

YOUNGSEER PARK

(last updated: May 18, 2024)

The Johns Hopkins University
Center for Imaging Science (CIS)
Human Language Technology Center of Excellence (HLTCOE)
Institute for Computational Medicine (ICM)
Mathematical Institute for Data Science (MINDS)
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Education

THE GEORGE WASHINGTON UNIVERSITY

Ph.D. in Computer Science. March 2011.

Title: *Anomaly Detection in Time Series of Graphs and Hypergraphs using Graph Features.*

THE GEORGE WASHINGTON UNIVERSITY

M.S. (with distinction) in Computer Science. February 1993.

INHA UNIVERSITY, SEOUL, KOREA

B.E. (with honor) in Electrical Engineering. February 1985.

Experience

July 2019 – Present

Research Scientist, conducting research on statistical inference problems supported by NSF, DARPA, Microsoft Research, Howard Hughes Medical Institutes, etc. Also advising graduate students and postdocs on their research works.

Joint Appointment at

- The Human Language Technology Center for Excellence (HLTCOE)
- Institute for Computational Medicine (ICM)
- Mathematical Institute for Data Science (MINDS)

SEOUL NATIONAL UNIVERSITY

Artificial Intelligence Institute

Sept 2023 – May 2024

Visiting Professor, conducting research on artificial intelligence. Also advising graduate students and postdocs on their research works.

SEOUL NATIONAL UNIVERSITY

Department of Industrial Engineering

March 2019 – August 2019

Associate Visiting Professor, conducting research on data mining. Also advising graduate students and postdocs on their research works.

THE JOHNS HOPKINS UNIVERSITY

Center for Imaging Science

July 2011 – June 2019

Associate Research Scientist, conducting research on statistical inference problems supported by NSF, DARPA, Howard Hughes Medical Institutes, etc. Also advising graduate students and postdocs on their research works.

THE JOHNS HOPKINS UNIVERSITY
May 2004 – June 2011

Center for Imaging Science

Senior Research Analyst, developing and testing a new automated shape analysis algorithm to identify brain images in a study of Alzheimer’s Disease funded by NIH. Also continuing to work on iterative denoising project funded by DARPA.

THE JOHNS HOPKINS UNIVERSITY
May 2003 – May 2004

Center for Imaging Science

Postdoc Fellow, developing and testing a new clustering algorithm to identify meaningful cross-corpus associations using an iterative denoising algorithm for DARPA funded project.

THE GWU
September 1999 – May 2003

Computer Science

Graduate Research Assistant, developed and tested a new classification algorithm to discover significant clusters in high-dimensional noisy data funded by Robert Bosch in Germany.

THE GWU
July 2001 – August 2001

Computer Science

Lecturer, taught Introduction to Programming in C++ course.

THE JHU
August 1998 – July 1999

Biomechanics Lab

Senior Research Engineer, developed soft tissue deformation tools for the shoulder kinematics and dynamics using OpenGL.

THE GWU
January 1993 – August 1998

Computer Science

Graduate Research Fellow, worked at the Laboratory for Advanced Computer Applications in Medicine (LACAM) for creating VR tools for surgical simulations using OpenInventor and VRML2.0.

**Publications
submitted to
Journal**

10. Aranyak Acharyya, Jess Arroyo Relin, Michael Clayton, Marta Zlatic, **Y. Park**, Carey E. Priebe, “Consistent response prediction for multilayer networks on unknown manifolds,” Submitted, 2024
9. Cencheng Shen, **Y. Park**, Carey E Priebe, “Graph Encoder Ensemble for Simultaneous Vertex Embedding and Community Detection,” Submitted, 2023
8. Hayden S. Helm, Marah Abdin, Benjamin D. Pedigo, Shweti Mahajan, Vince Lyzinski, **Y. Park**, Amitabh Basu, PialiChoudhury, Christopher M. White, Weiwei Yang, Carey E. Priebe, “Leveraging semantically similar queries for ranking via combining representations,” Submitted, 2021
7. Amitabh Basu, Avanti Athreya, **Y. Park**, Carey E. Priebe, Christopher White, Joshua Vogelstein, Michael Winding, Marta Zlatic, Albert Cardona, Patrick Bourke, Weiwei Yang, Jonathan Larson, “Distance-based Positive and Unlabeled Learning for Ranking,” Submitted, 2021
6. Jonathan Larson, Tiona Zuzul, Emily Cox Pahnke, Neha Parikh Shah, Patrick Bourke, Nicholas Caurvina, Fereshteh Amini, **Y. Park**, Joshua Vogelstein,

