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Academic Training

- Post- Doctoral, NSERC Industrial Research Fellowship, 2002-2003, Ryerson University, Toronto, and Clarifica Inc., Richmond Hill, Canada, Research Project title: *Improved Design for Construction Sediment Control Ponds for Receiving Water protection.*
- Ph.D., Civil Engineering, 2001, University of Toronto, Canada, Doctoral Thesis Title: *Urban Runoff Quantity and Quality Control Analysis.*
- M.Sc. Civil Engineering, Specialization in Hydraulics and Irrigation Engineering, 1989, University College of Engineering, Sambalpur University, Burla, India, Thesis title: *A study of soil erosion and its preventive measures in river valley project catchment with a brief study of Hirakud Project Catchment.*
- B.Sc. Civil Engineering (First Class Honors), 1987, University College of Engineering, Sambalpur University, Burla, India

Employment History

Oct 2014 – Present	Tenured Professor & Chair, Department of Civil Engineering, School of Engineering and Applied Sciences, University of the District of Columbia
Aug 2011 – Sep 2014	Tenured Associate Professor & Civil Engineering Program Director, School of Engineering and Applied Sciences, University of the District of Columbia
Aug 2008 – May 2011	Tenured Associate Professor, School of Engineering and Applied Sciences, University of the District of Columbia
Aug 2005- May 2008	Associate Research Professor, DC Water Resources Research Institute, University of the District of Columbia
Aug 2005- May 2008	Tenure-track Associate Professor, Department of Engineering, Architecture & Aerospace technology, University of the District of Columbia
May 2005 – Jul 2005	Senior Water Resources Engineer, BPC Group Inc. Orlando, Florida
Jun 2002 – Apr 2005	Water Resources Engineer and Industrial Research Fellow, Clarifica Inc., Richmond Hill, Canada
Jan 2002 – Dec 2003	NSERC Industrial Research Fellow and Adjunct Professor, Ryerson University, Toronto, Canada
Jan 1997 – May 2001	Graduate Research Fellow and Teaching Assistant, Department of Civil Engineering, University of Toronto, Canada
Jul 1990 – May 1996	Sr. Lecturer (Eqv. Assistant Professor), Applied Mechanics and Hydraulics Department, National Institute of Technology Rourkela, Odisha, India
Jan 1990 – Jun 1990	Lecturer, Sanjay Memorial Institute of Technology, Berhampur, Odisha, India

Professional Affiliation

- Professional Engineer, District of Columbia, USA
- Professional Engineer, Maryland, USA
- Professional Engineer, Ontario, Canada
- Diplomat, American Academy of Water Resources Engineers
- Member, American Society of Civil Engineers
- Member, National Society of Professional Engineers
- Member, American Society Engineering Education
- Member, District of Columbia Society of Professional Engineers.

Honors and Awards

- Awarded **Dr. Marjorie Holloman Parker Distinguished Educators Award** by University of the District of Columbia on the 2018 Founders Day at Washington DC
- Awarded **Eminent Engineer** by Tau Beta Pi, DC Alpha Chapter, Engineering Honor Society
- Awarded **Outstanding and Dedicated Service Award** for the contribution to DCSPE as the President of the Society on June 06, 2015 by District of Columbia Society of Professional Engineers
- Awarded **Outstanding Contribution to the 2014 ABET Accreditation Visit** for Civil Engineering, by School of Engineering and Applied Sciences, UDC, April 2015
- Awarded 2nd Place in the Student Research Paper Competition in 70th Joint Annual Meeting of BKX/NIS March 13-17, 2013, Reston VA, Asteway Ribisso and Pradeep Behera, "Precipitation Analysis for Mid-Atlantic Region based on Storm Event Analysis".
- **Awarded Diplomat, American Academy of Water Resources Engineers, 2010**
- Recognized by **Montclair Who's Who** 2009 for the academic contribution
- Awarded **Exemplary Contribution in Water Resources Engineering** by School of Engineering and Applied Sciences, UDC, April 2009
- Awarded **Outstanding Contribution to the 2008 ABET Accreditation Visit** for Civil Engineering, by School of Engineering and Applied Sciences, UDC December 2008
- Awarded **Outstanding Professor of School of Engineering and Applied Sciences** from the Undergraduate Student Government Association, May 7, 2007
- Awarded **Dedication to the Civil Engineering Program and as Advisor**, by School of Engineering and Applied Sciences, UDC April 2008
- Awarded **Canadian NSERC Industrial Research Fellowship** for Post-Doctoral Study at Clarifica Inc, Richmond Hill and Ryerson University, Toronto, Canada, 2002-2003
- Awarded **Canadian Commonwealth Scholarship** for Doctoral degree at the University of Toronto Canada, 1997-2001
- Awarded School of Engineering and Applied Sciences, UDC, for *Outstanding Contribution to the 2008 ABET Accreditation Visit* for Civil Engineering, December 2008
- Awarded School of Engineering and Applied Sciences, UDC, for *Exemplary Contribution in Water Resources Engineering*, April 2009
- Recognized by **Montclair Who's Who** 2009

