### **IDENTIFYING INFORMATION:**

NAME: Grizzle, Jessy

ORCID iD: <a href="https://orcid.org/0000-0001-7586-0142">https://orcid.org/0000-0001-7586-0142</a>

POSITION TITLE: Professor of Robotics

<u>PRIMARY ORGANIZATION AND LOCATION</u>: University of Michigan, ANN ARBOR, MI, United States

# **Professional Preparation:**

ORGANIZATION AND LOCATION	DEGREE (if applicable)	RECEIPT DATE	FIELD OF STUDY
Ecole Superieure d'Electricite, Paris, Isle de Paris, France	ОТН	12/1984	Post-doc in Nonlinear Control, with Michel Fliess
University of Texas at Austin, Austin, Texas, USA	PHD	12/1983	ECE, Nonlinear Control, with Steven Marcus
Oklahoma State University, Stillwater, Oklahoma, USA	BENG	05/1979	ECE and Modeling the Global Carbon Cycle, with Robert Mulholland

# **Appointments and Positions**

2022 - present	Professor of Robotics, University of Michigan, ANN ARBOR, MI, United States
1987 - 2022	Professor of EECS, University of Michigan, ANN ARBOR, MI, United States
1985 - 1987	Assistant Professor of ECE, University of Illinois-Urbana-Champaign, Urbana, IL,
	USA

#### **Products**

#### Products Most Closely Related to the Proposed Project

- Gan L, Zhang R, Grizzle J, Eustice R, Ghaffari M. Bayesian Spatial Kernel Smoothing for Scalable Dense Semantic Mapping. IEEE Robotics and Automation Letters. 2020; 5(2):790-797. Available from: https://ieeexplore.ieee.org/document/8954837/ DOI: 10.1109/LRA.2020.2965390
- Mungai M Eva, Grizzle Jessy. Feedback Control Design for Robust Comfortable Sit-to-Stand Motions of 3D Lower-limb Exoskeletons. IEEE Access. 2020. DOI: 10.1109/ACCESS.2020.3046446
- 3. Da X, Grizzle J. Combining trajectory optimization, supervised machine learning, and model structure for mitigating the curse of dimensionality in the control of bipedal robots. The International Journal of Robotics Research. 2019 July 08; 38(9):1063-1097. Available from: http://journals.sagepub.com/doi/10.1177/0278364919859425 DOI: 10.1177/0278364919859425
- 4. Hartley Ross, Ghaffari Maani, Eustice Ryan M, Grizzle Jessy W. Contact-aided invariant extended Kalman filtering for robot state estimation. The International Journal of Robotics Research. 2019; :0278364919894385.
- 5. Chen Y, Peng H, Grizzle J. Obstacle Avoidance for Low-Speed Autonomous Vehicles With Barrier Function. IEEE Transactions on Control Systems Technology. 2018; 26(1):194-206.

Available from: http://ieeexplore.ieee.org/document/7864310/ DOI: 10.1109/TCST.2017.2654063

## Other Significant Products, Whether or Not Related to the Proposed Project

- Huang J, Grizzle J. Improvements to Target-Based 3D LiDAR to Camera Calibration. IEEE Access. 2020; 8:134101-134110. Available from: https://ieeexplore.ieee.org/document/9145571/ DOI: 10.1109/ACCESS.2020.3010734
- 2. Hereid Ayonga, Harib Omar, Hartley Ross, Gong Yukai, Grizzle Jessy W. Rapid Trajectory Optimization Using C-FROST with Illustration on a Cassie-Series Dynamic Walking Biped. International Conference on Intelligent Robots and Systems (IROS 2019); 2019; c2019.
- 3. Ames Aaron D, Xu Xiangru, Grizzle Jessy W, Tabuada Paulo. Control barrier function based quadratic programs for safety critical systems. IEEE Transactions on Automatic Control. 2016; 62(8):3861--3876.
- 4. Ames A, Galloway Kevin, Sreenath Koushil, Grizzle JW. Rapidly exponentially stabilizing control lyapunov functions and hybrid zero dynamics. Transactions on Automatic Control. 2014; 59(4):876--891.
- 5. Westervelt Eric R, Grizzle Jessy W, Chevallereau Christine, Choi Jun Ho, Morris Benjamin. Feedback Control of Dynamic Bipedal Robot Locomotion. CRC Press; 2007. xi--xvp.

# **Synergistic Activities**

- 1. Co-editor with Prof. Aysegul Ucar for Special Section: Real-Time Machine Learning Applications in Mobile Robotic, IEEE Access, to appear.
- 2. Co-author with Prof. Henrik Christensen of the 2020 US National Robotics Roadmap 4.0, <a href="https://www.asme.org/government-relations/capitol-update/2020-updated-u-s-robotics-roadmap-released">https://www.asme.org/government-relations/capitol-update/2020-updated-u-s-robotics-roadmap-released</a>
- 3. Attendee of the National Society of Black Engineers and the National Society of Hispanic Engineers, representing the University of Michigan Robotics Institute
- 4. Developer and co-instructor of ROB 101 Computational Linear Algebra: Math at the Scale of Life, with special emphasis on inclusivity and partnering with HBCUs, <a href="https://robotics.umich.edu/academic-program/course-offerings/rob101/">https://robotics.umich.edu/academic-program/course-offerings/rob101/</a>

## **Certification:**

When the individual signs the certification on behalf of themselves, they are certifying that the information is current, accurate, and complete. This includes, but is not limited to, information related to domestic and foreign appointments and positions. Misrepresentations and/or omissions may be subject to prosecution and liability pursuant to, but not limited to, 18 U.S.C. §§ 287, 1001, 1031 and 31 U.S.C. §§ 3729-3733 and 3802.

Certified by Grizzle, Jessy in SciENcv on 2024-05-07 09:13:25