

CURRICULUM VITAE OF KRISHNAKUMAR (KUMAR) V NEDUNURI

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Education

Andhra University, India	Chemical Engineering	B.Tech, 1990
Indian Institute of Technology, Mumbai, India	Chemical Engineering Science	M.S., 1992
Purdue University, Indiana	Hydraulic and Environmental Engineering	Ph.D., 1999

Appointments:

Associate Professor	9/04 to present
Assistant Professor	9/99-9/04
Research Engineer	8/92-8/94
Graduate Research Assistant at Kansas State	8/94 – 7/97

Relevant Industrial and academic experience

As a chemical engineer, Kumar worked on design, simulation and optimization of ammonia plants. He held the position of research engineer at a computer aided process design center, IIT, Mumbai where he was part of a developmental/implementation team which successfully provided consulting to refinery operations that included design of furnaces. At IIT Mumbai, Kumar had taken graduate courses in advanced reaction engineering and catalysis, advanced heat transfer, optimization and process control, modeling and simulation.

Most Current Papers/Proceedings/Book chapters

S. K. Lunsford, **Nedunuri K.V.**, Michael Sandy, Teaching chemical equilibrium concepts using field-lab experiences in a multi-disciplinary integrated environment (2007), *Analytical Science Digital Library*, 5(4), ASDLID 010044, 1-11.

E. Smith, S. Okunade, K. Nedunuri, C. Lowell, and J.R. Shann, Soil-contaminant association at an ecologically disturbed site undergoing native grass phytoremediation, *The Ohio Journal of Science*, 105(1), A-10, 2005.

Basista, B., Herrelko, J., **Nedunuri, K.**, Sandy, M., Lowell, C., Okunade, S., Klopfenstein, P., Roath, K., Aldridge, M., Ross, A., Thompson, C., Mathews, S., Tomlin, J., Rusch, T. Krakowski, R., Esprit, L., Johnson, J., Aimiwu, S. (2004) "Miami Valley Collaborative for the Improvement of Science and Mathematics Education". In S. Wagner & S. P. Meiring (Eds.), *The Story of SUSTAIN: Models of Reform in Mathematics and Science Teacher Education*. (pp. 159-180) Columbus, OH: Ohio Resource Center for Mathematics, Science, and Reading.

B. Jones, C. Lowell, and **K. V. Nedunuri** (2002) , Copper uptake into roots from hydroponically grown tree seedlings, *The Ohio Journal of Science*, An international Multidisciplinary Journal, 102(1), A-12, 2002.

Nedunuri, K.V., A.P. Schwab, and R.S. Govindaraju (2000), Enhanced mobility of lead in soil rhizosphere: Model development and validation, *Building Partnerships Proceedings of the Joint Water Conference on Water Resources Engineering and Water Resources Planning and Management*, Ed. Rollin H. Hotchkiss and Michael Glade, ASCE International Headquarters, 1801 Alexander Bell Drive, Reston, VA 20191.

Nedunuri K.V., Govindaraju Rao S., M.K. Banks, and A.P. Schwab (2000), Role of spatial variability in the field-scale degradation of total petroleum hydrocarbons using plants, *ASCE Journal of Environmental Engineering*, 126(6), pp. 483-490.

Synergistic Activities

1. Innovations in Teaching:

- a. **Introductory Hydrology Course:** Developed and conducted an online web-assisted course titled as Introduction to Water Resources Management using webCT.
- b. **Fluid Mechanics and Hydraulics Course:** Applied an inquiry based curriculum to teach Bernoulli Equation and associated concepts.

2. Development of an on-line database to support research:

- a. Developing a Water Quality Database Management System for the Upper Little Miami River Basin to help nutrient loading calculations into the Upper Little Miami River Watershed as part of the Total Maximum Daily Loads for this watershed.

Research Support

Krishnakumar Nedunuri, Co-PI, Dr. Cadance Lowell (Co-PI) and Dr. Anthony Arment (PI) and “Identifying maximum rhizosphere bioremediative potential through DNA micro arrays”. Funded by the Army Research Office. Total Amount: \$ 440, 822. Award Period: October 1, 2006 – September 30, 2009.

“Agronomic optimization of phytoremediation of polycyclic aromatic hydrocarbons”, funded by the US EPA National Center for Environmental Research – Superfund Minority Program – Hazardous Substance Research. Proposed period: October 2003 – October 2005. Principal Investigators: **Krishnakumar V. Nedunuri** and Cadance Lowell. Funding amount: \$ 336, 649

“Water Quality Database Management System for the Upper Little Miami River Basins” funded by Greene County through Water and Wastewater Training Research Center at University of Dayton. Period: June 2004 – June 2006. Principal Investigators (PI): **Krishnakumar V. Nedunuri** and Subramania I. Sritharan. Funding amount: \$ 80, 000

Graduate Student Committee: Heather Henry, Ph.D. 2004; M. Smart, M.S. 2004; M. Kassaye, M.S. 2003.

Ph.D. Thesis Advisor: R.S. Govindaraju **M.S. Advisor:** K.P. Madhavan

Collaborators & Other Affiliations, Past 48 months

1. Collaborators:

S.I. Sritharan Central State University
Samuel Okunade Central State University
Cadance Lowell Central State University

Kathy M. Banks Purdue University
Paul Schwab Purdue University
Jodi Shann University of Cincinnati
Steve Rock US EPA NRMRL Cincinnati
Steve Hall USDA NRCS
Steve Saffermann University of Dayton
Doyle Watts Wright State University

