

Ying Tan

/ /

Associate Professor Ying Tan

 +61 3 83443830

 yingt@unimelb.edu.au

 [Find an Expert profile](#) ...

Room: Level: 05 Room: 5.10

Building: Electrical and Electronic Engineering

Campus: Parkville

RESEARCH INTERESTS

- Intelligent control systems and applications
- Nonlinear control systems and applications

BIOGRAPHY

Dr Ying Tan is an Associate Professor and Reader in the Department of Electrical and Electronic Engineering at The University of Melbourne.

Dr Ying Tan received her Bachelor's degree from Tianjin University, China, in 1995, and her PhD from the National University of Singapore in 2002. She joined McMaster University in 2002 as a postdoctoral fellow in the Department of Chemical Engineering. She joined the Department of Electrical and Electronic Engineering Department at the University of Melbourne in 2004.

Dr Ying Tan's main areas of research are nonlinear systems, on-line optimization and intelligent control systems. She has published 110 papers in journals and conferences and has attracted more than 2 million Australian dollars in research funding. She currently is Associate Editor for Systems and Control Letters, Asian Journal of Control. She is the steering committee member for Asian Control Association and Co-Chairs for Asian Control Conference 2017.

She was awarded an Australian Postdoctoral Fellow (2006-2008) and a Future Fellow (2009-2013) by the Australian Research Council. She was the one of finalists for Best Student Paper Award, American Control Conference.

RECENT PUBLICATIONS

1. Eden J, Song C, Tan Y, Oetomo D, Lau D. CASPR-ROS: A generalised cable robot software in ROS for hardware. *Mechanisms and Machine Science*. 2018, Vol. 53. DOI: [10.1007/978-3-319-61431-1_5](https://doi.org/10.1007/978-3-319-61431-1_5) (http://dx.doi.org/10.1007/978-3-319-61431-1_5)
2. Chen Q, Tan Y, Li J, Mareels I. Decentralized PID Control Design for Magnetic Levitation Systems Using Extremum Seeking. *IEEE ACCESS*. IEEE - Institute of Electrical and Electronic Engineers. 2018, Vol. 6. DOI: [10.1109/ACCESS.2017.2787052](https://doi.org/10.1109/ACCESS.2017.2787052) (<http://dx.doi.org/10.1109/ACCESS.2017.2787052>)
3. Fong J, Tan Y, Crocher V, Oetomo D, Mareels I. Dual-loop iterative optimal control for the finite horizon LQR problem with unknown dynamics. *SYSTEMS & CONTROL LETTERS*. Elsevier BV. 2018, Vol. 111. DOI: [10.1016/j.sysconle.2017.11.002](https://doi.org/10.1016/j.sysconle.2017.11.002) (<http://dx.doi.org/10.1016/j.sysconle.2017.11.002>)
4. Tan Q, Divekar P, Tan Y, Chen X, Zheng M. Model-Guided Extremum Seeking for Diesel Engine Fuel Injection Optimization. *IEEE-ASME TRANSACTIONS ON MECHATRONICS*. IEEE - Institute of Electrical and Electronic Engineers. 2018, Vol. 23, Issue 2. DOI: [10.1109/TMECH.2018.2793879](https://doi.org/10.1109/TMECH.2018.2793879) (<http://dx.doi.org/10.1109/TMECH.2018.2793879>)
5. Wu W, Fong J, Crocher V, Lee P, Oetomo D, Tan Y, Ackland D. Modulation of shoulder muscle and joint function using a powered upper-limb exoskeleton. *JOURNAL OF BIOMECHANICS*. Pergamon. 2018, Vol. 72. DOI: [10.1016/j.jbiomech.2018.02.019](https://doi.org/10.1016/j.jbiomech.2018.02.019) (<http://dx.doi.org/10.1016/j.jbiomech.2018.02.019>)
6. Cheng X, Tan Y, Mareels I. On robustness analysis of linear vibrational control systems. *AUTOMATICA*. Pergamon-Elsevier Science. 2018, Vol. 87. DOI: [10.1016/j.automatica.2017.09.029](https://doi.org/10.1016/j.automatica.2017.09.029) (<http://dx.doi.org/10.1016/j.automatica.2017.09.029>)
7. Lee T-C, Tan Y, Mareels I. A New Condition for Output-Persistent-Excitation of Switched Nonlinear Time-Varying Systems. *2017 IEEE 56TH ANNUAL CONFERENCE ON DECISION AND CONTROL (CDC)*. Institute of Electrical and Electronics Engineers. 2017.
8. Lee T-C, Tan Y, Mareels I. An Algorithm to Find Common Zeroing-Output Systems of Arbitrarily Switched Linear Time-Invariant Systems. *20th World Congress of the International-Federation-of-Automatic-Control (IFAC)*. Elsevier Science. 2017, Vol. 50, Issue 1. DOI: [10.1016/j.ifacol.2017.08.2520](https://doi.org/10.1016/j.ifacol.2017.08.2520) (<http://dx.doi.org/10.1016/j.ifacol.2017.08.2520>)
9. Lee T-C, Tan Y, Mareels I. Analyzing the Stability of Switched Systems Using Common Zeroing-Output Systems. *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*. IEEE - Institute of Electrical and Electronic Engineers. 2017, Vol. 62, Issue 10. DOI: [10.1109/TAC.2017.2679069](https://doi.org/10.1109/TAC.2017.2679069) (<http://dx.doi.org/10.1109/TAC.2017.2679069>)
10. Chen Q, Tan Y, Yang Q, Li J, Mareels I. Centralized control implementation using distributed observer for Meglev systems. *Chinese Control Conference, CCC*. 2017. DOI: [10.23919/ChiCC.2017.8028947](https://doi.org/10.23919/ChiCC.2017.8028947) (<http://dx.doi.org/10.23919/ChiCC.2017.8028947>)
11. Fong J, Crocher V, Tan Y, Oetomo D, Mareels I. DEEMU: A Transparent 3D Robotic Manipulandum for Upper -Limb Rehabilitation. *2017 INTERNATIONAL CONFERENCE ON REHABILITATION ROBOTICS (ICORR)*. IEEE. 2017. Editors: Amirabdollahian F, Burdet E, Masia L.
12. Chen Q, Tan Y, Li G, Li J, Mareels I. Design of Double-Sided Linear Permanent Magnet Eddy Current Braking System. *PROGRESS IN ELECTROMAGNETICS RESEARCH M*. Electromagnetics Academy. 2017, Vol. 61. DOI: [10.2528/PIERM17071804](https://doi.org/10.2528/PIERM17071804) (<http://dx.doi.org/10.2528/PIERM17071804>)

