

Siheng Chen

CONTACT INFORMATION

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RESEARCH INTERESTS

- Theory: Graph signal processing, statistical machine learning
- Algorithm: Graph neural networks
- Application: Autonomous systems, smart infrastructure

WORKING EXPERIENCE

- Associate Professor at Shanghai Jiao Tong University Dec. 2020 - Present
- Research Scientist at Mitsubishi Electric Research Laboratories Feb. 2019 - Nov. 2020
- Autonomy Engineer at Uber Advanced Technologies Group Oct. 2017 - Feb. 2019
- Postdoctoral Researcher at Carnegie Mellon University Jan. 2017 - Sept. 2017
- Research Intern at Mitsubishi Electric Research Laboratories May 2016 - Aug. 2016

EDUCATION

- Ph.D in Electrical and Computer Engineering 2011 - 2016
GPA: 4.0, Carnegie Mellon University Pittsburgh, PA, USA
Ph.D Thesis: Data science with graphs: A signal processing perspective
Advisor: Prof. Jelena Kovačević
- Master of Science in Machine Learning 2014 - 2016
GPA: 4.0, Carnegie Mellon University Pittsburgh, PA, USA
Master Thesis: Adaptive sampling for urban traffic monitoring
Advisor: Prof. Christos Faloutsos
- Master of Science in Electrical and Computer Engineering 2011 - 2012
GPA: 4.0, Carnegie Mellon University Pittsburgh, PA, USA
- Bachelor of Science in Electronic Engineering 2007 - 2011
GPA: 92 (1/108), Beijing Institute of Technology Beijing, China

HONORS AND AWARDS

- IEEE Signal Processing Society Young Author Best Paper Award 2018
- Best Student Paper Award of IEEE GlobalSIP 2018
- IEEE ISIT Travel Grant 2016
- IEEE ICASSP National Science Foundation Travel Grant 2014, 2016
- Outstanding Graduates in the city of Beijing 2011
- Outstanding Students, Beijing Institute of Technology 2008, 2009, 2010
- China Aerospace Science and Technology Corporation Scholarship 2011
- National Scholarship of China 2009, 2010
- Meritorious Winner in Mathematical Contest in Modeling 2010

PUBLICATIONS

Preprint

1. **S. Chen**, M. Li, and Y. Zhang, "Sampling and recovery of graph signals via graph neural networks", *IEEE Transactions on Signal Processing.*, submitted.
2. **S. Chen**, Y. C. Eldar, and L. Zhao, "Graph unrolling networks: Interpretable neural networks for graph signal denoising", *IEEE Transactions on Signal Processing.*, submitted.