Research Funding and Grants

A. External Research Grants Awarded

- [1] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*, Project ID: 2018DC145B Title: *Runoff Control Performance Evaluation and Development of Design Guideline for Green Roof Systems for District of Columbia*
Time Period: March 2018- February 2019, Amount: **\$ 15,980**
- [2] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-
Title: *Targeted Infusion Project: Integrating “Risk and Resilience” into Undergraduate Engineering Education for Workforce Towards a Hazard-Resilient Built Environment*
Time Period: July 2018 – June 2021, Amount: **\$399,931**
Collaborative PI: Dr. Lei Wang, Dr. Sasan Haghani, and Dr. Jiajun Xu, University of the District of Columbia
- [3] **Co-PI: Pradeep Behera** - *National Institute of Standard and Technology*, ID: 70NANB18H164
Title: *Professional Research Experience Program at the University of the District of Columbia (PREP-UDC)*
Time Period: July 2018 – June 2023, Amount: Up to **\$ 6.7 million**
Collaborative PI: Dr. Kate Klein, Dr. Lara Thomson, Dr. Pawan Tyagi, Dr. Devdas Shetty, Dr. Esther Ososanya, Dr. Wagdi Mahmoud, Dr. Briana Wellman, Dr. Lei Wang, Dr. Sasan Haghani, and Dr. Jiajun Xu, University of the District of Columbia
- [4] **Co-PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*, Project ID: 2017DC145B Title: *Measurement and Performance Analysis of UDC Van-Ness Campus Green Roof System with automated sensors*
Time Period: March 2017- February 2018, Amount: **\$ 19,900**
Collaborative PIs: Dr. Sasan Haghani, and Dr. Sasan Aflaki
- [5] **PI: Pradeep Behera**, USDA/NIFA
Title: *Establishment of Computational Infrastructure at UDC to Conduct Climate Change Research for District of Columbia”,*
Time Period: September 2014 – August 2017, Amount: **\$75,000**
Co-PIs: Drs. Dong Jeong, Tolessa Deksissa, E. Harrison and D. Jones,
- [6] **PI: Pradeep Behera** – *District of Columbia DOEE*,
Title: Flood Assessment for Washington Metropolitan Region
Time Period: October 2014- August 2015, Amount: **\$ 35,000**
- [7] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-1245883
Title: *Integrating virtual 3-D lab modules for flood modeling studies in civil engineering curriculum: An Inter-university implementation and evaluation*

Time Period: September 2013 – August 2014, Amount: **\$193,382 (UDC Portion \$10,000)**

Collaborative PI: Dr. Chandramouli Viswanathan, Perdue University Calumet and Co-PIs Emily Hixon from Perdue University Calumet, Dr. Ramesh Teegavarapu from Florida Atlantic University, Dr. James Fox from University of Kentucky

- [8] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-1137529
 Title: *Targeted Infusion: Enhancing Undergraduate Programs in Environmental Science and Sustainability*
 Time Period: September 2011 – August 2014, Amount: **\$ 298,419**
 PI: T. Deksissa, and Co-PIs: L. Liang & S. Harkness
- [9] **Co-PI: Pradeep Behera** - *Department of Education*, Project ID: PI20A110052
 Title: *Pathways to a STEM Baccalaureate and Beyond (STEM Pathways) at the University of the District of Columbia (UDC)*
 Time Period: October 2011 – September 2014, **\$ 750,000**
 PI: A. Darai, Co-PIs: L. Liang, M. Anderson, C. Ford, J.B. Shaw & R. Cook
- [10] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF CMMI 0940393
 Title: *Environmental Runoff Monitoring*
 Time Period: July 2009 – December 2011, **\$ 100,000**
 PI: Dr. B. Yu Co-PIs: Dr. S. Kim and Dr. P. Cotae
- [11] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*, Project ID: 2012DC145B Title: *Monitoring UDC Van-Ness Campus Green Roof System for the Evaluation of Runoff Quantity Control Performance*
 Time Period: March 2012- February 2013, Amount: **\$ 16,808**
 Co-PI: Dr. Arash Massoudieh (Catholic University of America)
- [12] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*, Project ID: 2012DC136B Title: *Anticipating Climate Change based on Precipitation Analysis for the District of Columbia*
 Time Period: March 2012- February 2013, Amount: **\$ 6,500**
- [12] **Co-PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*,
 Project ID: 2012DC145B
 Title: *Development of a Physically-based Model for Performance Evaluation Optimization of Green Roof Systems*
 Time Period: March 2012- February 2013, Amount: **\$ 41,747**
 PI: Dr. Arash Massoudieh (Catholic University of America)
- [13] **Co-PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*,
 Project ID: 2012DC141B
 Title: *Development of a Porous Driveway System for Districts Residential Lots*
 Time Period: March 2012- February 2013, Amount: **\$ 15,914**

