**VITAE**

**NAME**: SUKHVARSH JERATH

**ADDRESS:**  Professor Emeritus of Civil Engineering

University of North Dakota

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Grand Forks, ND 58202-8115, U.S.A.

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**PERSONAL:** U.S. Citizen

Married, two children

**EDUCATION:**

Ph.D.: University of Illinois, Urbana ‑ Champaign, Illinois

M.S.: Brigham Young University, Provo, Utah

M.E.: Birla Institute of Tech. and Science, Pilani, India

B.E.: Birla Engineering College, Pilani, India

**PROFESSIONAL REGISTRATION AND MEMBERSHIPS:**

Professional Engineer in the states of Illinois, Indiana, Minnesota, and North Dakota.

Fellow of the American Society of Civil Engineers

Member, the American Society of Mechanical Engineers (ASME)

Member, the American Society for Engineering Education

Member, the Honorary Society of ΦΚΦ (Phi Kappa Phi)

Member, the Honorary Society of Σ Ξ (Sigma Xi)

**AREAS of INTEREST**

Structural analysis and design, structural and solid mechanics

Durability of Portland cement concrete and concrete pavements including high strength concrete,

concrete admixtures and fly ash.

Static and dynamic stability of steel tanks due to wind and earthquake forces

Blast loading on frames

Vibration of pipes

Moving loads including dynamic effects and impact factors on highway bridges

Wind turbines – Earthquake and wind forces, soil structure interaction

Interested in aerofoil design of small wind turbine blades to produce more energy for buildings

**DISTINCTION and AWARDS:**

Recipient of the North Dakota Spirit Faculty Achievement Award given by the North Dakota state through its university system.

**Fulbright Fellow**

Spring 2015 Indian Institute of Technology, Bombay, India (Ranked no. 1 in higher education in India at that time)

**TEACHING AND RESEARCH EXPERIENCE:**

Taught at seven universities in the U.S. and abroad

Taught 8 different Graduate and 13 different Undergraduate courses in my career (In addition to Introduction, thesis, dissertation, seminar, etc. type of courses)

Advised 3 Ph.D. and 22 Masters’ students to completion

Two sabbatical leaves to go abroad (India) to teach and conduct research as visiting professor

**ADMINISTRATIVE EXPERIENCE:**

Chair, Department of Civil Engineering, University of North Dakota, University of North Dakota, Grand Forks (July 1, 2016 – June 30, 2018)

Graduate Program Director, Department of Civil Engineering, University of North Dakota, Grand Forks (2010 – 2017)

**INDUSTRIAL EXPERIENCE:**

 September 1977 ‑ September 1980

Structural Engineer - Custodis Construction Co., (Division of Research Cottrell Inc., Somerville, New Jersey), Terre Haute, Indiana

Design and analysis of concrete columns and fiber glass reinforced plastic (FRP) liners for power plant and industrial chimneys.

June 1972 - September 1972

Civil Engineer, Gilbert Horrocks and Associates American Fork, Utah.

Design and Layout of Storm Sewer System for Provo, Utah

**CONSULTING:**

Arch Manufacturing, Inc., Colville, Washington

Abe W. Mathews Engineering Company, Hibbing, Minnesota

KBM Inc., Grand Forks, North Dakota

Palanisami & Associates, Inc., Consulting Engineers, Minneapolis, Minnesota

Hurst & Henrichs, Ltd., Fargo, North Dakota

Webster, Foster, and Weston, Grand Forks, North Dakota

**PROFESSIONAL AND SOCIAL ACTIVITIES (SELECTED FEW):**

* Member technical committees in the American Society of Civil Engineers (ASCE) and the American Society of Engineering Education)
* Paper Reviewer for ASCE, ASME, Mechanics of Structures and Machines, International Journal of Solids and Structures and other journals
* Chair – Red River Group, The American Society of Mechanical Engineers (ASME), (1997 – 2000)
* Vice-Chair, Red River Group, ASME (1989 – 1997)
* President, North Dakota Section, American Society of Civil Engineers (1992 - 1994)
* Chair, District 8 Council, American Society of Civil Engineers (ASCE), (1992-1993)
* Director, Dakota Director, Dakota Chapter - American Concrete Institute (ACI), (1987 - 1991)
* University of North Dakota Senate (2002 – 2003, 2005 – 2007, 2007-2009)
* Life Member of the University of Illinois Alumni Association
* Volunteer - American Heart Association Fund Raising

**SELECTED PRESENTATIONS:**

Presented Research in about 40 International and National Technical Conferences.

American Academy of Sciences 3rd Environmental Science and Technology Conference, Houston, TX, August 6-9, 2007. **Paper of the Conference Award.**

2017 Steel Structure Conference, Atlanta, GA, October 16 -18, 2017, **Keynote Speech.**

International Conference on Civil, Architecture and Marine Engineering, Osaka, Japan, April 22-23, 2019, **Keynote Speech and Organizing Committee Member.**

**BOOKS:**

1. Moretti, C.J., and Jerath, S. (2009). “Bridge monitoring to measure corrosion rate and concrete resistivity,” Chapter 21, *“Safety and Reliability of Bridge Structures,”* Edited by Khaled M. Mahmoud, Published by CRC Press/Taylor and Francis
2. Jerath, S., and Moretti, C.J. (2010). “Enhancing durability of concrete bridge decks by using industrial by-products as mineral admixtures,” Chapter 3, *“Industrial Resource Utilization and Productivity,”* Understanding the Linkages, Edited by A. Mittal and A Pennathur, Published by Momentum Press, New York, NY
3. Jerath, S. (2021) – **Structural Stability Theory and Practice (Buckling of Columns, Beams, Plates, and Shells), publisher, John Wiley & Sons, Hoboken, NJ.** The graduate level text book is written in both U.S. and SI units for distribution to the international audience. The publisher may get it translated in foreign languages.

**REVIEWS and REPORTS –**

 Statics: Analysis and Design of Systems in equilibrium by Sheppard and Tongue, John Wiley & Sons, Inc., 2005.

 Structural Analysis: Using Classical and Matrix Methods, Third Edition, by Nelson and McCormac, John Wiley & Sons, Inc., 2005.

 Wrote four research reports for the North Dakota Department of Transportation (NDDOT)

**REFEREED PUBLICATIONS:**

Seventeen journal papers

Thirty-Nine conference papers and chaired conference sessions

**RESEARCH GRANTS:**

Total of about $500,000 as P.I. and Co-P.I.