Jeffrey Weston, Christopher White, Carey E. Priebe, “Dynamic Silos: Modularity in intra-organizational communication networks before and during the Covid-19 pandemic,” Submitted, 2021

5. Zachary Lubberts, Avanti Athreya, **Y. Park**, Carey E. Priebe, Carey E. Priebe, “Beyond the adjacency matrix: random line graphs and inference for networks with edge attributes,” Submitted, 2021
4. Vivek Gopalakrishnan, Jaewon Chung, Eric Bridgeford, Benjamin D. Pedigo, Jess Arroyo, Lucy Upchurch, G. Allan Johnson, Nian Wang, **Y. Park**, Carey E. Priebe, Joshua T. Vogelstein, “Multiscale Comparative Connectomics,” submitted, 2020
3. Chen, Guodong; Arroyo, Jess; Athreya, Avanti; Cape, Joshua; Vogelstein, Joshua; **Park, Y.**; White, Christopher; Larson, Jonathan; Yang, Weiwei; Priebe, Carey E., “Multiple Network Embedding for Anomaly Detection in Time Series of Graphs,” submitted, 2020
2. Konstantinos Pantazis, Daniel L. Sussman, **Y. Park**, Carey E Priebe, Vince Lyzinski, “Multiplex graph matching matched filters,” submitted, 2019.
1. C.E. Priebe, **Y. Park**, M. Tang, A. Athreya, V. Lyzinski, J. Vogelstein, Y. Qin, B. Cocanougher, K. Eichler, M. Zlatic, A. Cardona, “Semiparametric spectral modeling of the Drosophila connectome,” submitted, 2017.

Publications Journal

38. Avanti Athreya, Zachary Lubberts, **Y. Park**, Carey E. Priebe, “Euclidean mirrors and dynamics in network time series,” Journal of the American Statistical Association, accepted for publication, 2024
37. Tiona Zuzul, Emily Cox Pahnke, Jonathan Larson, Patrick Bourke, Nicholas Caurvina, Fereshteh Amini, Neha Parikh Shah, **Y. Park**, Joshua Vogelstein, Jeffrey Weston, Christopher White, Carey E. Priebe, “Dynamic Silos: Increased Modularity in Intra-organizational Communication Networks during the Covid-19 Pandemic,” Management Science, accepted for publication, 2024
36. Cencheng Shen, Jonathan Larson, Ha Trinh, Xihan Qin, **Y. Park**, Carey E Priebe, “Discovering Communication Pattern Shifts in Large-Scale Networks using Encoder Embedding and Vertex Dynamics,” IEEE Transactions on Network Science and Engineering, vol 11, no 2, pp 2100-2109, 2024.
35. Hayden S. Helm, Amitabh Basu, Avanti Athreya, **Y. Park**, Joshua T. Vogelstein, Michael Winding, Marta Zlatic, Albert Cardona, Patrick Bourke, Jonathan Larson, Chris White, Carey E Priebe, “Distance-based Positive and Unlabeled Learning for Ranking,” Pattern Recognition, accepted for publication, 2023
34. Aranyak Acharyya, Joshua Agterberg, Michael W. Trosset, **Y. Park**, Carey E Priebe, “Semisupervised regression in latent structure networks on unknown manifolds,” vol 8, no 75, 2023
33. Tianyi Chen, **Y. Park**, Ali Saad-Eldin, Zachary Lubberts, Avanti Athreya, Benjamin D. Pedigo, Joshua T. Vogelstein, Francesca Puppo, Gabriel A. Silva, Alysson R. Muotri, Weiwei Yang, Christopher M. White, Carey E Priebe, “Discovering a change point in a time series of organoid networks via the iso-mirror,” Applied Network Science, vol 8, no 45, 2023