PI: Dr Inder Bhambri

- [14] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*,
 Project ID: 2011DC124B Title: *National Capital Region Flood Risk Assessment: Inter-University Collaboration Initiative*
 Time Period: Mar 2011- February 2012, Amount: **\$ 17,520**
 PIs: M. Casey (GMU), J. Galloway (UMD),
- [15] **Co-PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*,
 Project ID: 2012DC144
 Title: *Water Pollution Modeling and Prediction Using Computational Intelligence Methods*
 Time Period: March 2012- February 2013, Amount: **\$ 18,980**
 PI: Dr Nian A Zhang
- [16] **Co-PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*,
 Project ID: 2011DC128B
 Title: *Urban Stormwater Runoff Prediction Using Computational Intelligence Methods* Time
 Period: March 2011- February 2012, Amount: **\$ 15, 768**
 PI: Dr Nian A Zhang
- [17] **Co-PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*,
 Project ID: 2010DC114B
 Title: *Development of Analytical Tools to Evaluate the Performance of Low Impact
 Developments in the District of Columbia*
 Time Period: March 2010- February 2011, Amount: **\$ 29,893**
 PI: Dr. Arash Massoudieh (Catholic University of America)
- [18] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*, Project ID:
 2009DC106B Title: *Development of Web-based Rainfall Statistical Analysis Tool for Urban
 Stormwater Management Analysis (Phase II)*
 Time Period: March 2009- February 2010, Amount: **\$ 19,478**
- [19] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*, Project ID:
 2009DC105B Title: *Application of Spatiotemporal Informatics to Water Quality (Phase II)*
 Time Period: March 2008- February 2009, Amount: **\$ 45,389**
 Co-PI: Dr. Byunggu Yu
- [20] **Co-PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*,
 Project ID: 2009DC138B
 Title: *Urban Development of a Fast Optimization Technique Using Interactive Spatial Join for
 GIS Application in Water Resources*
 Time Period: March 2009- February 2010, Amount: **\$ 42,668**
 PI: Dr. S. Kim and Co-PI: Dr. Byunggu Yu
- [21] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI*,

Project ID: 2008DC97B

Title: *Application of Spatiotemporal Informatics to Water Quality*

Time Period: March 2008- February 2009, Amount: **\$ 46,900**

Co-PI: Dr. Byunggu Yu

[22] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI,*

Project ID: 2008DC93B

Title: *Development of Web-based Rainfall Statistical Analysis Tool for Urban Stormwater Management Analysis (Phase I)*

Time Period: March 2008- February 2009, Amount: **\$ 19,028**

[23] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI,*

Project ID: 2007DC88B

Title: *Decision support system to deal with water emergencies for Metropolitan DC*

Time Period: March 2007- February 2008, Amount: **\$ 30,820**

PI: S. Kanungo (George Washington University)

[24] **Co-PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI,*

Project ID: 2007DC87B

Title: *Modeling of Integrated Urban Wastewater System in the District of Columbia*

Time Period: March 2007- February 2008, Amount: **\$ 19,627**

PI: T. Deksissa

[25] **PI: Pradeep Behera** – *United States Geological Survey (USGS)/DCWRRRI,*

Project ID: 2006DC78B

Title: *Wet-Weather Flow Characterization for the Rock Creek through Monitoring and Modeling*

Time Period: March 2006- February 2007, Amount: **\$ 19,420**

B. Internal Research Grants Awarded

[1] **PI: Pradeep Behera** – *UDC STEM Center Summer Research Grant,*

Title: *Development of develop analytical probabilistic models for urban stormwater management analysis*

Time Period: Summer 2010, Amount: **\$ 5,000**

[2] **PI: Pradeep Behera** – *UDC STEM Center Summer Research Grant,*

Title: *Development of develop analytical probabilistic models for urban stormwater management analysis*

Time Period: Summer 2011, Amount: **\$ 5,000**

[3] **PI Dr. B. Yu and Co-PIs: Pradeep Behera A. Flowers, M. Srinivasan, S. Kim, K. Choi, L. Liang, and**– *2010 Seed Grant Competition*

Title: *Strategic Initiative Grant*

Time Period: Summer 2010, Amount: **\$ 25,000**

- [4] **Co-PI: Pradeep Behera** – UDC Agricultural Research Station,
 Project ID: 38Z10
 Title: *Design and Development of Anaerobic Digester of Organic Waste Processing Experimental Biofuel Research (Phase III)*
 Time Period: November 2010 – October 2011, Amount: **\$ 53,000**
 PI: Dr. Esther T. Ososanya and Co-PI: Dr. Abiose Adebayo, Dr. Wagdi Mahmoud, and Song Xueqing
- [5] **Co-PI: Pradeep Behera** – UDC Agricultural Research Station,
 Project ID: 38Z10
 Title: *Design and Development of Anaerobic Digester of Organic Waste Processing Experimental Biofuel Research (Phase II)*
 Time Period: November 2009 – October 2010, Amount: **\$ 53,000**
 PI: Dr. Esther T. Ososanya and Co-PI: Dr. Abiose Adebayo, Dr. Wagdi Mahmoud, and Song Xueqing
- [6] **Co-PI: Pradeep Behera** – UDC Agricultural Research Station,
 Project ID: 38Z10
 Title: *Design and Development of Anaerobic Digester of Organic Waste Processing Experimental Biofuel Research (Phase I)*
 Time Period: November 2008 – October 2009, Amount: **\$ 53,000**
 PI: Dr. Esther T. Ososanya and Co-PI: Dr. Abiose Adebayo, Dr. Wagdi Mahmoud, and Song Xueqing
- [7] **PI: Pradeep Behera** – *Agricultural Research Station, University of DC,*
 Title: *Urban Stormwater Quality Assessment for District of Columbia through Monitoring and Modeling*
 Time Period: May 2007- August 2007, Amount: **\$ 20,000**