Journal

1. M. Li, **S. Chen**, X. Chen, Y. Zhang, Y. Wang, and Q. Tian, "Symbiotic graph neural networks for 3D skeleton-based human action recognition and motion prediction", *IEEE Transactions on Pattern Analysis and Machine Intelligence.*, Accepted.
2. X. Chen, **S. Chen**, H. Zheng, J. Yao, K. Cui, Y. Zhang, and I. W. Tsang, "Node attribute generation on graphs", *IEEE Transactions on Pattern Analysis and Machine Intelligence.*, Accepted.
3. V. Ioannidis, **S. Chen**, and G. Giannakis, "Efficient and stable graph scattering transforms via pruning", *IEEE Transactions on Pattern Analysis and Machine Intelligence.*, Accepted.
4. **S. Chen**, B. Liu, C. Feng, C. Vallespi-Gonzalez, and C. Wellington, "3D point cloud processing and learning for autonomous driving", *IEEE Signal Processing Magazine, Special Issue on Autonomous Driving*, 2020, Accepted.
5. **S. Chen**, C. Duan, Y. Yang, D. Li, C. Feng, and D. Tian, "Deep unsupervised learning of 3D point clouds via graph topology inference and filtering", *IEEE Trans. Image Proc.*, 2020, Accepted.
6. J-Z. Peng, **S. Chen**, N. Aubry, Z. Chen, W-T. Wu, "Time-variant prediction of flow over an airfoil using deep neural network ", *Physics of Fluids* 32 (12), 2020
7. J-Z. Peng, **S. Chen**, N. Aubry, Z. Chen, W-T. Wu, "Unsteady reduced-order model of flow over cylinders based on convolutional and deconvolutional neural network structure", *Physics of Fluids* 32 (12), 2020
8. J. Liu, **S. Chen**, M. Bergés, J. Bielak, J. H. Garrett, J. Kovačević, and H. Y. Noh, "Damage diagnosis algorithms for indirect structural health monitoring of bridges", *Mechanical Systems and Signal Processing*, 2019.
9. J. Liu, **S. Chen**, George Lederman, David Kramer, H. Y. Noh, J. Bielak, J. H. Garrett, J. Kovačević, and M. Bergés, "Dynamic responses of two passenger trains with the corresponding GPS positions, environmental conditions and weekly maintenance schedules in Pittsburgh's light rail network", *Nature Scientific Data*, 2019.
10. Y. Yang, **S. Chen**, M. A. Maddah-Ali, P. Grover, S. Kar, and J. Kovačević, "Fast temporal path localization on graphs via multiscale Viterbi decoding", *IEEE Trans. Signal Proc.*, vol. 66 , no. 21 , Nov, 2018, pp. 5588 - 5603.
11. **S. Chen**, D. Tian, C. Feng, A. Vetro, and J. Kovačević, "Fast resampling of 3D point clouds via graphs", *IEEE Trans. Signal Proc.*, vol. 66, no. 3, Feb, 2018, pp. 666 - 681.
12. G. Lederman, **S. Chen**, J. H. Garrett, J. Kovačević, H. Y. Noh, and J. Bielak, "A data fusion approach for track monitoring from multiple in-service trains", *Mechanical Systems and Signal Processing*, vol. 95, Oct, 2017.
13. G. Lederman, **S. Chen**, J. H. Garrett, J. Kovačević, H. Y. Noh, and J. Bielak, "Track monitoring from the dynamic response of a passing train: a sparse approach", *Mechanical Systems and Signal Processing*, vol. 90, June, 2017.
14. G. Lederman, **S. Chen**, J. H. Garrett, J. Kovačević, H. Y. Noh, and J. Bielak, "Track-monitoring from the dynamic response of an operational train", *Mechanical Systems and Signal Processing*, vol. 87, Part A, March, 2017.
15. **S. Chen**, Y. Yang, S. Zong, A. Singh, and J. Kovačević, "Detecting localized binary attributes on graphs", *IEEE Trans. Signal Proc.*, vol. 65, no. 10, May, 2017.

16. **S. Chen**, R. Varma, A. Singh, and J. Kovačević, “Signal recovery on graphs: Fundamental limits of sampling strategies”, *IEEE Trans. Signal and Information Proc. over Networks, Special Issue on Inference and Learning over Networks*, vol. 2, no. 4, Dec. 2016.
17. **S. Chen**, R. Varma, A. Sandryhaila, and J. Kovačević, “Discrete signal processing on graphs: Sampling theory”, *IEEE Trans. Signal Proc.*, vol. 63, no. 24, Aug. 2015. [IEEE Signal Processing Society Young Author Best Paper Award](#).
18. **S. Chen**, A. Sandryhaila, J. M. F. Moura, and J. Kovačević, “Signal recovery on graphs: Variation minimization”, *IEEE Trans. Signal Proc.*, vol. 63, no. 17, Jun. 2015.
19. **S. Chen**, F. Cerda, P. Rizzo, J. Bielak, J. H. Garrett, and J. Kovačević, “Semi-supervised multiresolution classification using adaptive graph filtering with application to indirect bridge structural health monitoring”, *IEEE Trans. Signal Proc.*, vol. 62, no. 11, Jun. 2014.
20. F. Cerda, **S. Chen**, J. Bielak, J. H. Garrett, P. Rizzo, and J. Kovačević, “Indirect structural health monitoring of a simplified laboratory-scale bridge mode”, *International Journal Smart Structure and Systems, Special Issue: Challenge on bridge health monitoring utilizing vehicle-induced vibrations*, vol. 13, no. 5, May. 2014.

