**David S. Ebert**

**Data Institute for Societal Challenges 405-325-4158**

**The University of Oklahoma**  **ebert@ou.edu**  
**Five Partners Place 201 Stephenson Pkwy, Ste 4600 Norman, OK 73019**

**Education**

B.A. Computer and Information Science Ohio State University 1986

M.S. Computer and Information Science Ohio State University 1987

Ph.D. Computer and Information Science Ohio State University 1991

**Professional Experience**

**2020 - present**, Gallogly Professor of ECE and CS, The University of Oklahoma, Norman, OK

Associate Vice President of Research and Partnerships

**2009 - 2020** School of ECE, Purdue University, West Lafayette, IN

Silicon Valley Professor

**2006 - 2020** School of ECE, Purdue University, West Lafayette, IN

Professor

**2000 - 2006** School of ECE, Purdue University, West Lafayette, IN

Assoc. Professor

**2000 - 2000** Electronics Arts Inc, Research, Redwood City, CA

Graphics Consultant

**2000 - 2000** Computer Science, Stanford University, Stanford, CA

Visiting Assoc. Professor

**1998 - 2000** CSEE, U. of Maryland Baltimore County, Baltimore, MD

Assoc. Professor

**1998 - 1998**, National Library of Medicine, Bethesda, MD

Visualization Consultant

**1994 - 1998** Summer Faculty Fellow, NASA GSFC, Greenbelt, MD

Visualization Consultant

**1993 - 1998** CSEE, U. of Maryland Baltimore County, Baltimore, MD

Assist. Professor

**1991 - 1993** CIS, The Ohio State University, Columbus, OH

Instructor

#### **Representative publications on emissions from oil and gas systems:**

#### Ko S, Zhao J, Xia J, Afzal S, Wang X, Abram G, Elmqvist N, Kne L, Van Riper D, Gaither K. Vasa: Interactive computational steering of large asynchronous simulation pipelines for societal infrastructure. IEEE Transactions on Visualization and Computer Graphics. 2014; 20(12):1853- 1862. DOI: 10.1109/tvcg.2014.2346911

1. Zhao J, Karimzadeh M, Masjedi A, Wang T, Zhang X, Crawford M, Ebert D. FeatureExplorer: Interactive Feature Selection and Exploration of Regression Models for Hyperspectral Images. 2019 IEEE Visualization Conference (VIS). 2019 IEEE Visualization Conference (VIS);; Vancouver, BC, Canada. IEEE; c2019. Available from: https://ieeexplore.ieee.org/document/8933619/ DOI: 10.1109/VISUAL.2019.8933619
2. Arthur D, Lasher-Trapp S, Abdel-Haleem A, Klosterman N, Ebert D. A New ThreeDimensional Visualization System for Combining Aircraft and Radar Data and Its Application to RICO Observations. Journal of Atmospheric and Oceanic Technology. 2010 May 01; 27(5):811-828. Available from: http://journals.ametsoc.org/doi/10.1175/2009JTECHA1395.1 DOI: 10.1175/2009JTECHA1395.1
3. Zhang R, Lukasczyk J, Wang F, Ebert D, Shakarian P, Mack E, Maciejewski R. Exploring geographic hotspots using topological data analysis. Transactions in GIS. 2021. DOI: 10.1111/tgis.12816
4. Song Y, Ye J, Svakhine N, Lasher-Trapp S, Baldwin M, Ebert D. An Atmospheric Visual Analysis and Exploration System. IEEE Transactions on Visualization and Computer Graphics. 2006; 12(5):1157-1164. Available from: http://ieeexplore.ieee.org/document/4015477/ DOI: 10.1109/TVCG.2006.117
5. Masjedi A, Zhao J, Thompson A, Yang K, Flatt J, Crawford M, Ebert D, Tuinstra M, Hammer G, Chapman S. Sorghum Biomass Prediction Using Uav-Based Remote Sensing Data and Crop Model Simulation. IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium. IGARSS 2018 - 2018 IEEE International Geoscience and Remote Sensing Symposium;; Valencia. IEEE; c2018. Available from: https://ieeexplore.ieee.org/document/8519034/ DOI: 10.1109/IGARSS.2018.8519034

**Synergistic activities**

1. Founded and directs the campus-wide Data Institute for Societal Challenges (DISC) that catalyzes data-enabled research and creative activities to address local to global challenges, seeds, forms, and manages diverse, convergent teams to solve real-world problems, and grows foundational data science research. DISC engages over 500 faculty and researchers across every college and all three OU campuses. Previously directed the Integrated Data Science Initiative at Purdue University that coordinated data science education and research across campus, including the Data Mine program – a 1000+ student data science living learning community.
2. Developed a network of minority-serving institution (MSI) faculty engaged in visual analytics research and teaching; created MSI faculty and MSI student summer visual analytics programs.
3. Co-founded and directed the DHS Center of Excellence Visual Analytics for Command, Control, and Interoperability Environments (VACCINE) with collaborating faculty from 38 universities in 4 countries.
4. Developed a public safety coalition of over 50 local, regional, and state law enforcement, fire, and emergency management agencies to test, deploy, and transition technology from VACCINE.
5. Served as 1st Vice President, Vice President of Publications, Treasurer, and Board of Governor member of IEEE Computer Society; Editor in Chief for IEEE Transactions on Visualization and Computer Graphics; SIGGRAPH Executive Committee member, and Executive Committee member of IEEE Technical Committee on Visualization and Graphics.

**Select Patents**

US Patent No. 11,191,227 – “Moisture Management & Perennial Crop Sustainability Decision System,” issued on December 7, 2021.

US Patent No. 10,506,201 – “Public Safety Camera Identification and Monitoring System and Method,” issued on December 10, 2019.

US Patent No. 8,924,332 – "Forecasting Hotspots Using Predictive Visual Analytics," issued on December 30, 2014.

US Patent No. 8,882,664 – "Animal Symptom Visual Analytics," issued on November 11, 2014.

US Patent No. 8,849,728 – "Visual Analytics Law Enforcement Tools," issued on September 30, 2014.

US Patent No. 8,605,592 – "Dietary assessment system and method," issued on December 10, 2013.

US Patent No. 8,363,913 – "Dietary assessment system and method," issued on January 29, 2013.

US Patent No. 8,115,766 – "System and Methods for Rendering Flows and Volumes," issued on February 14, 2012.

US Patent No. 7,724,258 – “Computer Modeling and Animation of Natural Phenomena,” issued on May 25, 2010.