C. Grants in Pending

- [1] **PI: Pradeep Behera** – *Department of Education,*
 Title: Integrating Entrepreneurial Mindset Education and Experience in Engineering and Computer Science Curricula – A Model for 21st Century STEM Work Force
 Time Period: September 2017, Amount: **\$750,000 over 3 years**
 Collaborative PIs. Department Chairs from SEAS and Dean SEAS, UDC
- [2] **PI: Pradeep Behera** – *Department of Defense,* Project ID: W911NF-17-S-0010,
 Title: *Multi-Scale Characterization to Understand Oceanic Sand as Fine Aggregate Constituent for Concrete*
 Collaborative PI: Dr. Lei Wang, Civil Engineering
 Time Period: Jan 2018- December 2020, Amount: **\$ 600,000**

D. Grant Proposals Not Funded

- [1] **PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-HRD 1332522
 Title: *Broadening Participation Research Project: Academic Enhancement of Engineering and Computer Science Programs through Inter-disciplinary Research and Education*
 Time Period: 07/24/2013, Amount: **\$338,876**
 Co-PI: Briana Wellman and Nian Zhang
- [2] **PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-CMMI 1265876
 Title: *Collaborative Research: Evolving Vulnerability of Critical Urban Infrastructure to Multiple Flood Threats*
 Time Period: 03/07/2013, Amount: **\$99,780**
 Co-PI: Dong Jeong
- [3] **PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-CMMI 1234555
 Title: *Collaborative Research: Evaluating Benefits and Timing of Flood Protection Solutions in the Face of Climate Change and Sea Level Rise*
 Time Period: 08/08/2012, Amount: **\$102,656**
 Co-PI: Dong Jeong
- [4] **PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-CBET 1133259
 Title: *COLLABORATIVE RESEARCH: Multi-scale source apportionment of particulate contaminants in stormwater runoff in highly urbanized areas*
 Time Period: 06/16/2011, Amount: **\$146,295**
 Collaborative PI: Dr. Arash Massoudieh (Catholic University of America)
- [5] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-HRD 1036544
 Title: *CREST: Center for Research and Education using Cloud Computing (CRECC)*
 Time Period: 07/08/2010, Amount: **\$5,000,000**
 PI: B. Yu and Co-PIs: Esther Ososanya, S. Onye, A. Flowers
- [6] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-CMMI 0926577
 Title: *Scalable Sensor Systems for Urban Runoff Monitoring*
 Time Period: 09/17/2009, Amount: **\$ 304,823**
 PI: B. Yu and Co-PIs: P. Cotae, S. Kim,
- [7] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-CBET 0821539
 Title: *RI: Development of Cost-Efficient Spatiotemporal Instrumentation for Monitoring Water and Wastewater*
 Time Period: 06/03/2008, Amount: **\$98,444**
 PI: Byunggu Yu
- [8] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-DUE 0807781
 Title: *RI: SBIR Phase I: NSF Scholarships in Science, Technology, Engineering, and Mathematics*
 Time Period: 11/15/2007, Amount: **\$600,000**
 PI: S. Oney, Co-PIs: Byunggu Yu, A sewer.

- [9] **Co-PI: Pradeep Behera** - *National Science Foundation*, Project ID: NSF-EEC- 1353420
 Title: Engineering Research Center for Engineered Resilient, Sustainable Systems and Communities (CERSSC)
 Time Period: September 2013, Amount: **Multi Million Dollar every year over 10 years**
 Collaborative PI: Saifur Rahman, Virginia Tech, Co-PIs- Gerald Galloway from University of Maryland, James Kendra from University of Delaware, John Harrald from Virginia Tech.
- [10] **PI: Pradeep Behera** – *National Science Foundation*, Project ID: NSF-BCS- 1413769,
 Title: *CNH-Ex: Resilience and vulnerability of flow regimes to increasing urbanization and a changing climate*
 Collaborative PI: Alfonso Mejia, Penn State University
 Time Period: June 2014- May 2016, Amount: **\$ 198,709**

Research Contribution

A. Peer Reviewed Journal and Conference Proceedings

- B Panigrahi, Alan Hall and **Pradeep K. Behera**, “Reevaluation of the C-51 Basin Rules” Proceedings, Civil Engineering Conference in the Asian Region, 2016, Honolulu, HI, Aug. 30 to Sept. 02, 2016.
- C.V,Chandramouli, E.Hixon, C. Zhou, J. Moreland, J.Wang, Z. Xiong, R.Teegavarappu, **P. Behera**, J.Fox (2016). Evaluating the usefulness of Virtual 3D lab modules developed for a flooding system in student learning. ASEE, 123rd Annual Conference & Exposition. New Orleans, LA.
- Chandramouli, C.V, Ziong, Z., Wang, M., Moreland, J., Zhou, C., Teegavarappu, R., Fox, J., **Behera, P.**, and Hixon, E (2016). Virtual 3D Modeling for Little Calumet River Flood Inundation Studies. ASCE EWRI World Environmental and Water Resources Congress 2016. West Palm Beach, FL.
- Nian Zhang, Tilaye Alemayehu, **Pradeep Behera**," Nonlinear Autoregressive (NAR) Forecasting Model for Potomac River Stage using Least SquaresSupport Vector Machines (LS-SVM)", "International Journal of Innovative Technology and Exploring Engineering (IJITEE)", ISSN: 2278–3075 (Online), Volume-4 Issue-9, Page No.: 47-51, February 2015.
- **Behera P.K.**, and Ramesh Teegavarapu, "Optimization of a Stormwater Quality Management Pond System", International Journal: Water Resources Management, DOI 10.1007/s11269-014-0862-1, 2014.
- Tolessa Deksissa, Lily R Liang, **Pradeep K Behera**, Susan Harknesss, “Fostering Significant Learning in Sciences”, International Journal for the Scholarship of Teaching and Learning, Vol. 2, No. 8, 2014.

