., Gitau, M. W., and Flanagan, D. C. (2016). Comparison of Stochastic Weather Generators for Long-Term Climate Data Simulation in Great Lakes Region. ASABE International Annual Meeting at Orlando, FL, July 17-20.
23. **Mehan, S.**, Guo, T., Gitau, M.W., and Flanagan, D.C. (2016). Effectiveness of Stochastic Weather Generators in Simulating Long-Term Climate Data. 37th Annual Indiana Water Resources Association Symposium-Evaluating the Restoration of Indiana’s Water Resources at Potawatomi Inn at Pokagon State Park, Angola, IN, June 8-10.
24. **Mehan, S.**, Singh, K.G., and Sharda, R. (2016). Effect of Colored Mulches in Mitigating Climate Change Impacts on Growth of Capsicum Under Field Conditions. The 3rd Annual ABE-GSA Industrial Research Symposium, Purdue University, West Lafayette, IN, February 18.

Dr. Sushant Mehan

25. **Mehan, S.**, Neupane, R.P., and Kumar, S. (2015). SWAT Model Calibration, Validation and Parameter Sensitivity Analysis using SWAT-CUP. ASA/CSSA/SSSA International Annual Meeting, MN, November 15-18.
26. **Mehan, S.**, Neupane, R.P., and Kumar, S. (2015). Projecting Climate Change Impacts on Surface Hydrology of a Small Agriculture-Dominated Watershed. International Soil and Water Assessment Tool Conference, Purdue University, West Lafayette, IN, October 14-16.
27. **Mehan, S.**, Kumar, S., and Lin Y. (2015). Application of GIS in Analyzing Rainfall Distribution Spatially in Skunk Creek Watershed. USGS EROS-SDSU Student Led Posters, USGS EROS Center, Garretson, SD, November 18.
28. Kumar, S., **Mehan. S.**, Neupane, R.P., Mbonimpa, E., Kjaersgaard, J., Jequet, J., Bly, A., Miller, M., and Smalley, S. (2015). Integrated Plan for Drought Preparedness and Mitigation, and Water Conservation at the Watershed Scale. NIWQP and AFRI PD Meeting Program, NC, July 27-28.

OUTREACH EXPERIENCE

- **Biobased Innovation and Career Advice Webinar**
60-minute **interactive webinar featuring** collegiate bio-based innovators from Purdue University, West Lafayette, IN, September 6, 2017, **informing** the end-users and stakeholders about our team's innovative **soy-based air filter** and receiving **feedback** from the industrial corporations to make the innovation **commercial**.
- **Radio/Technical Talk Show**
“**It’s YOUR AgriBusiness Hour,**” hosted by Bill Zortman, SD, April 2015. The **Radio show was all about** informing end-users, farmers, and policymakers about *how computer modeling and field studies can help in the prediction of drought conditions and different ways to mitigate the losses incurred in water deficit and high-temperature conditions.*

ONLINE ARTICLES/BLOGS

- [Impact of Climate Change and Economic Prosperity](#). Accessed November 25, 2019.
- [Graduate School: A Journey](#). Accessed November 25, 2019.
- [Data Uncertainty and Bias Can Impact Policy-Making](#). Accessed November 25, 2019.
- [Data Analysis in Water Resource Management](#). Accessed November 25, 2019.

INVITED TALKS AND PANEL DISCUSSIONS

- Resource person at the two day International Symposium “ [Role of science in the post Covid-19 era](#)” concluded at Gujranwala Guru Nanak Khalsa College, Ludhiana. May 29, 2020.
- **Panel Member** at “**The Grad School vs. Industry**” session organized by Purdue Chapter of Society of Women Engineers. September 10, 2017. *Shared personal experience about industry and academic life*
- **Guest Speaker** at Indian Institute of Technology, Delhi, India, “**Indian Water Resources under the Face of Climate Change: Issues and Remedial Measures.**” November 22, 2017. *I talked about my Ph.D. Research and how it can be used in the context of Indian Water Resources*
- **Guest Speaker** at Water Technology Center, Indian Council of Agricultural Research, Delhi, India, “**Implications of Changing Climatic Conditions on Indian Water Resources: Future Potential in Water Resource Research.**” November 23, 2017. *Interactive session involving senior faculty and director, Water Technology Center, discussing issues with the Indian Water Resources and feasible solutions from successful global partners that can be implemented in India*

