

Leena Divakar
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PROFESSIONAL OVERVIEW

Over 20 years of experience addressing environmental challenges **related to soil, water, and air pollution**. **Expertise includes** assessing the impact **of these issues on** environmental health and socioeconomics, **both globally and in the** United States, **with a particular focus on** Kansas

PROFESSIONAL EXPERIENCE

Instructor/ Pollution Prevention Specialist, PPI, Kansas State University	(Jun 2018-Present)
Environmental Specialist, KDHE	(Apr 2015-Nov 2017)
Research Assistant, BAE, Kansas State University	(Sep 2013-Oct 2013)
Assistant Scientist, Agronomy, Kansas State University	(Nov 2012-May 2013)
Student Associate, AIT, Thailand	(Sep 2002-May 2009)
Senior Research Fellow, Indian Institute of Technology, Kharagpur, India	(Feb 2002-Jul 2002)
Assistant Engineer (Apprentice), Block Panchayat Muthukulam, India	(Jan2001-Jan 2002)

RELATED VOLUNTEER EXPERIENCE

Assist in preparation of CFWWTP Engineering report, 2018 for Environmental Division, Directorate of Public Works, Fort Riley (March 2018 – May 2018)

EDUCATION

Ph D. in Integrated Water Resources and Management, Asian Institute of Technology, Thailand, May 2011

Dissertation Title: Integrated Hydro -Economic Equity Support Water Allocation Model: An Application to Chao Phraya River Basin, Thailand

M.Tech. in Soil and Water Engineering, Kerala Agricultural University, Kerala, India, 2001

B.Tech. in Agricultural Engineering, Orissa University of Agriculture and Technology, Orissa, India, 1998

HONORS AND AWARDS

Summer School on Field Methods and Eco-Hydrological Models for Integrated Water Management in Rural Areas Kiel, Germany 2010 (Declined due to delay in Visa)

Danish International Development Agency Scholarship for Doctoral Program at AIT, Thailand 2002-2006
Junior Research Fellowship, Indian Council for Agricultural Research 1998-2000.

EXPERIENCE

Assisted with the PPI summer intern program and mentored 5 summer interns over the past 5 years at manufacturing facilities

Provided federal, state, and local environmental compliance services in the areas of air pollution, solid waste, hazardous waste, and wastewater and industrial stormwater to over 150 small businesses across Kansas

Leads the technical assistance team to provide compliance assistance to air permitting and assist with air emission calculator tools

Developed a harmful algal blooms toolkit, that provides technical assistance to private waterbody owners across Kansas.

Developed and updated several guidance documents for private well testing, maintenance, and septage management to ensure safe drinking water mainly for rural Kansas.

Managed a number of small projects from start to completion for the Kansas Small Business Environmental Assistance Program including compliance calendars and posters for livestock; dry cleaning; open burning, updating a nutrient management tool for CAFO owners, assisting Kansas dentists with EPA's dental amalgam rule, promoting a USDA prescription drug and sharps take-back program from communities from disadvantaged communities in Kansas and few communities in southwestern Missouri.

Assisted in managing environmental compliance assessment and assistance project for the Kansas Department of Health and Environment (KDHE) involving all non-discharging ready mixed concrete facilities across Kansas

Proficiency in modeling of water resource systems

Trained in developing Total Maximum Daily Loads for high priority water bodies, including analysis and calculation of Wasteload and Load Allocations.

Knowledge in quantification and control of Non Point Source Pollution of Water Resources

Expertise in water assessment and water accounting, water and environmental economics and sustainability. Knowledge of GIS tools and application

Ability to rapidly assimilate new techniques and knowhow of project planning and implementation Work effectively in multicultural, multiethnic and multilingual environment

Skills in organizing and managing conferences and workshops Compiling and interpreting large datasets

Utilize written and verbal communication skills to convey results

TECHNICAL EXPERIENCE AND SKILLS

Trained in water resources system/ quality models: QUAL-2K, CROPWAT, HEC-Res Sim. Remote sensing based Evapotranspiration (ET) models (SEBS, SSEB, METRIC) Knowledge (limited) in: MIKE BASIN. HEC-HMS, HEC- RAS, MIKE 11, WEAP, SWAT, MODFLOW

ESRI GIS software: ArcView, ArcInfo

Trained in decision support software Olympe for cropping, animal and farming systems. Knowledge in programming languages: Visual Basic, Fortran and Basic.