- **Behera P. K.**, Ramesh Teegavarapu, Asteway Ribisso, "Storm Event Characteristics based on IETD for different Climatic Regions within United States" *Proceedings, World Environmental & Water Resources Congress, 2013*, Cincinnati, OH, May 19-23, 2013.
- R. S. V. Teegavarapu, **Pradeep Behera**, A. Goly "Assessment of Influences of Climate Variability on Storm Event Characteristics" *Proceedings, World Environmental & Water Resources Congress, 2013*, Cincinnati, OH, May 19-23, 2013.
- Nian Zhang, **P. K. Behera**, and Charles Williams, "Solar Radiation Prediction Based on Particle Swarm Optimization and Evolutionary Algorithm Using Recurrent Neural Networks," 2013 *Proceedings, IEEE International Systems Conference (IEEE SysCon 2013)*, Orlando, Florida, April 15 - 18, 2013.
- Wagdi Mahmoud, Esther Ososanya, **Pradeep Behera**, Abiose Adebayo and Xueqing Song, "Anaerobic Digester of Organic Waste processing: A Biomass Energy Production Project", *Proceedings ASEE 2012 Annual Conference*, TX, 2012.
- Ramesh Teegavarapu, A Aneesh Goly, Chandramouli Viswanathan, and **Pradeep Behera**, "Precipitation Extremes and Climate Change: Evaluation using Descriptive WMO Indices", *Proceedings, World Environmental and Water Resources Congress 2012: Crossing Boundaries*, ASCE, Albuquerque, NM, May 2012.
- Nian Zhang and **Pradeep Behera**, "Solar Radiation Prediction based on Recurrent Neural Networks trained by Levenberg-Marquardt Backpropagation Learning Algorithm," *Proceeding, IEEE*, 978-1-4577-2159, ISGT 2012.
- Byunggu, Yu, **Pradeep K Behera**, Juan F. Ramirez Rochac, Seon, H. Kim, and Dong H Jeong , "Transformative Sensor Technology for Urban Runoff Monitoring" *Proceedings NSF CMMI Research and Innovation Conference – Engineering for Sustainability and Prosperity, 2011 (in print), NSF*.
- Byunggu, Yu, **Pradeep K Behera**, Juan F. Ramirez Rochac, "Advanced Sensor-Computer Technology for Urban Runoff Monitoring, *SPIE Conference on Sensors and Smart Structures Technologies, NSF Special Section*, Vol 7981 (Chair & Ed. Dr. Masayosi Tomizuka, UC Berkeley), 2011 in print SPIE.
- Byunggu, Yu, **Pradeep K Behera**, Seon, H. Kim, P. Cotae, Juan F. Ramirez Rochac, and Travis Branham, "Environmental Runoff Monitoring" *SPIE Conference on Sensors and Smart Structures Technologies, NSF Special Section*, Vol. 7647, 764748, March 2010, SPIE, doi:10.1117/12.847308.
- **Behera P.K.** and T. Branham, "Development of a Rainfall Statistical Analysis Tool for Analytical Probabilistic Models for Urban Stormwater management Analysis", *Proceedings World Environmental & Water resources Congress 2010*, Providence, RI, May 2010.

- **Behera P.K.** and Y. Guo and R. Teegavarapu, "Evaluation of Antecedent Storm Event Characteristics for different Climatic Regions based on Interevent Time Definition (IETD)" *Proceedings World Environmental & Water resources Congress 2010*, Providence, RI, May 2010.
- **Behera P.K.** and Y. Guo and R. Teegavarapu, "Optimization of Regional Stormwater Quality Control Systems Using Genetic Algorithms", *Proceedings World Environmental & Water resources Congress 2009: Great Rivers*, Kansas City, Missouri, May 2009.
- Byunggu Yu, F. Vainstein, L. Liang, S. Lakeou, **P. Behera**, P. Lala, I Aizeenberg, "UDC-TAMUT-BMSTU Joint Effort for Engineering Higher Education and Research in U.S. and Russia" at the International Theoretical & Practical Seminar: Development of Research-Education Collaboration between Russian and U.S. Universities in the Field of Engineering, October 14, 2008, Moscow, Russia.
- **Behera P.K.**, "Probabilistic Approaches for Assessment of Non-Point Source Pollutant Loads from Urban Watersheds" *Proceedings, World Environmental and Water Resources Congress 2008*, Honolulu, HI, May 2008.
- **Behera, P, K.**, J. Y. Li, and B. J. Adams, "Runoff Quality Analysis of Urban Catchments with Analytical Probabilistic Models" *Journal of Water Resources Planning and Management*. ASCE, Vol. 132, No. 1, pp. 4-14, January-February 2006.
- **Behera, P, K.**, F. Papa, and B. J. Adams, "Optimization of Regional Storm-Water Management Systems." *Journal of Water Resources Planning and Management*. ASCE, Vol. 125, No. 2, pp-107-114, March-April, 1999.
- **Behera, P.K.**, R.N. Prusty and L. K. Mishra, "Flood prediction in downstream of Hirakud dam in Mahanadi River by Unit Hydrograph method using Infiltration Index", *Proceedings of VII Congress of Asian and Pacific Regional Division of International Association of Hydraulic Research*, Vol. 3, pp. 153-164, 1992.

