

College of Engineering and Mines

Douglas J. Goering, Dean

Baccalaureate Degrees

Casey Lee Adamson **

B.S., Geological Engineering

Nicholas Belmont

B.S., Civil Engineering

Jeremy Bowen Bloomstrom

B.S., Electrical Engineering: Communications

Devin Casey Boyer

B.S., Computer Engineering

Jessy Coffman

cum laude, B.S., Mechanical Engineering. *Golden Key Honor Society*

Margaret Cysewski *

cum laude, B.S., Civil Engineering

Nathan F. Damario

B.S., Civil Engineering

Duane M. Davis **

cum laude, B.S., Mechanical Engineering

David Dickson III

B.S., GIS and Engineering Science: Interdisciplinary Programs

Daniel L. Dominick **

B.S., Civil Engineering

Oliver J. Fleshman

B.S., Mechanical Engineering

Megayla Yvonne Franks

B.S., Mechanical Engineering

Donald Lee Gillie **

B.S., Civil Engineering

Ryan Goentzel

summa cum laude, B.S., Civil Engineering

Devin James Hahne

B.S., Mechanical Engineering: Aerospace Emphasis

Evangeline Hammond

B.S., Construction Management and Business: Interdisciplinary Program

Katherine Elizabeth Harris

B.S., Petroleum Engineering

Jacob Helton **

B.S., Civil Engineering

John T. Hendricks

cum laude, B.S., Electrical Engineering: Power and Control

Timothy D. Henry

B.S., Civil Engineering

Keith Herring

B.S., Mechanical Engineering

Eric Hill

B.S., Mining Engineering

Christopher Hollis

B.S., Mechanical Engineering

John Earnest Hood **

B.S., Electrical Engineering: Power and Control

Katherine May Johnson

B.S., Mechanical Engineering

Katherine May Keith

B.S., Renewable Energy Engineering: Interdisciplinary Program

Steven George Kibler

B.S., Electrical Engineering: Computer Engineering

John Michael Kirkendall **

B.S., Civil Engineering

David J. Kitchens

B.S., Mining Engineering

Alex Kotlovenko

B.S., Petroleum Engineering

Dmitry Sergeevich Kotlovenko

B.S., Civil Engineering

Stephen Koweluk

B.S., Electrical Engineering: Communications

Andrew Laughlin **

B.S., Electrical Engineering: Power and Control

Erik Ivan Leman

cum laude, B.S., Petroleum Engineering

Jason Michael Lopez

B.S., Mechanical Engineering

William F. Mangano III

B.S., Civil Engineering

Vincent A. McElmurry

B.S., Electrical Engineering: Power and Control

Sherry McGee

B.S., Geological Engineering

Seth T. Miller

cum laude, B.S., Geological Engineering

Larae C. Minter

magna cum laude, B.S., Mechanical Engineering: Aerospace Emphasis

Larry Jonathan Mosley, Jr.

B.S., Civil Engineering

Adria C. Neitzer

B.S., Petroleum Engineering

Daniel C. Oliva **

cum laude, B.S., Mechanical Engineering

Drew F. Olson

B.S., Mechanical Engineering

Dustin Olson

B.S., Computer Engineering

Blake Rider

B.S., Electrical Engineering: Communications

Danielle Louise Ryder

B.S., Civil Engineering

Robert Paul Shymanski II

cum laude, B.S., Mechanical Engineering

George A. Skinner

B.S., Civil Engineering

Kevin William Sobolesky

B.S., Electrical Engineering: Computer Engineering

Sagrado E. Sparks **

B.S., Civil Engineering

Bernadette Jackie Suvlu **

B.S., Civil Engineering

Kenneth James Sweet

cum laude, B.S., Electrical Engineering: Power and Control. *Golden Key Honor Society*

Ulysses-Zachary Sion Twogood

B.S., Petroleum Engineering

John S. Vainikka

B.S., Computer Engineering

Annie Josephine Weber

B.S., Mechanical Engineering

Joshua N. Wetzel *

B.S., Mechanical Engineering

Ian Malone Williams **

B.S., Mechanical Engineering

Michael Lawrence Wilson

B.S., Mechanical Engineering

Tamar D. Young

B.S., Civil Engineering

Master's Degrees

Hrishikesh Adhikari **

M.C.E., Civil Engineering. *B.T., Kakatiya University (India), 1999. M.S., University of Alaska Fairbanks, 2005*