Other software (Statistical) used: Microsoft Office, MSTAT, SYSTAT, SPSS and MINITAB Skilled in operation and maintenance of meteorological equipments.

One month training in post harvest engineering at Indian Grain Storage Institute, Hyderabad, India

KEY PRESENTATIONS

Presented at EPA R7 meetings in 2022 and 2023

Conducted a online Kansas Perc dry cleaners meeting with EPA regarding the Risk evaluation for Perchloroethylene (PCE).

Served as an instructor for 40 students on laboratory techniques while serving as a doctoral research assistant in Asian Institute of Technology, Thailand

Assisted with organization of international conference involving 300+ people Reviewed abstracts, helped with coordination of presentations, food and lodging

Gave public defense of doctoral dissertation and master's thesis to audiences of 50-60 people

Worked as senior research fellow, and served as an instructor for students in laboratory class at Indian Institute of Technology, Kharagpur, India

Panda, R. K., Behera, S, and **Divakar, L.** Integrated Eco friendly Management Strategy for Quantification and Control of Non Point Source Pollution of Water Resources. International Conference on Water, Champaign, Illinois, U.S. A. Nov 6-7. 2002.

Divakar, L., Paul, J. V, and Franklin, M. R. Simulation of Priority Fixation of a Reservoir System with Multiple Objectives. International Agriculture Engineering Conference, Bangkok, Thailand. Dec 3-6. 2007.

Divakar, L. Water Pricing for Water Allocation - An Emerging Tool. International Agriculture Engineering Conference, Bangkok, Thailand. Dec 3-6. 2007.

Upendram, S., **Divakar, L.** and Anandhi, A. Vulnerability of water resources to climate change in Kansas" ASABE 1st Climate Change Symposium: Adaptation and Mitigation Conference Proceedings.

TMDL REPORTS

Kansas Lower Republican Basin TMDL: Upper Kansas River, Head Water to Ogden
<https://www.kdhe.ks.gov/DocumentCenter/View/14089/Upper-Kansas-River-TP-PDF>

Kansas Lower Republican Basin TMDL: Crooked Creek and Stranger Creek Watershed
<https://www.kdhe.ks.gov/DocumentCenter/View/14018/Crooked-Creek-TP-PDF>

Prepared Section 3 of Lower Arkansas Basin TMDL for Total Phosphorus impairment

PUBLICATIONS

Divakar, L., Babel, M. S., Perret, S. R, and A. Das Gupta (2011). Optimal Allocation of Bulk Water Supplies to Competing Use Sectors Based on Economic Criterion - An Application to the Chao Phraya River Basin, Thailand. Journal of Hydrology, 104(1-2), 22-35.

Divakar, L., Babel, M. S., Perret, S. R, and A. Das Gupta (2011). "Optimal water allocation model based on satisfaction and economic benefits. International Journal of Water, 7(4), 2013.

Ryan J. Hamel

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Phone: (785) 532-3351 • Email: rhamel@ksu.edu

Education

Kansas State University in Manhattan, KS

- B.S. in Biological and Agricultural Engineering (environmental option); 3.65 GPA
- Secondary major in Natural Resources and Environmental Sciences; minor in German

Employment

Ryan Hamel has ten years of experience providing environmental consulting services. His expertise includes energy assessments, regulatory compliance, permit assistance, onsite auditing and regulatory applicability. Hamel has conducted a number of energy-, waste-, and water-reduction assessments for the general manufacturing, commercial, and agricultural industries, as well as the public sector. He has provided sustainability-focused presentations at state conferences, national organizations, webinars, and trade associations, and has led a professional network for environmental, health, and safety managers in southeast Kansas. Hamel has also created and updated a number of guidance documents, tools, forms, and manuals for multiple industries related to energy and pollution prevention savings and environmental compliance.

