Guosong Yang (杨国松)

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Education

University of Illinois at Urbana-Champaign — Urbana, IL
Ph.D. candidate in Electrical and Computer Engineering — 2013–present
Advisor: Daniel Liberzon
Tentative dissertation title: "Switched and hybrid systems with inputs: small-gain theorems and finite data-rate feedback stabilization"

University of Illinois at Urbana-Champaign — Urbana, IL
M.S. in Electrical and Computer Engineering — 2011–2013
Advisor: Daniel Liberzon
Thesis: "A Lyapunov-based small-gain theorem for interconnected switched systems"

Hong Kong University of Science and Technology — Kowloon, Hong Kong
B.Eng. in Electronic Engineering (Honors Research Option), minor in Mathematics — 2007–2011
Advisor: Zexiang Li

Research interests

- Switched and hybrid systems
- Control with limited information
- Nonlinear systems and control theory

Publications

- A. Mironchenko, **G. Yang**, and D. Liberzon, "Lyapunov small-gain theorems for networks of not necessarily ISS hybrid systems," submitted to *Automatica*
- **G. Yang**, D. Liberzon, and A. Mironchenko, "Analysis of different Lyapunov function constructions for interconnected hybrid systems," to appear in *55th IEEE Conference on Decision and Control*, 2016
- **G. Yang** and D. Liberzon, "Finite data-rate stabilization of a switched linear system with unknown disturbance," in *10th IFAC Symposium on Nonlinear Control Systems*, 2016, pp. 1103–1108
- **G. Yang** and D. Liberzon, "Stabilizing a switched linear system with disturbance by sampled-data quantized feedback," in *2015 American Control Conference*, 2015, pp. 2193–2198
- **G. Yang** and D. Liberzon, "A Lyapunov-based small-gain theorem for interconnected switched systems," *Systems & Control Letters*, vol. 78, pp. 47–54, 2015
- **G. Yang** and D. Liberzon, "Input-to-state stability for switched systems with unstable subsystems: a hybrid Lyapunov construction," in *53rd IEEE Conference on Decision and Control*, 2014, pp. 6240–6245
- A. Mironchenko, **G. Yang**, and D. Liberzon, "Lyapunov small-gain theorems for not necessarily ISS hybrid systems," in *21st International Symposium on Mathematical Theory of Networks and Systems*, 2014, pp. 1001–1008

Teaching experience

University of Illinois at Urbana-Champaign Urbana, IL

- Teaching assistant, ECE517 Nonlinear and Adaptive Control, Fall 2015, Fall 2016
- Teaching assistant, ECE528 Analysis of Nonlinear Systems, Spring 2015

Professional activities

- Reviewer for Automatica of IFAC, since 2015
- Reviewer for System & Control Letters, since 2016

Honors and awards

- Best Poster Award, Coordinated Science Laboratory Student Conference, 2016
- HKUST University Scholarship, 2007–2011
- HKUST School of Engineering Scholarship, 2007–2011
- HKUST ECE Outstanding Freshmen Scholarship, 2007–2011
- HKUST The Joseph Lau Luen Hung Charitable Trust Scholarship, 2007–2011
- HKUST Dean's List Award, Fall 2007, Spring 2008, Fall 2008, Spring 2009, Fall 2009
- Gold medal for 8th Asian Physics Olympiad, 2007

Personal

- Birthday: January, 1989
- Citizenship: China
- Languages: Chinese (native), English (fluent)