32. Michael Winding, Benjamin D Pedigo, Christopher L Barnes, Heather G Patsolic, **Y. Park**, Tom Kazimiers, Akira Fushiki, Ingrid V Andrade, Feng Li, Javier Valdes-Aleman, Avinash Khandelwal, Nadine Randel, Elizabeth Barsotti, Ana Correia, Richard D Fetter, Volker Hartenstein, Carey E Priebe, Joshua T Vogelstein, Albert Cardona, Marta Zlatic, "The connectome of an insect brain, *Science*, vol 379, no 6636, 2023,
31. Mu, Cong, **Y. Park**, Carey E. Priebe, "Dynamic Network Sampling for Community Detection," *Applied Network Science*, vol 8, no 5, pp 1-18, 2023.
30. Konstantinos Pantazis, Daniel L. Sussman, **Y. Park**, Carey E Priebe, Vince Lyzinski, "Multiplex graph matching matched filters," *Applied Network Science*, vol 7, no 29, 2022
29. Avanti Athreya, Michael Kane, Bryan Lewis, Zachary Lubberts, Vince Lyzinski, **Y. Park**, Carey E. Priebe, Minh Tang, "Numerical tolerance for spectral decompositions of random dot product graphs," *Journal of Computational and Graphical Statistics*, vol 0, no 0, pp 1-12, 2022.
28. Michael J. Harrower, Joseph C. Mazzariello, A. Catherine D'Andrea, Smiti Nathan, Habtamu Mekonnen, Ioana A. Dumitru, Carey E. Priebe, Kifle Zerue, **Y. Park**, "Aksumite Settlement Patterns: Site Size Hierarchy and Spatial Clustering Analyses," *Journal of Archaeological Research*, 2022
27. Congyuan Yang, Carey E. Priebe, **Y. Park**, David J. Marchette, "Simultaneous Dimensionality and Complexity Model Selection for Spectral Graph Clustering," *Journal of Computational and Graphical Statistics*, vol 30, no 2, pp 422-441, 2021.
26. Avanti Athreya, Minh Tang, **Y. Park**, Carey E. Priebe, "On estimation and inference in latent structure random graphs," *Statistical Science*, vol 36, no 1, pp 68-88, 2021.
25. Nian Wang, Robert J Anderson, David G Ashbrook, Vivek Gopalakrishnan, **Youngser Park**, Carey E Priebe, Yi Qi, Joshua T Vogelstein, Robert W Williams, G. Allan Johnson, "Variability and Heritability of Mouse Brain Structure: Microscopic MRI Atlases and Connectomes for Diverse Strains," *NeuroImage*, vo 222, no 15, 2020.
24. D. L. Sussman, V. Lyzinski, **Y. Park**, C. E. Priebe, "Matched Filters for Noisy Induced Subgraph Detection," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol 42, no 11, pp 2887-2900, 2020.
23. Joshua Agterberg, **Y. Park**, Jonathan Larson, Christopher White, Carey E. Priebe, and Vince Lyzinski, "Vertex Nomination, Consistent Estimation, and Adversarial Modification," *Electronic Journal of Statistics*, vol. 14, no. 2, pp. 3230-3267, 2020.
22. H. G. Patsolic, **Y. Park**, V. Lyzinski, C.E. Priebe, "Vertex Nomination Via Local Neighborhood Matching," *Statistical Analysis and Data Mining*, 2020;1-16, March, 2020.
21. Carey E. Priebe, **Youngser Park**, Joshua T. Vogelstein, John M. Conroy, Vince Lyzinskic, Minh Tang, Avanti Athreya, Joshua Cape, and Eric Bridgeford, "On a 'Two Truths' Phenomenon in Spectral Graph Clustering," *Proceedings of the National Acedemy of Sciences*, vol. 116, no. 13, pp 5995-6000, 2019.

