# Mr. Yuzhen Qin- Curriculum Vitae

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## CURRENT POSITION

- **University of California, Riverside**                                                             USA
  *Postdoctoral Researcher (advisor: Prof. Fabio Pasqualetti)*                      *Jan. 2020 – Present*

## EDUCATION

- **University of Groningen**                                                                 Netherlands
  *Ph.D. (supervisor: Prof. Ming Cao)*                                              *Oct. 2015 – Dec.2019*

- **Wuhan University**                                                                            China
  *Master of Control engineering*                                                  *Sep. 2012 – Jun. 2015*

- **Hohai University**                                                                            China
  *Bachelor of Automatic Control*                                                  *Sep. 2008 – Jun. 2012*

## PUBLICATIONS

- **Journal papers**

  [1] **Y. Qin**, T. Menara, D. S. Bassett, and F. Pasqualetti, "Phase-amplitude coupling in neuronal oscillator networks", submitted to *Physical Review Letters*.

  [2] T. Menara, **Y. Qin**, D. S. Bassett, and F. Pasqualetti "Relay interactions enable remote synchronization in networks of phase oscillators", submitted to *IEEE Control Systems Letters*.

  [3] O. Portoles, **Y. Qin**, J. Hadida, M. Woolrich, M. Cao, and M. van Vugt, "Fluctuations of local synchrony lead to resting-state alpha-band-envelope connectivity in a parsimonious large-scale brain model", submitted to *PLOS One*.

  [4] Y. Zhai, Z.W. Liu, M.Fe Ge, G. Wen, X. Yu, and **Y. Qin**, "Trusted-region subsequence reduction for designing resilient consensus algorithms", *IEEE Transactions on Network Science and Engineering*, vol. 8, no. 1, pp. 259-268, 2021

  [5] **Y. Qin**, M. Cao, B. D.O. Anderson, D. S. Bassett, and F. Pasqualetti, "Mediated remote synchronization of Kuramoto-Sakaguchi oscillators: the number of mediators matters", *IEEE Control Systems Letters*, 2020, 5(3): 767-772.

  [6] **Y. Qin**, Y. Kawano, M. Cao, and B. D. O. Anderson. "Partial exponential stability analysis of slow-fast systems via periodic averaging." submitted to *IEEE Transactions on Automatic Control*.

  [7] **Y. Qin**, Y. Kawano, O. Portoles and M. Cao. "Partial phase cohesiveness in networks of networks of Kuramoto oscillators." *IEEE Transactions on Automatic Control*, in press.

  [8] **Y. Qin**, M. Cao, and B. D. O. Anderson, "Lyapunov criterion for stochastic systems and its applications in distributed computation." *IEEE Transactions on Automatic Control*, 65(2), pp.546-560.

  [9] M. Ye, **Y. Qin**, A. Govaert, B. D. O. Anderson, and M. Cao. "An influence network model to study discrepancies in expressed and private Opinions," *Automatica*, 107: 371-381, 2019.

- **Conference papers**

  [1] **Y. Qin**, T. Menara, S. Oymak, and F. Pasqualetti, "Representation learning for stochastic sequential linear bandits", submitted to the *60th IEEE Conference on Decision and Control*, 2021.

  [2] **Y. Qin**, M. Cao, B. D.O. Anderson, D. S. Bassett, and F. Pasqualetti, "Mediated remote synchronization of Kuramoto-Sakaguchi oscillators: the number of mediators matters", in Proceeding of the *59th IEEE Conference on Decision and Control*, Virtual, 2020.

[3] **Y. Qin**, Y. Kawano, and M. Cao, "Stability of remote synchronization in star networks of Kuramoto oscillators," in Proceeding of the *57th IEEE Conference on Decision and Control*, Miami Beach, FL, USA, 2018.

[4] **Y. Qin**, Y. Kawano, and M. Cao, "Partial phase cohesiveness in networks of communitinized Kuramoto oscillators," in Proceeding of *IEEE European Control Conference*, Limassol, Cyprus, 2018, pp. 2028-2033.

[5] A Govaert, **Y. Qin**, and M. Cao. "Necessary and sufficient conditions for the existence of cycles in evolutionary dynamics of two-strategy games on networks," in Proceeding of *IEEE European Control Conference*, Limassol, Cyprus, 2018, pp. 2182-2187.

[6] **Y. Qin**, M. Cao, and B. D. O. Anderson, "Asynchronous agreement through distributed coordination algorithms associated with periodic matrices," in Proceeding of the *20th IFAC World Congress*, Toulouse, France, 2017, 50(1): 1742-1747.

## PRESENTATIONS

- **Talk**: "Mediated remote synchronization of Kuramoto-Sakaguchi oscillators: the number of mediators matters", the 59th IEEE CDC, Virtual, 2020.

- **Talk**: "Stability of remote synchronization in star networks of Kuramoto oscillators", the 57th IEEE CDC, Miami Beach, FL, USA, 2018.

- **Talk**: "Partial phase cohesiveness in networks of communitinized Kuramoto oscillators", IEEE ECC, Limassol, Cyprus, 2018.

- **Talk** : "Partial synchronization in networks of networks of Kuramoto oscillators", the 36th Benelux Meeting on Systems and Control, Spa, Belgium, 2018.

- **Talk**: "Asynchronous agreement through distributed coordination algorithms associated with periodic matrices", the 20th IFAC Congress, Toulouse, France, 2017.

- **Talk**: "Stochastic asynchronous agreement", the 35th Benelux Meeting on Systems and Control, Soesterberg, the Netherlands, 2017.

## PROFESSIONAL SERVICES

- **Reviewer for**
  IEEE Transactions on Automatic Control; Automatica; Systems and Control Letters; IEEE Transactions on Industrial Electronics; IEEE Transactions on Systems, Man and Cybernetics; IEEE Control Systems Letters; IEEE Conference on Decision and Control; American Control Conference.

## SUPERVISION OF STUDENTS

- **Master Student** — Feb. 2017 - Sep. 2017
  - **Athanasios Bachoumis**: thesis "Phase synchronization in a sequence of cognitive stages"

- **Bachelor Students** — Dec. 2017 - Jul. 2018
  - **Ricardo Ernesto Bustamante Cisneros**: thesis "Entrainment for neural activities in the brain"
  - **Gait Huls**: thesis "The application of the lower dimensional model to the phenomenon of brain synchronization"

## TEACHING

- **Teaching assistant at University of Groningen** — Feb. 2016-Apr. 2019
  - **Modelling and Analysis of Complex Networks**: course code TBMACN-11.

Referees available on request