B. Book Chapter Publication

- Chapter 5 for the book 'Urban Stormwater Management Planning with Analytical Probabilistic Models' by B. J. Adams and F. Papa, John Wiley & Sons, New York, 2000.
- **Behera, P, K.**, J. Y. Li, and B. J. Adams, "Characterization of Urban Runoff Quality: A Toronto Case Study" *Applied Modeling of Urban Water Systems*. W. James (Ed.), CHI Guelph, Ontario, Vol. 8, January 2000.

C. Technical Reports

- Pradeep Behera, “Monitoring of UDC Van-Ness Campus Green Roof System to Evaluate Runoff Quantity Control Performance”, USGS/DCWRRI, May 2013.
- Pradeep Behera and Inder Bhambri “Development of Porous Driveway System for Districts Residential Lots”, USGS/DCWRRI, May 2013.
- Nian Zhang and Pradeep Behera, “Urban Stormwater Runoff Prediction Using Computational Intelligence Methods”, USGS/DCWRRI, May 2012.
- Pradeep Behera, J Trevor Cone, Brenna E. O’Connor, Dr. Richard McCuen, Freddy Montano “National Capital Region Flood Risk Assessment: Inter-university Collaboration Initiative”, USGS/DCWRRI, May 2012.
- Arash Massoudieh, Pradeep Behera, and Minh Tri Le, “Evaluating the Performance of Low Impact Developments on Runoff Volume in Washington DC”, USGS/DCWRRI, February 2012.
- Nian Zhang and Pradeep Behera, “Urban Stormwater Runoff Prediction Using Computational Intelligence Methods”, USGS/DCWRRI, May 2012.
- Pradeep Behera, and Travis Branham, “Development of Web-based Rainfall Statistical Analysis Tool for Urban Stormwater Management Analysis (Phase I)”, USGS/DCWRRI, May 2010.
- Byunggu Yu and Pradeep Behera, “Application of Spatiotemporal Informatics to Water Quality (Phase II)”, USGS/DCWRRI, May 2010.
- Shivraj Kanungo and Pradeep Behera, “Decision Support System to Deal with Water Emergencies for Metropolitan DC”, USGS/DCWRRI, May 2009 and May 2009.
- Pradeep Behera, and Travis Branham, “Development of Web-based Rainfall Statistical Analysis Tool for Urban Stormwater Management Analysis (Phase II)”, USGS/DCWRRI, May 2009.
- Byunggu Yu and Pradeep Behera, “Application of Spatiotemporal Informatics to Water Quality (Phase I)”, USGS/DCWRRI, May 2009.
- Pradeep Behera, “Wet-Weather Flow Characterization for the Rock Creek through Monitoring and Modeling”, USGS/DCWRRI, May 2007.
- Primary Author of Research Report (2003) “Preliminary Assessment for Improved Design Criteria for Construction Sediment Control Pond”, TRCA and Ministry of Ontario, Canada
- Primary Author of Research Report (2004) “Assessment of Construction Sediment Control Ponds to Protect Receiving Waters”, TRCA, Toronto, Canada.

D. Non-referred Conference Paper/Poster Presentation

- Pradeep K. Behera, and Brahim Sidi Mhamed, “Analysis of External and Internal Storm Event Characteristics for Mid-Atlantic Region”, World Environmental & Water Resources Congress, 2016, West Palm Beach, FL, May 22-26, 2016.
- Pradeep K. Behera, Ramesh Teegavarapu, Chandramauli V Chandramauli, Brahim Sidi Mhamed, “Tracking Changes and Trends in the Potomac River Stream flow Extremes and Characteristics”,

World Environmental & Water Resources Congress, 2016, West Palm Beach, FL, May 22-26, 2016.