Employment

K-State Engineering Extension; 2007 – 2014, 2016 – present; Manhattan, KS and Olathe, KS

- Assisted clients, both on-site and remotely, with energy efficiency, pollution prevention, and environmental compliance issues
- Developed documents and tools to measure and report environmental requirements and outcomes
- Coordinated environmental compliance and pollution prevention grant-funded projects
- Operated, with a team of four, the Kansas Small Business Environmental Assistance Program (SBEAP)

Ramboll Environ; 2014 – 2016; Overland Park, KS

- Conducted on-site assessments related to energy efficiency and industrial ventilation
- Worked with clients to evaluate environmental permitting needs and submit permit applications
- Supported environmental litigation by evaluating historical case documentation to reconstruct the circumstances of various environmentally-impactful incidents

Frontier El Dorado Refining Company through Pollution Prevention Institute; 2006 – 2007; El Dorado, KS

- Researched environmental and economic impacts of erosion at petroleum refinery
- Developed and presented comprehensive plan to conserve and reduce soil losses
- Continued work after conclusion of internship (based upon company request)

City of Manhattan Public Works; 2005; Manhattan, KS

- Led public education portion of city's stormwater program
- Assisted in development of city's stormwater program, as it began working toward compliance with National Pollutant Discharge Elimination System (NPDES) regulations
- Investigated local stormwater challenges primarily due to construction and excess runoff

Skills and certifications

- Professional Engineer (State of Kansas; #24799)
- Certified Energy Manager (CEM #15745)
- Certified Measurement and Verification Professional (CMVP #4913)
- Development of tools for environmental tracking purposes
- Grant writing
- RCRA hazardous waste
- Federal/Kansas air quality regulations
- Fluent in German

Rajavel Krishnamoorthy, PhD

2323 Anderson Avenue, Ste. 300, Pollution Prevention Institute (PPI)

Kansas State University, Manhattan, KS, USA

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+1 785-317-8243

<https://www.linkedin.com/in/rajavel-krishnamoorthy-20028020/>

Competitive Work Experience

Instructor - Pollution Prevention Institute, Kansas State University, KS, USA.	Nov 2023 - Present
NSF- Post-Doctoral Research Associate Department of Industrial Manufacturing Systems Engineering, Kansas State University, KS, USA.	Nov 2021 -Nov 2023
CAS - PIFI fellow Shenzhen Institute of Advanced Technology (SIAT), Chinese Academy of Sciences, Shenzhen, China.	Sep 2018 - Nov 2021
Postdoctoral Fellow Department of Environmental Science, Zhejiang University, Hangzhou, China.	May 2016 - Apr 2018

Education

Ph.D.	Bharathiar University, India.	2009 - 2015
P.G Diploma in Nanotechnology,	Bharathiar University, India.	2007 - 2008
M.Sc. Physics,	P.S.G College of Arts and Science, Bharathiar University, India.	2007 - 2009
B.Ed.,	Vetrivel College of Education, Periyar University, India.	2006 - 2007
B.Sc. Physics,	P.S.G College of Arts and Science, Bharathiar University, India.	2003 - 2006

Career Accomplishment

Research Associate at Kansas State University, USA. (2021-2023)

Introduced new sensor technology with integrated circuits for real-time and continuous monitoring of phosphate nutrients in soil and water using printed sensor materials. Smart scale 2D nanoscale materials and their surface engineering for trace-level detection of toxic environmental pollutants using electrochemical approaches for point-of-care applications. Using additive manufacturing technology such as Inkjet, dispense, and 3D printing for sensor fabrication and printed electronics.

PIFI Postdoctoral Fellow at SIAT-CAS, China. (2018-2021)

Methods of manufacturing MXene layered structures using chemical phase exfoliation and its surface defect engineering for structure-property function identification. Establishing novel polymer composite nanostructures such as MXene-PVDF, AgNWs-WPU, and MXene-WPU, and liquid metals composites and their multifaceted property identification such as electrical, thermal, and mechanical. Development of high-performance multi-functional electromagnetic

interference (EMI) shielding materials for electronic packaging applications.

Postdoctoral Researcher at Zhejiang University, China (2016-2018)

Controlled exfoliation of 2D MXene Nanostructures and its mechanism of etching identification. Establishment of novel catalytic materials using MXene and its derived Hybrid Nanostructures. Bio-Nano-Interfacial Interaction of Engineered Nanoparticles for Environmental Applications such as antibacterial and antifouling.