Conference

1. C. Pan, **S. Chen**, A. Ortega, “Spatio-temporal graph scattering transform”, *ICLR 2021*.
2. C. Xu, **S. Chen**, M. Li, Y. Zhang, “Invariant teacher and equivariant student for unsupervised 3D human pose estimation”, *AAAI 2021*.
3. M. Li, **S. Chen**, Y. Zhang, I. W. Tsang, “Graph cross networks with vertex infomax pooling”, *Neural Information Processing Systems (NeurIPS) 2020, Oral*.
4. P. Wu, **S. Chen**, and D. Metaxas, “MotionNet: Joint perception and motion prediction for autonomous driving based on BEV maps”, *In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR). 2020*.
5. M. Li, **S. Chen**, Y. Zhang, and Y. Wang, “Dynamic multiscale graph neural networks for category-agnostic 3D skeleton-based motion prediction”, *In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR) 2020, Oral*.
6. Y. Hu, **S. Chen**, Y. Zhang, and Y. Wang, “Collaborative motion prediction via neural message passing”, *In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR) 2020, Oral*.
7. J. Liu, B. Chen, **S. Chen**, M. Bergés, J. Bielak, H. Noh, “Damage-sensitive and domain-invariant feature extraction for vehicle-vibration-based bridge health monitoring”, *In Proc. IEEE Int. Conf. Acoust., Speech Signal Process. 2020*.
8. **S. Chen**, N. Zhang, and H. Sun, “Collaborative localization based on traffic landmarks for autonomous driving”, *International Symposium on Circuits and Systems (ISCAS), 2020*.
9. V. Ioannidis, **S. Chen**, and G. Giannakis, “Pruned graph scattering transforms”, *International Conference on Learning Representations (ICLR), 2020*.
10. **S. Chen**, S. Niu, T. Lan, and B. Liu, “PCT: Large-scale 3D point cloud representations via graph inception networks with applications to autonomous driving”, *In Proc. IEEE Int. Conf. Image Process (ICIP).*, Taipei, Sep. 2019.
11. M. Li, **S. Chen**, X. Chen, Y. Zhang, Y. Wang, and Q. Tian, “Actional-structural graph convolutional networks for skeleton-based action recognition”, *In Proc. IEEE Conf. on Computer Vision and Pattern Recognition (CVPR)*, Long Beach, California, USA July 2019.
12. Y. Hu, **S. Chen**, X. Chen, Y. Zhang, and X. Gu, “Neural message passing for visual relationship detection”, *ICML Workshop on Learning and Reasoning with Graph-Structured Representations.*, Long Beach, California, USA July 2019.
13. C. Duan, **S. Chen**, and J. Kovačević, “3D point cloud denoising via graph-based neural networks”, *In Proc. IEEE Int. Conf. Acoust., Speech Signal Process.*, , Brighton, UK, May. 2018. [Invited Paper](#).