- P. K. Behera, T., Deksissa,, S. Harkness and L. Liang, “Infusion of Sustainability Concepts to Civil Engineering Courses at UDC”, ASEE 2013 Mid-Atlantic Fall Conference, October 11-12, 2013, Washington DC.
- P. Behera, “Flood Risk in the National capital Region – A walking tour in DC with Members of the Flood Risk Assessment program Team” organized by AWWA NCRS on September 13, 2012
- T Deksissa, P. K. Behera, L. Liang and S. Harkness, “Attracting and preparing underrepresented minority students in science and engineering”, in NSF NABGG Technology Conference, Arlington, VA, September 2012.
- P. K. Behera, “A New Sensor Technology for Sewer Flow Monitoring” at the 2011 World Environmental & Water Resources Congress 2011” at Palm Spring, CA during May 22-26, 2011.
- Yu, B., P.K. Behera, J.F. Ramirez Rochac, S.H. Kim, and D.H. Jeong, Poster Presentation, “Environmental Urban Runoff Monitoring,” SPIE Conference on “Smart Structure NDE”, San Diego, CA., March 7-12, 2011
- Yu, B., P.K. Behera, J.F. Ramirez Rochac,, Poster Presentation of “Environmental Urban Runoff Monitoring” at the SPIE Conference on “Smart Structure NDE”, at San Diego, CA during March 7-12, 2010.
- Tolessa Deksissa and P. K. Behera, “Modeling of Integrated Urban Wastewater System: Model Selection and Implementation” in the Proceedings of 2008 Mid-Atlantic WRRRI Conference.
- P. K. Behera, “Probabilistic Approaches for Assessment of Non-Point Source Pollutant Loads from Urban Watersheds” in the International Conference on “World Environmental & Water resources Congress 2008 at Honolulu, Hi during May 12-17, 2008.
- P. K. Behera, “Application of Analytical Models for TMDL Analysis”, World Environmental Congress, Omaha, Nebraska, May 21-25, 2006.
- Krasnova, R., J. Y. Li and P. K. Behera, “Performance Evaluation of a Construction Sediment Control Pond”, International Conference on Stormwater and Urban Water Systems Modeling, Toronto, Ontario, Feb 24-25, 2005.
- P. K. Behera, J.Y. Chen, I.O. Poon, B, J. Adams, B.J, "Runoff quality analysis of urban catchments with analytical probabilistic models: model development, verification, and application" by EGU-1st General Assembly Conference, Nice, France, 25-30, April 2004.

- P. K. Behera, and B. J. Adams, “Analytical Probabilistic Model to Estimate Long-term EMC of Pollutants in Urban Runoff” by - 35th Central Canadian Symposium on Water Pollution Research, Burlington, Ontario, 2000.
- P. K. Behera, P.K, B. J. Adams, and J.Y. Li, “Runoff Quality Analysis for Metropolitan Toronto Waterfront” Annual Conference on Storm water and Urban Water Systems Modeling, Toronto, Ontario, Feb 18-19, 1999.

E. Conference Paper/Poster Presentation with UDC Students

- Andrian R. Fernandopulle, P. Behera, and D. Jeong, “Development of a Precipitation Analysis Tool for Urban Stormwater Management”, ASEE 2013 Mid-Atlantic Fall Conference, October 11-12, 2013, Washington DC.
- Asteway Ribisso and Pradeep Behera, “Long-term Precipitation Analysis for Mid-Atlantic Region for Evaluating Climate Variability and Change”, 2013 Emerging Researchers National (ERN) Conference in STEM, February 28-March 2, 2013, Washington DC.
- Yonas Gardissa, Mir Ali and Pradeep Behera, “Stream flow analysis based on Flow Duration Curves for Potomac Watershed”, 2013 Emerging Researchers National (ERN) Conference in STEM, February 28-March 2, 2013, Washington DC.
- Mir Ali, Yonas Gardissa and Pradeep Behera, “Analysis of Stream flow for Climate Change Evaluation based on Flow Duration Curves within Potomac Watershed”, 2013 Emerging Researchers National (ERN) Conference in STEM, February 28-March 2, 2013, Washington DC.
- Asteway Ribisso and Pradeep Behera, “Precipitation Analysis for Mid-Atlantic Region based on Storm Event Analysis”, 70th Joint Annual Meeting of BKX/NIS, March 13-17, 2013, Reston VA.
- Yonas Gardisa and Pradeep Behera, “The stream flow study using flow duration curves for Maryland locations within Potomac watershed”, 70th Joint Annual Meeting of BKX/NIS, March 13-17, 2013, Reston VA.
- Mekonnen Hailegiorgis, and Pradeep Behera, “Regional Climate Change Analysis based on Long-term Precipitation Data” at the 2012 Emerging Researchers National (ERN) Conference in STEM at Atlanta, February 23-25, 2012.
- Travis Branham and Pradeep Behera, "Development of a Rainfall Statistical Analysis Tool for Analytical Probabilistic Models for Urban Stormwater management Analysis", Proceedings World Environmental & Water resources Congress 2010, Providence, RI, May 2010.

Conference Chair/Moderator/Panel Member

- Moderated Technical Session on “Risk, Uncertainty and Probabilistic Approaches for Watershed Processes” at the 2012 *World Environmental & Water Resources Congress 2011* at Albuquerque, NM during May 20-24, 2012.
- Panel Member, Seminar: Renewable Energy and Green Communication, 25th *BEYA STEM Global Competitive Conference*, February 17-19, 2011, Washington DC.
- Panel Member at a Seminar organized by American Water resources Association National Capital Region Section and entitled “Flooding – a Growing National and Regional Threat” on March 15, 2011 at 121 *Cannon House Office Building, Capital Hill, Washington DC*.
- Team Member, at the “Flood Risk in the National capital Region – A walking tour in DC with Members of the Flood Risk Assessment program Team” organized by *AWWA NCRS* on September 13, 2012

Organized Technical Workshop

- Organized Technical Workshop on the “Key EPA Internet Tools for Watershed Management” at the University of the District of Columbia, December 12th 2007
- Co-coordinated and served as a panelist on the “Interactive Panel on Urban Water Issues: Present and Future” at the University of the District of Columbia, September 10, 2008.
- Organized as a key member for Technical Workshop entitled “Improving the Selection of Stormwater best management Practices: Making Decisions Under Multiple Uncertainties collaborating with Virginia Tech, University of Maryland for Mid Atlantic Water Program, 2010.