Dr. Sushant Mehan

- **Guest Speaker** at National Institute of Food Technology Entrepreneurship and Management, Sonapat, Haryana, India, “**Keys to Higher Education Overseas**” November 21, 2017. *Lecture on how to become a successful candidate while applying to higher education institutes*

SKILLS

- **Hydrologic Models** SWAT; APEX
- **Soil Erosion Model** WEPP
- **Crop Model** EPIC
- **Climate/Weather Generators** CLIGEN, LARS-WG, WeaGETS
- **Image Processing Software** ENVI, ERDAS, ArcGIS
- **Computation and Programming** R, Python, LINUX, and SAS

ACADEMIC SERVICE

- **Award Chair:** CA/NEVADA ASABE Section, 2020-2021
- **Executive Member:** CA/NEVADA ASABE Section, 2019-2020
- **Proposal Reviewer:** Nazarbayev University Research Proposal Reviewer, 2018; 2019
- **Student Competition Chair:** G.B. Gunlogson Student Design Competition – Open Format 2019 at ASABE Annual International Meeting, Boston, MA, July 7-10, 2019
- **Session Chair and Moderator:** Natural Resources and Environmental Systems: 221 *Hydrologic and Climate Data: Challenges and Opportunities*, ASABE Annual International Meeting, Detroit, MI. July 29-August 1, 2018; ASABE Annual International Meeting, Boston, MA, July 7-10, 2019, Virtual Meeting via Zoom, July 12-15, 2020
- **Peer Reviewer:** More than 90 Reviews: *Journal of Applied Biological Research (ABR), Sustainability, Agriculture, Water, Climate, Precision Farming, Remote Sensing, Journal of Plant and Agricultural Research, Earth’s Future, ISPRS International Journal of Geoinformation, Transactions of the ASABE, CATENA, Applied Engineering in Agriculture, Journal of Food Processing and Preservation (JFPP), and more*
- **A judge or On Panel for Academic Activities**
 - *Visual Presentation Contest* for Students of Agronomy, Soils, and Environment Sciences (2016-18)
 - *ASABE Fountain Wars Design Competition and Open Format* at ASABE Annual International Meeting (2016-19)
 - *ASABE Adams and Foundation Engineering Scholarship* (2017, 2018, 2019)
 - *The Lafayette Regional Science and Engineering Fair* (2016-18)
 - *Undergraduate Research and Poster Symposium* (2016)
 - *Undergraduate Capstone Project* (2016-18)
- **President ABE-GSA** (Agricultural and Biological Engineering-Graduate Student Association) (May 2017-April 2018)
- **ABE Ambassador** (College of Agriculture Graduate Student Advisory Board) (May 2016-April 2017)
- **Professional Development Chair ABE-GSA** (Agricultural and Biological Engineering-Graduate Student Association) (May 2016- April 2017)
- **Executive Member** (College of Agricultural Engineering and Technology) – PAU Science Club (July 2013-July 2014): Assisted Vice-Chancellor (President of the University), Dean (Post Graduate Studies), Comptroller of Examinations, HODs, PAU, Ludhiana

Dr. Sushant Mehan

- **Volunteered at ASABE Annual International Meeting** at Orlando, FL (July 17-20, 2016), Spokane, WA (July 16-19, 2017)
- **Organized Talks** “Words for You from Your Own: A Panel” (June 27, 2016), “Snapshot of Research Faculty-II: A Panel” (September 19, 2016), “Career in Water Resources: Jeffrey D. Martin” (October 24, 2016), “Graduate School: A Balancing Act: Dr. Linda Hankins” (November 14, 2016)
- **Moderator and Graduate Student Organization Management Lead for Arranging** Volunteers for Undergraduate Capstone Oral Talks and Posters (2016, 2017, 2018)
- **Master of Ceremony for Swami Vivekananda National Award Ceremony** organized each year (2011, 2013, 2014)
- **Adjudicator** at Inter-Class Debate Competition held at Punjab Agricultural University, Ludhiana-141004 (March 7, 2014)
- **Quiz Master:** Inter-College Quiz Competition organized by PAU Science Club (March 5, 2014)
- **Student Panelist** in Mahindra Samridhi Indian Agricultural Awards held at Hotel Ashoka, New Delhi, organized by Mahindra and Mahindra (February 24, 2014)
- **Student Administrator** at Run for Health Drive and Conducting Technical and Non-Technical Seminars, Organized under the administration of University Science Club in 2013
- **Student Organizer at INDIA-US International Conference** held in November 2010 at PAU, Tractor’s Association Manufacturer’s Meet (TAMM-2010) in January 2010