14. C. Duan, **S. Chen**, and J. Kovačević, “MultiProject: 3D point cloud denoising”, *Proc. IEEE Glob. Conf. Signal Information Process.*, Anaheim, California, USA, Dec. 2018. **Awarded Best Student Paper.**
15. **S. Chen***, S. Niu*, H. Guo, C. Targonski, M. Smith, and J. Kovačević, “Generalized value iteration networks: Life beyond lattices”, *AAAI*, New Orleans, USA, Feb. 2018.
16. **S. Chen**, D. Tian, C. Feng, and J. Kovačević, “Contour-based resampling of 3D point clouds”, *In Proc. IEEE Int. Conf. Acoust., Speech Signal Process.*, New Orleans, USA, March 2017.
17. Y. Yang, **S. Chen**, M. Maddah-Ali, P. Grover, S. Kar, and J. Kovačević, “Fast path localization on graphs via multiscale Viterbi decoding”, *In Proc. IEEE Int. Conf. Acoust., Speech Signal Process.*, New Orleans, USA, March 2017.
18. **S. Chen**, Y. Yang, A. Singh, and J. Kovačević, “Signal detection on graphs: Bernoulli noise model”, *Proc. IEEE Glob. Conf. Signal Information Process.*, Washington, DC, Dec. 2016.
19. **S. Chen**, Y. Yang, C. Faloutsos, and J. Kovačević, “Monitoring Manhattan’s traffic at 5 intersections?” *KDD 2016, The 5th International Workshop on Urban Computing*, San Francisco, Aug, 2016.
20. **S. Chen**, R. Varma, A. Singh and J. Kovačević, “A statistical perspective of sampling scores for linear regression”, *In Proc. IEEE Int. Symposium on Information Theory.*, Barcelona, Spain, July 2016. **Awarded Travel Grant.**
21. **S. Chen**, R. Varma, A. Singh, and J. Kovačević, “Representations of piecewise smooth signals on graphs”, *In Proc. IEEE Int. Conf. Acoust., Speech Signal Process.*, Shanghai, China, March 2016. **Invited Talk. Awarded Travel Grant.**
22. R. Varma, **S. Chen**, and J. Kovačević, “Spectrum-blind signal recovery on graphs”, *IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing 2015*, Cancun, Mexico, Dec, 2015. **Invited Talk.**
23. T. Ji, **S. Chen**, R. Varma, and J. Kovačević, “Efficient route planning of autonomous vehicles based on graph signal recovery”, *53rd Annual Allerton Conference on Communication, Control, and Computing 2015*, Allerton, IL, Oct, 2015. **Invited Talk.**
24. **S. Chen**, R. Varma, A. Singh, and J. Kovačević, “Signal recovery on graphs: Random versus experimentally designed sampling”, *Sampling Theory and Applications 11th International Conference*, Washington, D.C., May, 2015. **Invited Talk.**
25. **S. Chen**, A. Sandryhaila, and J. Kovačević, “Sampling theory for graph signals,” *In Proc. IEEE Int. Conf. Acoust., Speech Signal Process.*, Brisbane, Queensland, May 2015.
26. **S. Chen**, A. Sandryhaila, and J. Kovačević, “Distributed algorithm for graph signal inpainting”, *In Proc. IEEE Int. Conf. Acoust., Speech Signal Process.*, Brisbane, Queensland, May 2015.
27. S. Bittner, **S. Chen**, and J. Kovačević, “Fast algorithm for neural network reconstruction”, *In Proc. IEEE Int. Symposium on Biomedical Imaging.*, Brooklyn, April, 2015.
28. **S. Chen**, A. Sandryhaila, J. M. F. Moura, and J. Kovačević, “Signal denoising on graphs via graph filtering”, *Proc. IEEE Glob. Conf. Signal Information Process.*, Atlanta, GA, Dec. 2014.
29. **S. Chen**, A. Sandryhaila, G. Lederman, Z. Wang, J. M. F. Moura, P. Rizzo, J. Bielak, J. H. Garrett, and J. Kovačević, “Signal inpainting on graphs via total variation minimization”, *In Proc. IEEE Int. Conf. Acoust., Speech Signal Process.*, Florence, Italy, May 2014. **Awarded Travel Grant.**
30. G. Lederman, Z. Wang, J. Bielak, H. Noh, J. H. Garrett, **S. Chen**, J. Kovačević, F. Cerda, and P. Rizzo, “Damage quantification and localization algorithms for indirect SHM of bridges”, *Proc. Int. Conf. Bridge Maint., Safety Manag.*, Shanghai, China, July 2014.
31. **S. Chen**, A. Sandryhaila, J.M.F. Moura, and J. Kovačević, “Adaptive graph filtering: Multiresolution classification on graphs”, *Proc. IEEE Glob. Conf. Signal Information Process.*, Austin, TX, Dec. 2013.