20. Avanti Athreya, Donniell E. Fishkind, Keith Levin, Vince Lyzinski, **Youngser Park**, Yichen Qin, Daniel L. Sussman, Minh Tang, Joshua T. Vogelstein, Carey E. Priebe, "Statistical inference on random dot product graphs: a survey," *Journal of Machine Learning Research*, vol 18, no 226, pp. 1-92, 2018.
19. K. Eichler, F. Li, A. L. Kumar, **Y. Park**, I. Andrade, C. Schneider-Mizell, T. Saumweber, A. Huser, D. Bonnery, B. Gerber, R. D. Fetter, J. W. Truman, C.E Priebe, L. F. Abbott, A. Thum, M. Zlatic, and A. Cardona, "The complete wiring diagram of a high-order learning and memory center, the insect mushroom body," *Nature*, no. 548, pp. 175-182, 2017.
18. V. Lyzinski, **Y. Park**, C. E. Priebe, M. W. Trosset, "Fast Embedding for JOFC Using the Raw Stress Criterion," *Journal of Computational and Graphical Statistics*, vol 26, no 4, pp 786-802, 2017.
17. V. Lyzinski, M. Tang, A. Athreya, **Y. Park**, C. E. Priebe, "Community Detection and Classification in Hierarchical Stochastic Blockmodels," *IEEE Transactions on Network Science and Engineering*, vo.. 4, no. 1, pp 13-26, 2017.
16. M. Tang, A. Athreya, D.L. Sussman, V. Lyzinski, **Y. Park**, C.E. Priebe, "A semiparametric two-sample hypothesis testing problem for random dot product graphs," *Journal of Computational and Graphical Statistics*, vol 26, no 2, pp 344-354, 2017.
15. D. E. Fishkind, C. Shen, **Y. Park**, C.E. Priebe, "On the Incommensurability Phenomenon," *Journal of Classification*, Vol. 33, No. 2, pp. 185-209, 2016.
14. V. Lyzinski, D. L. Sussman, D. E. Fishkind, H. Pao, L. Chen, J. T. Vogelstein, **Y. Park**, C. E. Priebe, "Spectral Clustering for Divide-and-Conquer Graph Matching," *Parallel Computing*, Vol. 47, pp. 70-87, 2015.
13. J. Vogelstein*, **Y. Park***, T. Ohyama*, R. Kerr, J.W. Truman, C.E. Priebe, M. Zlatic, "Discovery of Brainwide Neural-Behavioral Maps via Multiscale Unsupervised Structure Learning," *Science*, Vol. 344 No. 6182, 386-392, April 25, 2014. (* co-first)
12. H. Wang, M. Tang, **Y. Park**, and C.E. Priebe, "Locality statistics for anomaly detection in time series of graphs," *IEEE Transactions on Signal Processing*, Vol. 62, No. 3, pp. 703-717, February, 2014.
11. **Y. Park**, C.E. Priebe, and A. Youssef, "Anomaly Detection in Time-Series of Graphs using Fusion of Invariant," *IEEE Journal of Selected Topics in Signal Processing*, Vol. 7, No. 1, pp. 67-75, February, 2013.
10. M. Tang, **Y. Park**, N.H. Lee, and C.E. Priebe, "Attribute Fusion in a Latent Process Model for Time Series of Graphs," *IEEE Transactions on Signal Processing*, Vol. 61, No. 7, pp. 1721-1732, April, 2013.
9. N. Ram Mohan, C.E. Priebe, **Y. Park**, and M. John, "Statistical Analysis of Hippocampus Shape Using a Modified Mann-Whitney-Wilcoxon Test," *International Journal of Bio-Science and Bio-Technology*, Vol. 3, No. 1, pp. 19-26, 2011.
8. Z. Ma, A. Cardinal-Stakenas, **Y. Park**, M.W. Trosset, and C.E. Priebe, "Dimensionality Reduction on the Cartesian Product of Embeddings of Multiple

Dissimilarity Matrices,” *Journal for Classification*, vol 27, pp 1-15, October, 2010.

7. C.E. Priebe, **Y. Park**, D.J. Marchette, J.M. Conroy, J. Grothendieck, and A.L. Gorin, “Statistical Inference on Attributed Random Graphs: Fusion of Graph Features and Content: An Experiment on Time Series of Enron Graphs,” *Computational Statistics and Data Analysis*, volume 54, pages 1766-1776, 2010.
6. M.I. Miller, C.E. Priebe, Qiu, A., Fischl, B., Kolasny, A., Brown, T., **Y. Park**, Ratnanather, J.T., Busa, E., Jovicich, J., Yu, P., Dickerson, B.C., Buckner, R.L. and the Morphometry BIRN, “Collaborative computational anatomy: An MRI morphometry study of the human brain via diffeomorphic metric mapping”, *Human Brain Mapping*, 30:2132-2141, Wiley-Liss, also available at <http://dx.doi.org/10.1002/hbm.20655> (online), 2009.
5. **Y. Park**, C.E. Priebe, M.I. Miller, N. Ram Mohan and K.N. Botteron, “Statistical Analysis of Twin Populations using Dissimilarity Measurements in Hippocampus Shape Space”, *Journal of Biomedicine and Biotechnology*, vol 2008, 2008.
4. M.W. Trosset, C.E. Priebe, **Y. Park**, and M.I. Miller, “Semisupervised Learning from Dissimilarity Data”, *Computational Statistics and Data Analysis*, 52, 4643–5657, 2008. Also presented at the Joint Statistical Meetings 2007, Salt Lake City, Utah.
3. C.E. Priebe, D.J. Marchette, **Y. Park**, and R.R. Muise, “An Application of Integrated Sensing and Processing Decision Trees for Target Detection and Localization on Digital Mirror Array Imagery”, In *Journal of Applied Optics*, 45, 13 (2006): 3022–3030.
2. C.E. Priebe, J.M. Conroy, D.J. Marchette, and **Y. Park**, “Scan Statistics on Enron Graphs”, In *Journal of Computational and Mathematical Organization Theory*, 11, 229–247, Springer Science, 2005.
1. J. Hahn, R. Kaufman, A.B. Winick, T. Carleton, **Y. Park**, R. Lindeman, K.M. Oh, N. al-Ghreimil, R.J. Walsh, M. Loew, J. Gerber, S. Sankar, “Training Environment for Inferior Vena Caval Filter Placement”, In *The Medicine Meets Virtual Reality*, (January 1998).