Graduate study at Bharathiar University, India (2009-2015)

Pyrolysis-assisted chemical vapor deposition (CVD) synthesis of MWCNTs, different functionalization chemistry, and its growth mechanism exploration. Fabrication of Metal (Ag, Au)/Metal oxide (ZnO, CuO, and Fe₂O₃) decorated MWCNTs for sensor fabrication. Electrical transport of CNTs and nanotubes-based device fabrication for the development of VOC's gas sensors. Mechanism of interactions between the nanotubes and bacterial cells.

Grants and Projects Handled

1. Construction of Metal Nanoparticles Decorated Self-assembled 3D MXene Foam for Achieving High Electromagnetic Shielding Interference Materials, China Post-Doctoral Foundation (2019M653124). (Independent Project)
 2. In situ Controlled synthesis of TiO₂@Mxene Hybrid 2D Nanostructures for Adsorption and Degradation of Organic Dyes from Water, China Post-Doctoral Foundation (2017M611999). (Independent Project)
 3. Real-time and Continuous Monitoring of Phosphates in the Soil with Graphene-Based Printed Sensor Arrays (Award Abstract # 1935676) NSF- SitS -UKRI.
 4. Advanced Electronic Packaging Materials, National and Local Joint Engineering Laboratory of Advanced Electronic Packaging Materials, Leading Scientific Research Project of Chinese Academy of Sciences (QYZDY-SSW-JSC010).
 5. Bio-Nano-interfacial Interactions of Engineered Nanomaterials, National Key Research and Development Program of China (2017YFA0207003), National Natural Science Foundation of China (21525728 and 21621005).
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Professional Teaching Experience

Teaching Assistance at Kansas State University, Manhattan, KS, USA

Subject: Materials and the Impact of Manufacturing Processes

- Taught Material manufacturing process topics such as polymers and industrial manufacturing systems to about 26 students.
- Setting undergrad practical classes including 3D printing, materials fabrication, and characterization techniques.

Aug 2022 - Dec 2022

Guest Lecture in Bharathiar University, India

Subjects taught (25 students in each class), and each paper is an individual specific course paper on each semester.

- Molecular Quantum Mechanics
- Electromagnetic Theory
- Nuclear Physics and particle physics
- Conducting Practical courses for master's degree students.

Aug 2015 - Apr 2016

Teaching Assistance in Bharathiar University, Coimbatore, India,

Jan 2011 - May 2014

Subject taught to master students during my graduate program.

- Nanoscience and technology, and
- Methods for Instrumental Characterization

Awards and Distinction

ACS Post-Doctoral Researcher Recognition	Jul 2023
CAS President's International Fellowship Initiative (CAS-PIFI), Chinese Academy of Sciences, China	Sep 2018 - Oct 2021
Chinese Post-Doctoral Fellowship	Apt 2019
China Postdoctoral Science Foundation, China	
Chinese Post-Doctoral Fellowship	May 2017
China Postdoctoral Science Foundation, China	
Senior Research Fellowship	Apr 2013 - Mar 2015
Council for Scientific and Industrial Research (CSIR), India	
International Student Exchange Award	Feb 2013 - Jun 2013
Centre for International Mobility (CIMO), Lappeenranta University of Technology, Finland	
University Research Fellowship	May 2010 - Mar 2013
Bharathiar University, India	

Peer-Reviewed Publications

○ Patent	- 04
○ Book Chapter	- 02
○ International publication	- 52
○ Conference Presented	- 25
○ Conference Participated	- 11

Access my detailed publication - <https://scholar.google.com/citations?user=dfa7SHEAAAAJ&hl=en>

Field of Expertise

Environmental Pollution Control	All level of Pollution Prevention Control measures, Remediation, Source reduction, and Technical and compliance assistance to all businesses
Inkjet Printing & Electrochemical sensing	Conductive Ink Synthesis (Graphene, MXene, etc.), Additive Manufacturing (Dispense, Inkjet, and 3D printing), Electrochemical Sensing (Soil phosphate, Pollutants, and Biomolecule Detection)
Nanomaterials	Engineered Synthesis of novel smart scale materials (Graphene, MXene, Metal NPs, AgNWs, Liquid Metal, Metal Oxides, and CNTs)
Electronic Packaging	Electromagnetic Interference Shielding (EMI) of Nano/Micro-structures, Polymer Nanocomposites and Hybrid Nanostructures
Catalysis and Sensors	Photocatalytic Dye degradation of Oxides and Hybrid Nanostructures and Sensors (Biosensors, VOC detection, and Wearable sensors)
Nano-Biotechnology	Bio-Nano-Interfacial Interactions of Engineered Nanoparticles and their Mechanism Exploration with Human Guts Pathogens