Mahammad Javed Ahmed

M.S., Civil Engineering. *B.S., University of the Punjab (Pakistan), 1981. M.S., University of British Columbia (Vancouver), 1999*

Kaustubh Dinesh Alurkar **

M.S., Petroleum Engineering. *B.E., Mumbai University Institute of Chemical Technology (India), 2005*

Okechukwu N. Anyanwu *

M.S., Petroleum Engineering. *B.S., Federal University of Technology (Nigeria), 1996*

John William Bannister

M.S., Civil Engineering. *B.A., Reed College (Oregon), 1998*

Amit Y. Bhangale **

M.S., Petroleum Engineering. *B.E., Mumbai University Institute of Chemical Technology (India), 2004*

Charles Bissue **

M.S., Mineral Preparation Engineering. *B.S., Kwame Nkrumah University of Science & Technology (Ghana), 2001*

Larre G. Brouhard, Jr.

M.S., Electrical Engineering. *B.S., University of Alaska Fairbanks, 2006*

Andrea E. Carlson

M.S., Environmental Quality Science: Environmental Contaminants. *B.S., University of Alaska Fairbanks, 1998*

Tania Hope Clucas

M.S., Science Management. *B.S., University of Alaska Fairbanks, 1995*

Krishnakanth R. Ganapuram

M.E.E., Electrical Engineering. *B.T., Jawaharlal Nehru Technological University (India), 2004*

Ashish L. Ghotekar **

M.S., Petroleum Engineering. *B.E., Mumbai University Institute of Chemical Technology (India), 2005*

Paul Martin Hanson **

M.S., Petroleum Engineering. *B.S., University of Wyoming, 1985*

Lienhsiang Huang

M.S., Science Management. *B.S., University of Alaska Fairbanks, 1985*

Payal Jalan

M.S., Electrical Engineering. *B.E., University of Pune (India), 2005*

Zachary Casimer Dean Jerla

M.S., Civil Engineering. *B.S., Montana Tech of the University of Montana, 2004*

Oldrine George Lewis *

M.S., Electrical Engineering. *B.E., Sanjay Education Society's College of Engineering (India), 1999*

Nilesh R. Limaye **

M.S., Petroleum Engineering. *B.E., Mumbai University Institute of Chemical Technology (India), 2005*

Brij Mohan Mahagaonkar *

M.S., Mechanical Engineering. *B.E., Visveswaraiah Technological University (India), 2004*

Srikanth Manam

M.E.E., Electrical Engineering. *B.T., Bapatla Engineering College (India), 2001. M.T., Sri Dharamasthala Manjunatheshwara College of Engineering and Technology (India), 2003*

Henry A. Mbama

M.S., Petroleum Engineering. *B.E., Federal University of Technology (Nigeria), 2004*

Ganesh G. Morye **

M.S., Petroleum Engineering. *B.E., Mumbai University Institute of Chemical Technology (India), 2005*

Sujith Velayudhan Nair **

M.S., Electrical Engineering. *B.E., NMAM Institute of Technology (India), 2002*

Praveen Krishna Namburu *

M.S., Mechanical Engineering. *B.E., University of Madras (India), 2004*

Sandeep Reddy Nerallapally *

M.S., Petroleum Engineering. *B.T., Jawaharlal Nehru Technological University (India), 2005*

Ikenna E. Nwaneri

M.S., Petroleum Engineering. *B.E., Federal University of Technology Owerri (Nigeria), 2003*

Laxmi Prasanna Palle Bala Krishna **

M.E.E., Electrical Engineering. *B.T., Jawaharlal Nehru Technological Institute (India), 2006*

Bhavani Shankar Palokodety **

M.S., Electrical Engineering. *B.E., Swami Ramanand Teerth Marathwada University (India), 2000*

Shivkumar B. Patil **

M.S., Petroleum Engineering. *B.E., Vishwakarma Institute of Technology, Pune (India), 2005*

Radha Krishna V. Proddaturi *

M.S., Electrical Engineering. *B.T., Jawaharlal Nehru Technological University (India), 2003*

Prasada Rao Raghupatruni *

M.S., Mechanical Engineering. *B.S., Maturi Venkata Subba Rao Engineering College (India), 2002*

Bipin Dilip Raut

M.S., Petroleum Engineering. *B.S., University Institute of Chemical Technology (India), 2002. M.S., Technical University of Eindhoven (Netherlands), 2005*

Amani Reddy **

M.S., Electrical Engineering. *B.T., Jawaharlal Nehru Technological University (India), 2005*