Publications Conference

32. A. Athreya, Z. Lubberts, C. Priebe, **Y. Park**, “Discovering underlying dynamics in time series of networks”, 6th International Conference on Econometrics and Statistics 1-3 August 2023, Waseda University, Tokyo, Japan.
31. Z. Lubberts, A. Athreya, C. Priebe, **Y. Park**, “Beyond the adjacency matrix: Random line graphs and inference for networks with edge attributes”, 6th International Conference on Econometrics and Statistics 1-3 August 2023, Waseda University, Tokyo, Japan.
30. Avanti Athreya, Zachary Lubberts, **Y. Park**, Carey E. Priebe, “Discovering underlying dynamics in time series of networks,”, 15th International Conference of the ERCIM WG on Computational and Methodological Statistics (CMStatistics 2022), 17-19 December 2022, King’s College, London, UK.

29. Kelly Marchisio, **Y. Park**, Ali Saad-Eldin, Anton Alyakin, Kevin Duh, Carey Priebe, Philipp Koehn, “An Analysis of Euclidean vs. Graph-Based Framing for Bilingual Lexicon Induction from Word Embedding Spaces”, EMNLP 2021, Punta Cana, November 7-11, 2021.
28. K. Pantazis, D. L. Sussman, **Y. Park**, C. E. Priebe, V. Lyzinski, “Multiplex graph matching matched filters”, GTA³ 2019 Workshop on Graph Techniques for Adversarial Activity Analytics, in conjunction with 12th ACM International Conference on Web Search and Data Mining, Los Angeles, CA, December 9, 2019.
27. Dan Sussman, Vince Lyzinski, **Youngser Park**, Carey E. Priebe, ‘Matched Filters for Noisy Induced Subgraph Detection”, GTA³ 2018: Workshop on Graph Techniques for Adversarial Activity Analytics, in conjunction with 11th ACM International Conference on Web Search and Data Mining, Marina Del Rey, CA, Feb 9, 2018. (**won the best paper award**)
26. A. Liu, H. Wang, **Y. Park**, C.E. Priebe, “Anomaly Detection in Time Series of Dependent Stochastic Block Model Graphs, ” Joint Statistics Meeting, Chicago, IL, August, 2016.
25. D. Zheng, D. Mhembere, **Y. Park**, J. T. Vogelstein, C. E. Priebe, R. Burns. “Spectral Clustering For Billion-Node Graphs,” SIAM Workshop on Network Scienceq (NS2016), Boston, MA, July, 2016.
24. H. Patsolic, V. Lyzinski, **Y. Park**, C.E. Priebe, “Vertex Nomination via Seeded Graph Matching,” Joint Statistics Meeting, August, 2016.
23. **Y. Park**, H. Wang, T. Nöbauer, A. Vaziri, C. E. Priebe, “Anomaly Detection on Whole-Brain Functional Imaging of Neuronal Activity using Graph Scan Statistics” ACM Conference on Knowledge Discovery and Data Mining (KDD), Workshop on Outlier Definition, Detection, and Description (ODDx3), August 10, 2015.
22. H. Wang, M. Tang, C.E. Priebe, **Y. Park**, “Inference in Time Series of Graphs using Locality Statistics” , IEEE Global Conference on Signal and Information Processing, Austin, Texas, Dec 3-5, 2013.
21. C.E. Priebe, N.H. Lee, **Y. Park**, M. Tang, “Attribute Fusion in a Latent Process Model for Time Series of Graphs,” IEEE International Workshop on Statistical Signal Processing 2011 (SSP’11), Nice, France, June 28-30, 2011.
20. **Y. Park**, C.E. Priebe, A. Youssef, “Anomaly Detection using Fusion of Graph Invariants on a Time Series of Graphs,” Joint Statistical Meetings 2010, Vancouver, August, 2010.
19. N. Ram Mohan, C.E. Priebe, **Y. Park**, and M. John, “Statistical Analysis of Hippocampus Shape Using a Modified Mann-Whitney-Wilcoxon Test”, BSBT 2009, Jeju, Korea, Dec. 2009,
18. Z. Ma, A. Cardinal-Stakenas, **Y. Park**, C.E. Priebe, “Combining Dissimilarity Representations in Embedding Product Space,” JSM 2009, Washington, DC, August, 2009.
17. **Y. Park**, C.E. Priebe, D.J. Marchette, A. Youssef, “Anomaly Detection using Scan Statistics on Time Series Hypergraphs”, JSM 2009, Washington, DC, August, 2009.