Kurt Foley

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Summary

I am a passionate energy professional dedicated to improving quality of life in my community through sharing the benefits of energy efficiency. I have two years of experience providing energy consulting services and energy education to small businesses, K-12 schools, and the general public. My expertise includes energy audits, delivering presentations, and research/writing. I have conducted a number of energy audits for a variety of industries including general manufacturing, commercial, agriculture, and the public sector. I have delivered energy- and sustainability-focused presentations at state and regional conferences, webinars, and workshops. My Master's research focused on the positive impact a State Energy Plan could have in reducing electricity rates in Kansas.

Skills and Qualifications

- Adobe Creative Cloud
- Develop Energy-Tracking Spreadsheets
- Energy Audits
- Grant Writing
- Microsoft Office Suite
- Presentations
- Program Development
- Research/Writing

Certifications and Trainings

- Certified Energy Manager (CEM #28396)
- Certified Measurement and Verification Professional In-Training (CMPVIT #1006)
- Certified Demand Side Manager (CDSM #2339)
- Kansas Master Naturalist
- Dale Carnegie Course: Skills for Success (received “Breakthrough Award for Enthusiastic Presentation”)

Education

University of Denver

- M.S. in Environmental Policy and Management
- Graduate Certificate in Energy and Sustainability

Washburn University

- B.A in History

Employment

K-State Engineering Extension; 2019-Present

Instructor/Energy Specialist

- Lead K-12 Energy Benchmarking Program; have led several student teams through energy investigations of their school
- Conduct energy assessments at small businesses; write technical reports, estimate energy savings, assist businesses in applying for grant funding to implement projects
- Provide energy education to K-12 students and teachers, small business owners, and general public
- Produce education/instructional videos on energy education activities, energy and environmental concepts, and energy equipment and tools
- Develop, organize, and host regional and statewide KidWind Challenges, with a team of four

CoreFirst Bank & Trust; 2013-2019, Topeka, KS and Englewood, CO

Universal Banker, Lead Personal Banker, Personal Banker, Teller

- Generated new commercial and personal relationships and strengthen existing relationships; cross-sold products and services across all bank departments
- Conducted interviews for new personal and commercial accounts, and personal loan products
- Worked directly with branch manager to maximize branch performance/operations, motivated team, and achieved branch and individual goals
- Received Award for Achievement in Customer Service (2015, 2016); Customer Referrals (2015, 2016); Loan Production (2016)

MARY PARK P.E.

785.532.1706 | marypark@ksu.edu

EDUCATION

Columbia University

Graduate School of Architecture,
Planning, and Preservation

Master of Science
Historic Preservation
2013 | New York, NY

University of California, San Diego

Jacobs School of Engineering

Bachelor of Science
Structural Engineering
2009 | La Jolla, CA

CERTIFICATIONS

Licensed Professional Engineer (PE)
in States of New York & Kansas
Construction Document Technologist
(CDT)
OSHA 10 hr

PUBLICATIONS

Reusing Brick: Properties of Brick to
Mortar Bond Strength
(Master's Thesis)

DOCOMOMO International Specialist
Committee on Education & Theory
Spring 2013 Publication

AWARDS

Auburn University Facilities Management
Outstanding Achievement Award
Silver (2020) & Bronze (2021)

INVITED LECTURES

Building Envelope Guest Lecture
Auburn University ARCH4010 4th year
studio (2019, 2020)

Building Envelope Guest Lecture
Georgia Institute of Technology ARCH
6030, CORE III graduate studio (2022)

SERVICE

Habitat for Humanity (2006 - Present)

EXPERIENCE

Kansas State University | Planning, Design & Construction

Senior Project Manager
2022 – Present | Manhattan, KS

- Leading the development of project parameters, encompassing the value proposition, initial project objectives, and scheduling.
- Collaborate cross-functionally with various teams including IT, Finance, Campus Services, Police Department, City of Manhattan, and external stakeholders such as contractors and consultants.
- Ensuring compliance to negotiated contract terms by consultants and contractors.
- Overseeing capital budget planning, monitoring variances, and providing financial reporting for all projects.
- Driving continuous improvement initiatives aimed at enhancing planning, design and construction processes.