32. Z. Wang, **S. Chen**, G.Lederman, F. Cerda, J. Bielak, J. H. Garrett, P. Rizzo, and J. Kovačević, “Comparison of sparse representation and Fourier discriminant methods: Damage location classification in indirect lab-scale bridge structural health monitoring”, *Proc. Structures Congr.*, Pittsburgh, PA, May 2013.
33. **S. Chen**, F. Cerda, J. Guo, J. B. Harley, Q. Shi, P. Rizzo, J. Bielak, J. H. Garrett, and J. Kovačević, “Multiresolution classification with semi-supervised learning for indirect bridge structure health monitoring,” *Proc. IEEE Int. Conf. Acoust., Speech, and Signal Proc.*, Vancouver, Canada, May 2013.
34. F. Cerda, J. H. Garrett, J. Bielak, P. Rizzo, J. A. Barrera, Z. Zhang, **S. Chen**, M. McCann, and J. Kovačević, “Indirect structural health monitoring in bridges: scale experiments”, *Proc. Int. Conf. Bridge Maintenance, Safety and Management*, Lago di Como, Italy, Jul. 2012.

PATENTS

1. Object detection and determination of motion information using curve fitting in autonomous vehicle applications, filed June 27, 2018, as 16/020,193. Inventors: Carlos Vallespi-Gonzalez, **S. Chen**, Abhishek Sen, Ankit Laddha.
2. Methods and systems for fast resampling method and apparatus for point cloud data, filed Nov 22, 2016, as 62/417,007. Inventors: D. Tian, **S. Chen**, C. Feng, A. Vetro.
3. A system to enable rail infrastructure monitoring through the dynamic response of an operational train, filed May 29, 2015, as 15/168,735. Inventors: G. Lederman, **S. Chen**, H. Noh, J. Kovačević, J. H. Garrett, J. Bielak.

PROJECTS

- Graph signal processing** 2012-Present
- developed a theoretical framework to analyze data that are indexed by general graphs with the applications to social networks, transportation networks and 3D point clouds
 - generalized concepts and tools from classical signal processing to the graph domain, including sampling theory on graphs, graph wavelets and graph dictionary learning
 - cooperated with Prof. José. M. F. Moura (ECE at CMU) and Prof Aarti Singh (MLD at CMU)
- Graph neural networks** 2017-Present
- generalized deep learning techniques to the irregular structures with applications to 3D point clouds, skeleton-based action recognition and path planning
 - proposed pruned graph scattering transforms, which are the nontrainable graph convolutional networks and provides theoretical insights for graph convolutional networks from a signal-processing perspective
 - proposed actional-structural graph convolution networks, which stack a series of actional-structural graph convolution and temporal convolution to learn both spatial and temporal features for skeleton-based action recognition and future prediction
 - proposed a novel end-to-end neural network planning module, generalized value iteration network, which allows an agent to learn and plan the optimal paths in unseen irregular spatial graphs, such as real-world city street networks
- Joint perception and prediction system for autonomous driving** 2017-Present
- developed *multisweep LidarCNN*, an end-to-end joint perception and prediction system based on real-time LIDAR sweeps, which automatically detects the objects and predicts their future trajectories and has been deployed on Uber’s self-driving cars
 - developed *LidarFlow*, an end-to-end point-wise motion prediction system, which automatically predicts the future trajectory of each LiDAR point and has been deployed on Uber’s self-driving cars
 - worked on the perception team at Uber Advanced Technologies Group (Continue collaborating)