16. B.A. Landman, **Y. Park**, Z. Ma, C.E. Priebe, "Data Fusion and Inference with Disparate Feature Spaces using Iterative Denoising Trees" JSM 2009, Washington, DC, August, 2009.
15. N. Ram Mohan, C.E. Priebe, **Y. Park**, M. John, "Hippocampus shape analysis of clinically depressed twin populations using a modified Mann-Whitney-Wilcoxon statistic" JSM 2009, Washington, DC, August, 2009.
14. **Y. Park**, C.E. Priebe, D.J. Marchette, A. Youssef, "Anomaly Detection using Scan Statistics on Time Series of Hypergraphs," Workshop on Link Analysis, Counterterrorism and Security at the SIAM International Conference on Data Mining, Sparks, Nevada, May 1-3, 2009
13. Z. Ma, A. Cardinal-Stakenas, **Y. Park**, C.E. Priebe, "Combining Dissimilarity Representations in Embedding Product Space", *Interface 2008*, Durham, NC, 2008.
12. A. Cardinal-Stakenas, Z. Ma, **Y. Park**, C.E. Priebe, "Comparing Dissimilarity Representations of Disparate Information", *Interface 2008*, Durham, NC, 2008.
11. **Y. Park**, C.E. Priebe, K. Botteron, M.I. Miller, N.R. Mohan, "Hippocampus shape-space analysis of clinically depressed, high risk, and control twin populations", *Frontiers in the Convergence of Bioscience and Information Technologies 2007*, Jeju, Korea, 2007.
10. "LDDMM Software Suite: an evolving BIRN technology", In *2006 TeraGrid Conference*, Indianapolis, IN, (June, 2006).
9. "BIRN and Computational Anatomy: A TeraGrid Technology", In *2006 TeraGrid Conference*, Indianapolis, IN, (June, 2006).
8. D.J. Marchette, C.E. Priebe, **Y. Park**, D. Karakos, "Iterative Denoising for Adaptive Sensors", In *Hawaii International Conference on Statistics, Mathematics and Related Fields*, (January 2006).
7. "Pattern Classification of Hippocampal Shape Analysis in a Study of Alzheimer's Disease", In *Human Brain Mapping 2005*, (June 2005).
6. C.E. Priebe, D.J. Marchette, J. Conroy, **Y. Park**, "Scan Statistics on Enron Graphs", In *SIAM International Conference on Data Mining (SDM'05), Workshop on Link Analysis, Counterterrorism and Security*, (April 2005).
5. D.J. Marchette, C.E. Priebe, **Y. Park**, "Comparing Apples and Oranges: Method for Comparing the Incomparable", In *Hawaii International Conference on Statistics and Related Fields*, (August 2004).
4. C.E. Priebe, D.J. Marchette, **Y. Park**, E. Wegman, J. Solka, D. Socolinsky, D. Karakos, K. Church, R. Guglielmi, R. Coifman, D. Lin, D. Healy, M. Jacobs, A. Tsao, "Iterative Denoising for Cross-Corpus Discovery", In *COMPSTAT 2004*, (August 2004).
3. **Y. Park**, P. Bock, "Discovering Clusters In High-Dimensional Noisy Feature Spaces Using A Dynamic Agglomerative Decimation Clustering Algorithm", In *ANNIE2002*, (November 2002).
2. **Y. Park**, P. Bock, "Discovering Clusters in High-Dimensional Noisy Feature Spaces Using a Dynamic Agglomerative Decimation Clustering Algorithm", In *NGDM2002*, (October 2002).

