

Xiuming Zhang

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RESEARCH INTERESTS

Computer Vision, Computational Photography, Machine Learning

EDUCATION

PhD Student (CS), **Massachusetts Institute of Technology**, MA

SEP 16 - NOW

- Advisor: Prof William Freeman
- Coursework: 6.869 *Advances in Computer Vision*, 18.404 *Theory of Computation*

BEng (ECE), **National University of Singapore**, Singapore

AUG 11 - MAY 15

- GPA: 4.97/5.00 | Ranking: 1/282 | Lee Kuan Yew Gold Medal
- Thesis: *Bayesian models of brain disorder heterogeneity* (led to [J1])
Committee: Profs Thomas Yeo (advisor) & Shuicheng Yan (examiner)

Exchange Student, **University of Waterloo**, ON, Canada

JAN 14 - MAY 14

- GPA (technical subjects): 95/100
- GRE: V 157 (74%), Q 170 (98%), AW 4.5 (80%) | TOEFL: 113 = R 30 + L 29 + S 26 + W 28

RELEVANT PUBLICATIONS

[J1] *Bayesian model reveals latent atrophy factors with dissociable cognitive trajectories in Alzheimer's disease*

Xiuming Zhang, Elizabeth C Mormino, Nanbo Sun, Reisa A Sperling, Mert R Sabuncu, BT Thomas Yeo

PNAS 2016 – Proceedings of the National Academy of Sciences of the USA

[\[paper\]](#) [\[code\]](#) [\[poster\]](#)

Media coverage by [NUS](#), [MGH/HMS](#), [EurekAlert](#), [ScienceDaily](#), [UPI](#), [Scicasts](#), etc

RESEARCH EXPERIENCE

Research Assistant @ Computer Vision Group, **MIT CSAIL**

SEP 16 - NOW

w/ Prof William Freeman

Research Engineer @ Cognitive Vision Lab, **Inst for Infocomm Res**

FEB 16 - JUL 16

Keywords: spectral methods for manifold learning

w/ Dr Liyuan Li

Thesis Student @ Computational Brain Imaging Group, **NUS**

AUG 14 - JAN 16

Keywords: probabilistic graphical model, regression analysis

w/ Prof Thomas Yeo

- Worked on Bayesian modeling of high-dimensional MRI data and discovered latent atrophy factors associated with distinct cognitive decline trajectories in Alzheimer's disease (led to [J1])

HONORS & AWARDS

ISMRM Magna Cum Laude Award (abstract ranked top 15%)	FEB 16
Lee Kuan Yew Gold Medal (best graduate)	JUN 15
IES Gold Medal (top graduate in general proficiency)	JUN 15
Texas Instruments Book Prize on DSP & Systems (area top)	JUN 15
IEEE-Eta Kappa Nu Honor Society Membership	JAN 14
IET Prize (top freshman and sophomore)	JUL 13
Rohde & Schwarz Competition Finale Travel Grant (represented NUS in Germany)	JUN 13
Intermediate-Level Certificate of German Language	MAY 13

TEACHING EXPERIENCE

Workshop Instructor @ **Nanyang Technological University**

DEC 15

- Introduced MATLAB basics to 40 undergraduate and graduate students in a one-day workshop

Teaching Assistant @ School of Computing, **NUS**

AUG 12 - AUG 13

- Coached over 100 undergraduates in *CS1010E Programming Methodology* over two semesters and received very positive feedback from both the lecturers and students

COMPUTER & LANGUAGE SKILLS

Programming Language	Python, MATLAB, Bash, C++
Scientific Software	Blender, FSL, FreeSurfer, COMSOL Multiphysics
Typesetting & Graphing	T _E X and friends, GIMP, Adobe Illustrator
Operating System	Linux, OS X, Windows
Language	English (proficient), Mandarin Chinese (mother tongue), German (elementary)