High-definition map creation for autonomous driving 2019-Present

- developed a multi-modality-fusion-based mapping system that automatically creates high-definition maps with the categories and positions of traffic-rule-related objects (traffic signs, traffic lights, land markers) in the 3D environment
- worked on the computer vision team at Mitsubishi Electric Research Laboratories (MERL)

Graph representation learning 2015-2017

- proposed a generative model for social circle on graphs and a metric to evaluate the likelihood of being social circles
- proposed a fast nonlinear graph embedding algorithm, called WarpMap, to improve user profiling and link prediction
- cooperated with Prof. Christos Faloutsos (MLD at CMU) and Prof. Leman Akoglu (Heinz at CMU)

Urban data analysis with graphs 2016

- analyzed Manhattan's traffic patterns using graph dictionary learning techniques
- proposed a graph-based sampling method for monitoring Manhattan's traffic distribution from a few selected sensors
- cooperated with Prof. Christos Faloutsos (MLD at CMU) and Prof. José. M. F. Moura (ECE at CMU)

3D point cloud processing and learning Summer intern, 2016

- proposed a graph-based resampling strategy of large-scale 3D point clouds with potential applications to progressive compression and efficient registration
- proposed a graph-based multiresolution representation for 3D point clouds with potential applications to progressive compression
- cooperated with Dr. Dong Tian (InterDigital), Prof. Chen Feng (NYU) and Dr. Anthony Vetro (MERL)

Indirect structural health monitoring 2011-2017

- proposed signal processing and machine learning techniques to identify the health status of bridges
- explored an indirect measurement approach for bridge structural health monitoring that collects sensed information from the dynamic responses of multiple vehicles travelling on a bridge
- cooperated with Prof. Jacobo Bielak (CEE at CMU), Prof. Haeyoung Noh (CEE at CMU) and Prof. James H. Garrett (CEE at CMU)

PRESS COVERAGE

- CMU ECE Headlines: The student and the symposium
- CMU ECE Headlines: Doctoral student Siheng Chen gives talk at Tsinghua University

INVITED TALKS

- Seminar talk at Washington University at St. Louis, Apr., 2020
- Seminar talk at University of Florida, Apr., 2020
- Seminar talk at University of California, Santa Barbara, Mar., 2020
- Seminar talk at Virginia Polytechnic Institute and State University, Feb., 2020
- Tutorial talk at IEEE International Workshop on Machine Learning for Signal Processing, Oct, 2019
- Seminar talk at Virginia Polytechnic Institute and State University, Mar., 2019
- Seminar talk at Michigan State University, Mar., 2019

- Seminar talk at Arizona State University, Mar., 2019
- Seminar talk at University of Utah, Jan., 2019
- Research talk at the Mitsubishi Electric Research Laboratories (MERL), Oct., 2018
- Seminar talk at the University of Michigan-Shanghai Jiao Tong University Joint Institute, Sep., 2018
- Seminar talk at Department of Electronic Engineering, Tshinghua University, Sep., 2018
- Research talk at School of Automation, Beijing Institute of Technology, Sep, 2018
- Invited talk at Machine Learning in Science and Engineering, June, 2018
- Research talk at Product Graph Team, Amazon, August, 2017
- Research talk at Facebook AI research, August, 2017
- Tutorial talk at Graph Signal Processing Workshop, May, 2017
- Research talk at Digital Signal Processing Group, Rice University, May, 2017
- Research talk at ECE Energy & Information Seminar, Carnegie Mellon University, April, 2017
- Research talk at School of Electronic and Computer Engineering, Peking University, January, 2017
- Research talk at Department of Electronic Engineering, University of Electronic Science and Technology of China, April, 2016
- Research talk at School of Electronic Engineering, Beijing Institute of Technology, March, 2016
- Research talk at Signal Transformation, Analysis and Compression Group, University of Southern California, January, 2016
- Research talk at Department of Electronic Engineering, Tshinghua University, May, 2014