13. Sebastian G, Tan Y, Oetomo D, Mareels I. Design of Feedback Gain in Feedback-Based Iterative Learning Control. *11th Asian Control Conference (ASCC)*. IEEE. 2017.
14. Fong J, Crocher V, Tan Y, Oetomo D, Mareels I. EMU: A transparent 3D robotic manipulandum for upper-limb rehabilitation. *IEEE International Conference on Rehabilitation Robotics*. 2017. DOI: [10.1109/ICORR.2017.8009341](https://doi.org/10.1109/ICORR.2017.8009341)
(<http://dx.doi.org/10.1109/ICORR.2017.8009341>)
15. Leong F, Mohammadi A, Tan Y, Thiruchelvam D, Valdastrì P, Oetomo D. Magnetic Interactions of Neighbouring Stator Sets in Multi DOF Local Electromagnetic Actuation for Robotic Abdominal Surgery. *2017 IEEE/RSJ INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS (IROS)*. IEEE. 2017, Vol. 2017-September. Editors: Bicchi A, Okamura A. DOI: [10.1109/IROS.2017.8206463](https://doi.org/10.1109/IROS.2017.8206463) (<http://dx.doi.org/10.1109/IROS.2017.8206463>)

View a full list of publications on the University of Melbourne's '[Find An Expert](http://www.findanexpert.unimelb.edu.au/display/person28203#tab-publications)' profile
(<http://www.findanexpert.unimelb.edu.au/display/person28203#tab-publications>)