Responsibilities outside the University

Following scholarly responsibilities include participation of member at the international level:

- Serving as a *Secretary for the National Probabilistic Approaches Committee* of Environmental & Water Research Institute (EWRI) of American Society of Civil Engineers.
- Serving as a *Committee Member* - Environmental and Water Resources Institute of ASCE Task Committee member on Low Impact Development –Combined Sewer Overflow (LID-CSO).
- Serving as a Committee Member - Environmental and Water Resources Institute of ASCE, Surface Hydrology

- Serving as core committee member in organizing North East Regional Meeting for Professional Engineers, organized by District of Columbia Society of Professional Engineers, to be held on December 5-7 at Washington DC, 2013

Industry Experience – National and International (Water Resources Engineer)

- * **Project Engineer**, 2005, Reviewer of Technical Reports for South Florida Water Management District, BPC Group Inc. Orlando.
- * **Lead Researcher and Scientist**, 2003-04, Research project “Improved Technical Design Criteria for Construction Sediment Control Ponds for Receiving Water Protection” for Toronto and Region Conservation Authority and Department of Fisheries and Ocean. The outcome of the project include two technical reports: (i) Preliminary Assessment for Improved Design Criteria for Construction Sediment Control Pond, and (ii) Assessment of Construction Sediment Control Ponds to Protect Receiving Waters. I prepared the research and analysis and written the reports.
- * **Project Manager**, 2004-05, Floodline Mapping Study – Fletchers Creek. The tasks include surveying of new stream corridor, updating of hydrologic and hydraulic model and mapping of regulatory floodline for the Fletchers Creek, City of Brampton and City of Mississauga. My involvement includes writing proposal, planning, budgeting, supervising hydrologic and hydraulic analysis, communicating with client and managing the project.
- * **Project Engineer**, 2004-05, Six point Interchange Reconfiguration Class Environmental Assessment – Stormwater Management Analysis, - This project involves planning and preliminary design of storm water quantity and quality control systems for the reconfiguration of six point interchange located in Toronto.
- * **Project Engineer**, 2003-04, Preparation of Technical Report ‘Erosion and Sediment Control Guideline’ for Toronto and Region Conservation Authority and Department of Fisheries and Ocean. Author of the technical report.
- * **Project Engineer**, 2003-04, Water resources analysis for Highway 7 Class Environmental Assessment, Town of Markham: 100-year Erosion Analysis and Determination of meander belt width for Rouge River, Development of stormwater management alternatives and selection of preferred alternative based on environmental, social, economical, and engineering factors.
- * **Project Engineer**, 2003, Storm sewer cost sharing analysis for a new development in the City of Brampton: Designed the storm water management system (storm sewer system, stormwater management ponds) for the site and developed unit costs for sharing between different owners.
- * **Project Engineer**, 2003, Development of Model Erosion and Sediment Control By-law for Toronto and Region Conservation Authority.
- * **Project Engineer**, 2002-2003, Sciberras Road Bridge Crossing Hydraulic Analysis, Town of

Markham. Planning and preliminary design of bridge crossing to satisfy provincial and federal regulations.

- * **Project Engineer**, 2003, Hydraulic Grade Line Analysis for storm sewer design in Block 12 and Block 18, City of Vaughan.
- * **Project Engineer**, 2003, Jannock Streetsville Hydrology Model Development, Town of Oakville.
- * **Project Engineer**, 2003, Update of Town of Markham Stormwater Management Guideline.
- * **Lead Author** for the Technical Report 'Development of Model Erosion and Sediment Control By-law' for the Toronto and Region Conservation Authority', 2003.
- * **Project Engineer**, 2002, Application of SWMM for the development of SWM Operation and Maintenance system by Clarifica Inc.
- * **Engineer**, 2002, South Beaver Creek Tributary – Flood line Mapping Evaluation.
- * **Engineer** 2002-03, Rouge River Tributary, Fonthill Creek Hydrologic and Hydraulic Analysis for Flood Evaluation, Town of Markham.
- * **Engineer**, 2002, Sundial Home (Joshua Creek) Hydraulic Grade Line Analysis, Town of Oakville.
- * **Engineer**, 2002-03, Lead author for development of a consolidated by-law for topsoil removal, fill and erosion and sediment control for the Town of Markham.
- * **Project Engineer**, 2005, Reviewed a number of technical reports for South Florida Water Management District on behalf of BPC Group Inc. Orlando.

Academic Contribution/Journal Reviewer

- Reviewer for Journal of Hydraulics Engineering, ASCE
- Reviewer for Journal of Water Resources Planning and Management, ASCE
- Reviewer for Journal of Water Research, Elsevier
- Reviewer for Journal of Hydrologic Engineering, ASCE
- Reviewer for Journal of Environmental Management, Elsevier
- Reviewer for Journal of Hydrology, Elsevier
- Reviewer for Journal of Environmental Pollution, Elsevier
- Reviewer for Journal of Hydrologic Processes, British Journal UK
- Reviewer for ASEE Annual Conference Proceeding
- Reviewer for NSF-GRF program