Autonomous Vehicle Resources at the University of Michigan

Experts and groups studying the social and moral implications of emerging technologies

- **Daniel Crane, Frederick Paul Furth Sr. Professor of Law**
  Email: dancrane@umich.edu
  Focus: antitrust and economic regulation; connected and autonomous vehicles; autonomous vehicle data; automobile distribution: manufacturers' rights to distribute cars directly to consumers

- **Emily Frascaroli, Lecturer, Michigan Law**
  Email: efrascar@umich.edu
  Expertise: counsel for Ford Motor Company: advises globally on automotive safety, regulatory, and product liability issues, including a focus on autonomous vehicles, mobility, and cybersecurity; extensive experience handling regulatory matters with NHTSA and other governmental entities, product defect investigations, and complex product litigation cases

- **Benjamin Kuipers, Professor of Computer Science and Engineering**
  Email: kuipers@umich.edu
  Focus: Representation, learning, and using foundational domains of commonsense knowledge, including space, objects, actions, and morality and ethics; the representation of commonsense and expert knowledge, with particular emphasis on the effective use of incomplete knowledge

- **Sylvia Lindtner, Assistant Professor of Information, School of Information and Assistant Professor of Art and Design, Penny W Stamps School of Art and Design**
  Email: lindtner@umich.edu
  Focus: human-computer interaction; computer supported cooperative work; science and technology studies; design; DIY; maker culture; China studies; Chinese internet research

- **Kyle Logue, Douglas A. Kahn Collegiate Professor of Law**
  Email: klogue@umich.edu
  Focus: insurance, torts, tax, and law and economics; property and casualty insurance law/policy

- **Rick Neitzel, Assistant Professor of Environmental Health Studies**
  Email: rneitzel@umich.edu
  Focus: use of new methodologies and technologies in exposure science and risk assessment; evaluation and management of health risks related to physical agents, safety hazards, and psychosocial factors

- **Shobita Parthasarathy, Associate Professor of Public Policy and Women's Studies, Director of the Science, Technology, and Public Policy Program**
  Email: shobita@umich.edu
  Focus: governance of emerging science and technology as well as the politics of evidence and expertise in policymaking, in the United States, Europe, and India; efforts to use science and technology to alleviate poverty and inequality, with a focus on India; global politics of knowledge, in an effort to understand why and how certain approaches to technology and poverty tend to dominate discussions and recommendations by international institutions

- **Bryce C. Pilz, Clinical Assistant Professor of Law**
  Expertise: associate general counsel at the University of Michigan, where he worked with the Office of Technology Transfer on startups and licensing; assisted in the creation of the University's Venture Accelerator at the North Campus Research Complex and advised the U-M Center for

Entrepreneurship on student entrepreneurship matters; co-authored papers on the legal issues related to the deployment of autonomous and connected vehicles

- **Jennifer Robertson, Professor of Anthropology and the History of Art**
  Email: jennyrob@umich.edu
  Focus: Human-robot coexistence and interaction, especially as visualized and practiced in Japan (and East Asia more generally); robot rights vs. human rights; robot ethics; robot design; gendering robots and robot gender (especially humanoids); robot therapy and robot caregivers

- **Bryant Walker Smith, Assistant Professor of Law and (by courtesy) in the School of Engineering, University of South Carolina, Adjunct Clinical Professor of Law (Michigan),**
  Email: bryantws@newlypossible.org; **Website:** newlypossible.org
  Expertise: a member of the U.S. Department of Transportation's Advisory Committee on Automation in Transportation, the chair of the Emerging Technology Law Committee of the Transportation Research Board of the National Academies, the reporter to the Uniform Law Commission's Study Committee on State Regulation of Driverless Cars, the chair of the Planning Task Force for the On-Road Automated Vehicle Standards Committee of the Society of Automotive and Aerospace Engineers,
  Focus: risk (particularly tort law and product liability), technology (automation and connectivity), and mobility (safety and regulation);

- **Michael P. Wellman, Lynn A. Conway Collegiate Professor of Computer Science & Engineering, Associate Dean for Academic Affairs, College of Engineering**
  Email: wellman@umich.edu
  Focus: computational market mechanisms and game-theoretic reasoning methods, with applications in electronic commerce, finance, and cyber-security

Laboratories and Institutes
Core and affiliated faculty in all of these laboratories and institutes have expertise on the technical aspects of autonomous vehicles

- **American Center for Mobility**
  Website: http://www.acmwillowrun.org/the-project/
  Description: Opened in December 2017, The American Center for Mobility (ACM) is a uniquely purpose-built facility focused on testing, verification, and self-certification of connected and automated vehicles and other mobility technologies at the 335-acre historic Willow Run site in Ypsilanti Township in Southeast Michigan. The ACM opened with Visteon Corporation and Toyota Research Institute on site to begin testing operations, and others scheduling soon.

- **Artificial Intelligence Laboratory** in Computer Science and Engineering (CSE)
  Lab Director: Rada Mihalcea, Professor of Computer Science and Engineering, (mihalcea@umich.edu)
  Website: http://ai.eecs.umich.edu/
  Description: A multidisciplinary group of researchers conducting theoretical, experimental, and applied investigations of intelligent systems. Current projects include research in rational decision making, distributed systems of multiple agents, machine learning, reinforcement learning, cognitive modeling, game theory, natural language processing, machine perception, healthcare computing, and robotics

- **Center for Automotive Research (CAR)**
  Website: http://www.cargroup.org/
  Description: CAR's mission is to conduct independent research and analysis to educate, inform and advise stakeholders, policy makers, and the general public on critical issues facing the automotive industry, and the industry's impact on the U.S. economy and society. As an independent, non-profit, research organization with a multi-disciplinary approach, CAR engages with leaders in the global automotive industry to support technology advancements and improve the competitiveness of the U.S. automotive industry. Works through close collaboration and strong relationships with automakers, suppliers, industry associations, government, non-profits, labor organizations, and educational institutions.
  Contact: (734) 662-1287; 3005 Boardwalk, Suite 200, Ann Arbor, MI 48108; email form on website

- **Mcity**
  Website: https://mcity.umich.edu/
  Director: Huei Peng, Roger L. McCarthy Professor of Mechanical Engineering (hpeng@umich.edu)
  Description: Collaborative academic, industrial, and governmental research center on connected and autonomous vehicles working to improve transportation safety, sustainability, and accessibility for the benefit of society. Mcity researchers work on all aspects of autonomous vehicles: engineering, social, and economic. Mcity contains a one-of-a kind urban test facility and on-road deployments.
  Contact: (734) 764-2886; email form on website

- **Michigan Interactive and Social Computing Group**
  Website: http://misc.si.umich.edu/
  Focus: connects researchers studying human-computer interaction, social computing, and computer-supported cooperative work across the University of Michigan; includes participants across a variety of schools and departments, including Information, Computer Science and Engineering, Education, the School of Public Health, and Industrial & Operations Engineering

- **Robotics** in the College of Engineering
  Lab Director: Jessy Grizzle, the Elmer G. Gilbert Distinguished University Professor and the Jerry W. and Carol L. Levin Professor of Engineering (grizzle@umich.edu)
  Website: https://robotics.umich.edu/
  Description: Michigan Robotics aims to accelerate the development of new robotics capabilities by bringing together roboticists of all stripes under one roof so that they can share problems and solutions. Researchers currently focus on mobility, manipulation, communication, perception, pattern recognition, and other factors that enable robots to interact with humans and the world