Auburn University | Planning, Design & Construction

Project Manager
2019 – 2022 | Auburn, AL

- Manage architectural/engineering projects from planning and design through bidding and construction of projects ranging in scope from less than \$50,000 to greater than \$20 million.
- Develop building envelope design standards and serve as division leader.
- Lead projects by maintaining schedules and budgets, monitoring cost and resolving client issues.
- Act as liaison between clients/users, consultants, contractors, and stakeholders to maintain effective communication within project team.

CANY Architecture + Engineering

Assistant Project Manager
2014 – 2018 | New York, NY

- Building envelope investigation, design and inspection of existing and new construction projects.
- Developed details and reviewed drawings for construction documents.
- Shop drawing and submittal review, field observations, technical report writing, bid administration and cost analysis.

Superstructures Engineers + Architects

Project Engineer
2012 – 2014 | New York, NY

- Produced engineering calculations and design support for commercial, residential and public restoration projects.
- Inspected and assessed current conditions of structures and draft detailed CAD documents for repair.
- Provided conservation investigation and lab testing of deteriorating materials and compose comprehensive recommendation reports.
- Reviewed and coordinated multi-team reports and design documents.
- Managed design team schedule and document project progress.

ERI

Commercial Real Estate Support Specialist
2009 – 2011 | Seattle, WA

DCI Engineers

Structural Design Intern
2007 - 2008 | Seattle, WA

Jacob Larson

jglarson@ksu.edu ❖ (785) 317-0749 ❖ Manhattan, Kansas

WORK EXPERIENCE

Pollution Prevention Specialist

Jan. 2022 – Present

Kansas State University (Pollution Prevention Institute)

Manhattan, KS

- Led a two-year sustainable materials management grant program to reduce waste
- Train, mentor, and assist students enrolled in summer intern program
- Provide RCRA hazardous waste compliance assistance to small businesses
- Assist Kansas industries, institutes, and communities with general environmental concerns

Process Engineer

Jan. 2019 – Jan. 2022

Precision Control Systems (Ultra Electronics Group)

Manhattan, KS

- Led opening of only US calibration lab certified to test and repair Fuel Quantity Test Set (TTMU597/E) units
- Utilized 6S principles to improve on-time shipments by more than 10 percent
- Prepared floor plan workflows for building expansion options to determine building feasibilities
- Performed AS9100D internal audits to ensure Quality Management System compliance
- Created and verified equipment profiles for pick and place, AOI, and reflow oven to onboard new product
- Troubleshoot and improved process equipment to reduce inefficiencies and rework counts

Surface Mount Technology Lead

Aug. 2018 – Jan. 2019

Precision Control Systems (Ultra Electronics Group)

Manhattan, KS

- Led a four-person surface mount team at highest pick rate while maintaining lowest error rate on record (< 2%)
- Performed equipment acceptance tests to ensure workmanship standards were maintained

Environmental Engineer Intern

June 2017 – Aug. 2017

Tyson Foods, Inc.

Emporia, KS

- Managed seven projects at a meat processing plant to save an estimated \$77,000 per year by conserving:
 - 4.8 million gallons of water
 - 760 megawatt-hours of electricity
 - 13 billion British thermal units of natural gas
- Initiated seven further projects for future interns to help the Emporia plant meet corporate goals
- Presented results to EPA to facilitate future pollution prevention endeavors

CERTIFICATIONS

- Six Sigma Green Belt from Crimson Corporation
- CPR and AED operation from American Red Cross
- IPC-A-610 and J-STD-001 standards from IPC

EDUCATION

Kansas State University

Graduated May 2018

Bachelor of Science in Chemical Engineering

Manhattan, KS

- Graduated with 3.8/4.0 GPA