PROFESSIONAL AFFILIATIONS

- American Geophysical Union (**AGU**), Member (2017-Present)
- Tau Beta Pi (**TBP**), The Engineering Honor Society, Member (2017-Present)
- Alpha Epsilon (**AE**) Honors Society, Purdue University Chapter, Lifetime Member
 - Members at Large (MAL) Professional Development Community (2017-2018)
- Purdue Climate Change Research Center (**PCCRC**) Post-Doc, Graduate Students Group, Executive Member (2016-2018)
- American Association for the Advancement of Science (**AAAS**), Member (2016-Present)
- Agricultural and Biological Engineering Graduate Student Association (**ABE-GSA**), President (2017-2018)
- American Society of Engineering Education (**ASEE**), Purdue University Chapter, Member (2016-2018)
- Association of Agricultural, Biological, and Food Engineers of Indian Origin (**AABFEIO**) (2015-Present)
 - Vice President (2019-2020)
 - Secretary (2018-2019)
 - Member (2015-Present)
- American Society of Agricultural and Biological Engineers (**ASABE**)
 - Publication Council Representative of **YPC** (2019-2021)
 - Members at Large (MAL) at Young Professional Community (**YPC**) at ASABE (2017-2019)
 - Chair ASABE Gunlogson Community (**P-121**)
 - Hydrology (**NRES-21**): Member (2016-Present)
 - Member (2015-Present)
- Soil Science Society of America (**SSSA**), Member (2015-Present)
- Crop Science Society of America (**CSA**), Member (2015-Present)
- American Society of Agronomy (**ASA**), Member (2015-Present)

Dr. Sushant Mehan

HONORS AND AWARDS

- **ASABE Outstanding Reviewer 2020** (NRES-Natural Resources & Environmental Systems)
- **“Highest Likes and Most Watched Video” Winner** at [ASABE Inspired Video Challenge](#) sponsored by CLAAS and organized by ASABE, 2020
- **Review Board Member** [Remote Sensing](#) (Impact Factor 2019: 4.118); [Water](#) (Impact Factor: 2.069); [Agronomy](#) (Impact Factor:2.259)
- [Top Reviewers in Environment and Ecology](#) (Global Peer Review Awards powered by Publons), 2019
- [Top Reviewers in cross-field](#) (Global Peer Review Awards powered by Publons), 2019
- [Outstanding ABE Ph.D. Student](#) Department of Agricultural and Biological Engineering, Purdue University, West Lafayette, IN, 2018
- [ASABE New Faces 2018: Professional](#)
- **First Place Poster Competition**, Second Place Oral Presentation, Second Place Pitch Your Thesis Competition at 5th ABE GSA Research and Industrial Symposium, Purdue University, West Lafayette, IN, 2018
- **Indiana Soybean Innovation Competition** (Winner of student competition): Team awarded \$20,000.00, 2017
- **University Fellow**, Punjab Agricultural University, Ludhiana, Punjab, India, 2012-14
- **First Place, Debate competition** by Young Writers Association of PAU, 2014
- **First Place, Declamation Contest** held organized by Directorate Student Welfare (DSW), PAU, 2013
- **Outstanding Best Student** at Undergraduate Level, 2011
- **Nominee of Indira Gandhi National Service Scheme (NSS) National Award**, 2011
- **Dr. Dalip Singh Deep Memorial State Award**, 2010
- **College Merit for Literary Events**, 2010
- **Outstanding Student Indian Society of Technical Education (ISTE)**, 2010
- **Best Speaker of the University** (Punjab Agricultural University), 2008 and 2011
- **Best Debater of the University** (Punjab Agricultural University), 2007-11
- **Bharti Scholarship** (Bharti Field Fresh, Punjab Agricultural University), 2007-11
- **Swami Vivekananda Youth Award**, 2010
- **Ajit Matto Award for Outstanding Academic Performance**, 2010