**SOME QUESTIONS STUDIED IN MICHAEL MALISOFF’S RESEARCH**

Thanks for your interest in my research on systems and controls. My research is in applied dynamical systems, especially control systems that arise in the study of mathematical models of biological and engineering systems. I often use feedback control, where past measurements of the states of the systems or from their surroundings are used to help decide how to control future system behavior. My current research uses event-triggered and learning-based control. Here are questions that my research group studied in past projects, with links to representative papers on each one:

How can marine robots help us understand the effects of coastal pollution?

<http://dx.doi.org/10.1007/978-3-642-55029-4_5>

How can mathematical techniques help aircraft land on unequipped runways?

<https://doi.org/10.1002/rnc.5332>

How can optimization resolve contentions on shared communication networks?

<https://doi.org/10.1016/j.automatica.2020.109219>

How can feedback controls improve the performance of power electronics?

<https://doi.org/10.1016/j.sysconle.2021.104933>

How can mathematics help control peak infection levels in disease models?

<http://dx.doi.org/10.3934/dcdsb.2022029>

How can mathematics help improve the performance of computer mice?

<http://dx.doi.org/10.1002/rnc.3593>

How can mathematics help restore mobility in patients with mobility disorders?

<http://dx.doi.org/10.1002/rnc.3211>

How can feedback controls help regulate heart rates for patients on treadmills?

<https://doi.org/10.1016/j.automatica.2011.01.079>

How can mathematics control semi-autonomous vehicles with a human in the loop?

<https://doi.org/10.1007/978-3-030-60990-0_22>

If you are interested in discussing control-related research with my research group, then please feel free to contact me, using the contact information on [my home page](https://www.math.lsu.edu/~malisoff/). If you are a student or postdoc seeking employment or funding for PhD studies, then please check the funding information on my homepage about how to apply for possible RA, postdoctoral, or junior faculty openings in my department. For more about research in my department, you may also check <https://www.math.lsu.edu/research>.