Steven Roscovius **

M.S., Engineering Management. *Golden Key Honor Society. B.S., University of Alaska Fairbanks, 1997*

Niladri Si **

M.S., Electrical Engineering. *B.E., Visveswaraiah Technological University (India), 2003*

Erin Templeton Strang

M.S., Environmental Quality Science: Environmental Contaminants. *B.S., University of Alaska Fairbanks, 2004*

Wei Wang *

M.S., Electrical Engineering. *B.E., Hebei University of Technology (P. R. China), 2005*

Nathan A. Wiltse **

M.S., Mineral Economics: Interdisciplinary Program. *B.A., St. Olaf College (Minnesota), 2000*

Hongyan Yuan *

M.S., Mechanical Engineering. *B.S., Tsinghua University (P. R. China), 2002*

Doctoral Degrees

Devdatta Prakash Kulkarni ***Ph.D. Engineering: Mechanical**

B.E., University of Pune (India), 2000. M.S., University of Alaska Fairbanks, 2003

Thesis: Experimental Investigations of Fluid Dynamic and Thermal Performance of Nanofluids

Fluid dynamic and heat transfer studies were conducted on a new generation of heat transfer fluids called nanofluids. Both experimental and numerical investigations were carried out to establish that these fluids possess superior thermal performance. Their use in automobiles, building heating systems and heat exchangers were explored to encourage future applications.

Major Professor: Dr. Debendra K. Das

Tomas Marsik ***Ph.D. Engineering: Electrical**

M.S., Czech Technical University in Prague (Czech Republic), 2003

Thesis: Developing Computer Models to Study the Effect of Outdoor Air Quality on Indoor Air for the Purpose of Enhancing Indoor Air Quality

People in developed countries spend the majority of their time indoors. Therefore, studying the effect of outdoor air quality on indoor air is of great importance to human health. This dissertation presents several dynamic models that were developed to study this effect with applications for Fairbanks, Alaska.

Major Professors: Dr. Richard Wies and Dr. Ronald A. Johnson

Liguo Su ****Ph.D. Engineering: Electrical**

B.S., Xiamen University (P. R. China), 1999. M.S., Xiamen University (P. R. China), 2002

Thesis: Development of Resonance Fluorescence Lidar for Studies of the Aurora

This dissertation presents the design, development and testing of a laser radar (lidar) system for studying the aurora. The lidar system is based on resonance scattering from N_2^+ ions that are produced by the aurora. Simulation of a N_2^+ resonance lidar signal, design and development of a wavelength tuning system and Monte Carlo analysis of lidar wind/temperature heat flux measurements are included.

Major Professor: Dr. Richard L. Collins

Arun Venkatasubramanian **

Ph.D. Engineering: Electrical

B.E., Hindustan College of Engineering (India), 2001. M.S., University of Alaska Fairbanks, 2003

Thesis: Role of Antennas and the Propagation Channel on the Performance of an Ultra Wide Band (UWB) Communication System

Ultra Wide Band radiation, propagation and reception were studied. A new theoretical model was developed for UWB pulse propagation over ground. The radiated UWB pulse properties were related to the antenna surface current distribution. Empirical models of the antennas and the propagation channel were used to quantify UWB receiver performance.

Major Professor: Dr. Vikas Sonwalkar

Anna M. Wagner *

Ph.D. Engineering: Environmental

M.S., Luleå University of Technology (Sweden), 1999

Thesis: Using Geophysical Constraints to Determine Groundwater Travel Times, Seafloor Arrival Locations, and Saltwater Concentrations for Transition Zone Depths at Underground Nuclear Detonations on Amchitka Island

Geophysical constraints were used to estimate groundwater travel times and seafloor arrival locations at underground nuclear detonation sites on Amchitka Island to aid in long-term stewardship. Saltwater concentration for a freshwater saltwater transition zone and the general subsurface characteristics of Amchitka were determined.

Major Professor: Dr. David Barnes

Jianfeng Xu

Ph.D. Engineering: Mechanical

B.S., Harbin Engineering University (P. R. China), 1996. M.S., Zhejiang University (P. R. China), 1999

Thesis: Theoretical and Experimental Analysis of Two-Phase Closed Thermosyphon

A theoretical model was developed to simulate the heat transfer performance of long inclined two-phase closed thermosyphons under low heat flux conditions. This model, along with associated laboratory experiments and full-scale field tests, improved our understanding of the internal processes of thermosyphons as well as their overall performance.

Major Professor: Dr. Douglas J. Goering