

## ZHEN-QI LIU – CURRICULUM VITAE

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## BIOGRAPHY AND INTERESTS

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I'm a graduate student in network neuroscience. I work on how complex cognitive and behavioral operations emerge from mesoscale cortical structure and dynamics. I develop network science and machine learning methods for computational neuroscience and neuroimaging.

Connectomics

Computational neuroscience

Machine learning

## EDUCATION

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2020-present	Ph.D. in Neuroscience, McGill University <i>Supervisor: Dr. Bratislav Misic</i>
2018-2020	M.Sc. in Neuroscience, McGill University <i>Reflections on functional hierarchy and cortico-cortical connections</i> <i>Supervisor: Dr. Bratislav Misic</i>
2014-2018	B.Eng. in Automation, Xi'an Jiaotong University, <a href="#">Honors Youth Program</a> <i>Functional significance of long-range temporal correlations in neural networks with application to brain-inspired computing</i> <i>Supervisor: Dr. Shan Yu, Dr. Kai Ye</i>

## PUBLICATIONS

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### *Preprints / Under Review*

Rahayel S, Misic B, Zheng YQ, **Liu ZQ**, Abdelgawad A, Abbasi N, Luk K, Dagher A. The agent-based SIR model replicates the spread of alpha-synuclein in the mouse brain.

### *Published / In Press*

Vazquez-Rodriguez B<sup>†</sup>, **Liu ZQ<sup>†</sup>**, Misic B. (in press) Signal propagation via cortical hierarchies. *Net Neurosci* <https://doi.org/10.1101/2020.02.15.950907> (†equal contribution, co-first author)

**Liu ZQ**, Zheng YQ, Masic B. Network topology of the marmoset connectome. (in press) *Net Neurosci* [https://doi.org/10.1162/netn\\_a\\_00159](https://doi.org/10.1162/netn_a_00159)

## CONFERENCE ABSTRACTS

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### *First-author*

**Liu ZQ**, Betzel RF, Masic B. The organization of functional connections without direct structural links. (2020) *Organization for Human Brain Mapping*, Montreal, QC.

**Liu ZQ**, Betzel RF, Masic B. The organization of functional connections without direct structural links. (2019) *Society for Neuroscience*, Chicago, IL.

**Liu ZQ**, Zheng YQ, Masic B. Network topology of the mesoscale marmoset connectome. (2019) *Organization for Human Brain Mapping*, Rome, ITA.

**Liu ZQ**, Zheng YQ, Masic B. Topological organization of the mesoscale marmoset connectome. (2019) *Healthy Brains Healthy Lives Annual Scientific Retreat*, Montreal, QC.

**Liu ZQ**, Zheng YQ, Masic B. Topological organization of the mesoscale marmoset connectome. (2018) *McConnell Brain Imaging Centre Annual Academic Retreat*, Montreal, QC.

### *Contributed*

Rahayel S, Masic B, Zheng YQ, **Liu ZQ**, Caputo A, Luk K, Dagher A. An agent-based model replicates the pathogenic spread of alpha-synuclein in mice. (2020) *Movement Disorders Society*, Philadelphia, PA.

Vazquez-Rodriguez B, **Liu ZQ**, Hagmann P, Masic B. Signal routing via cortical hierarchies. (2020) *Organization for Human Brain Mapping*, Montreal, QC.

*Selected for **Platform Talk***

Oudyk K, **Liu ZQ**, Markello R, DuPre E, Masic B, Poline JB. Exploring the redundancy of resting-state network connectivity. (2019) *Society for Neuroscience*, Chicago, IL.

## AWARDS

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2019 GREAT (Graduate Research Enhancement and Travel) Award, McGill University

2018 HBHL's Graduate Student Fellowship (Master's), McGill University

2018 IPN Recruitment Award (Master's), McGill University

2015-2017 Siyuan Scholarship, Xi'an Jiaotong University

2016-2017 Outstanding Student, Xi'an Jiaotong University

2016 XJTU-CASIA Automation Elite Class Program, Xi'an Jiaotong University and Institute of Automation, Chinese Academy of Sciences

2016 Information-technology Talent Program, Xi'an Jiaotong University

Last Revised: 2020/09/28

## SKILLS

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Python (fluent), MATLAB, C/C++/C#

## TRAINING

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### Conferences

Organization for Human Brain Mapping (OHBM, 2019, 2020), Society for Neuroscience (SfN, 2019), OCNS

Workshops / Summer schools