TEACHING EXPERIENCE

- 18202 (Undergrad): Mathematical Foundations of Electrical Engineering (instructor: Prof. J. M. F. Moura)
- 18790: Wavelets and Multiresolution Techniques (instructor: Prof. Jelena. Kovačević)
- 18799J: Special topics in signal processing: compressive sensing and sparse optimization (instructor: Prof. A. C. Sankaranarayanan)

STUDENTS MENTORED

- Chao Pan (Ph.D in ECE at UIUC): Summer intern 2020
- Xiaolong Li (Ph.D in ECE at Virginia Tech), Spring intern 2020
- Ningxiao Zhang (Ph.D in Astronomy at Penn State University): Multimodality fusion, Fall intern 2019
- Vassilis Ioannidis (Ph.D in ECE at University of Minnesota): Graph scattering transforms, Summer intern 2019
- Pengxiang Wu (Ph.D in CS at Rutgers University): High-definition map creation for autonomous driving, Summer intern 2019
- Divyansh Garg (Undergrad at Cornell University): 3D object detection, Summer intern 2018
- Chaojing Duan (Ph.D in ECE at CMU, Female): 3D point cloud denoising, Fall 2016 - Present
- Keqin Zeng (Undergrad at China Agricultural University, Female): 3D point cloud generation, Summer intern 2017
- Yanxi Chen (Undergrad at Tshinghua China): Seed set expansion, Summer intern 2017
- Xiao Ma (Undergrad at Beijing Jiaotong, China): Urban computing, Summer intern 2016
- Yuru Wu (Undergrad at Tshinghua, China): Graph mining, Summer intern 2016
- Chao Pan (Undergrad at Tshinghua, China): Tensor decomposition, Summer intern 2016

- Shi Zong (Master in ECE at CMU) Community detection, Summer 2015 - May 2016
- Tianxi Ji (Master in ECE at CMU): Route planning for drone, March 2015 - May 2016
- Chao Li (Master in Software Engineering at CMU): Ranking system, May 2015 - May 2016
- Chen Liang (Undergrad at Tsinghua, China): Graph mining, Summer intern 2015
- Akshay Varun (Undergrad at PESIT, India): Active learning for clustering, Summer intern 2015
- Sean Bittner (Undergrad in ECE at CMU): Neuron signal processing, Summer intern 2014
- Niv Zehngut (Undergrad in ECE at CMU): Wavelets on graphs, Spring 2014
- Yu Zhou (Master in BME at CMU, Female): Tissue classification in histology images, Fall 2012 - Spring 2014

SERVICE

Organizer

- Special Session on “A Signal-Processing-View of Graph Neural Networks” at IEEE Int. Conf. Acoust., Speech Signal Process. 2020

Conference Session Chair

- Graph Signal Processing Workshop 2017

Technical Program Committee

- IEEE European Signal Processing Conference 2018
- IEEE Global Conference on Signal and Information Processing 2017

Reviews

- IEEE Signal Processing Magazine
- IEEE Transactions on Signal Processing
- IEEE Transactions on Signal and Information Processing over Networks
- IEEE Transactions on Image Processing
- IEEE Transactions on Information Theory
- IEEE Internet of Things Journal
- IEEE Transactions on Industrial Electronics
- IEEE Transactions on Cybernetics
- IEEE Signal Processing Letter
- Applied and Computational Harmonic Analysis
- Signal Processing (ELSEVIER)
- IEEE International Conference on Acoustics, Speech and Signal Processing
- IEEE International Conference on Image Processing
- IEEE International Symposium on Biomedical Imaging
- IEEE International Workshop on Computational Advances in Multi-Sensor Adaptive Processing
- European Signal Processing Conference

SKILLS

- Programming Languages: Python, C/C++, Java, HTML, SQL, LaTeX
- Operating Systems: Windows, Linux