1. **Y. Park**, R. Lindeman, J. Hahn, “X-Ray Casting: Fast Volume Visualization Using 2D Texture Mapping Techniques”, In *IEEE Visualization’96 Late Breaking Hot Topics*, (October 1996).

Invited Talks

11. “On a ’Two Truths Phenomenon in Spectral Graph Clustering,” Data Mining Center, Seoul National University, Seoul, Korea, April 26, 2019.
10. “Structure Discovery in the Drosophila Connectome,” BK21+ Seminar, Seoul National University, Seoul, Korea, July 23, 2018.
9. “Vertex Nomination via Seeded Graph Matching,” BK21+ Seminar, Seoul National University, Seoul, Korea, January 3, 2017.
8. “Repeated Motif Hierarchical Stochastic Blockmodels,” Theoretical Foundations for Statistical Network Analysis, Isaac Newton Institute for Mathematical Sciences, Cambridge, England, July 15, 2016.
7. “Anomaly Detection in Time-Series of Graphs,” BK21+ Seminar, Seoul National University, Seoul, Korea, July 21, 2015.
6. “Discovery of Brainwide Neural-Behavioral Maps via Multiscale Unsupervised Structure Learning,” BK21+ Seminar, Seoul National University, Seoul, Korea, June 27, 2014.
5. “Anomaly Detection using Scan Statistics on Enron Graphs and Hypergraphs,” IASC 2008 Statistical Modeling for Computer Security, Seoul, Korea, December, 2008.
4. “On the Exploitation of Multiple Disparate Dissimilarities,” JSM 2008, Denver, CO, August, 2008.
3. “Scan Statistics in Hypergraphs,” Interface 2008, Durham, NC, May, 2008.
2. “Disparate Information Fusion: On the Exploitation of Multiple Disparate Dissimilarities,” Interface 2008, Durham, NC, May, 2008.
1. “Statistical Analysis of Twin Populations using Dissimilarity Measurements in Hippocampus Shape Space,” CS departmental seminar series, Virginia Commonwealth University, November, 2007.

Grants Participated

Microsoft Research, “Models for Statistical Inference in Neuroscience Connectomics,” PI, 2019.

DARPA MAA, “Universally Useful Primitives for Aligning Networks Across Time and Space,” PI: Vince Lyzinski, Co-PI with Carey E. Priebe, and Daniel Sussman, 2017.

DARPA D3M, “What Would Tukey Do?,” 2/1/2017–1/31/2021, PI: Carey E. Priebe, Co-PI with Minh Tang, Avanti Athreya, Vince Lyzinski, & Joshua Vogelstein.

National Science Foundation, “ABI Innovation: The ABCs of fusion and inference from multiple connectome modalities,” PI: Carey E. Priebe, Co-PI with Minh Tang, 2015.

National Science Foundation, “NSF BRAIN EAGER: Discovery and characterization of neural circuitry from behavior, connectivity patterns and activity patterns,” 09/01/14–08/31/16, PI: Carey E. Priebe

DARPA XDATA, “Fusion and Inference from Multiple and Massive Disparate Distributed Dynamic Data Sets,” 10/1/2012-3/31/2017, PI: Carey E. Priebe.

National Security Science and Engineering Faculty Fellowship Program, “Fusion and Inference from Multiple and Massive Disparate Data Sources,” 02/09/09-02/08/14, PI: Carey E. Priebe.

Johns Hopkins University Human Language Technology Center of Excellence, “Streaming Content in Context,” 2008–Current, PI: Carey E. Priebe.

Air Force Office of Scientific Research, “Information Fusion: Inference from Graphs and Feature Matrices,” 06/01/09-11/30/11, PI: Carey E. Priebe.

Office of Naval Research, “Disparate Information Fusion: Embedding & Exploitation of Disparate Measurements,” N00014-07-1-0328, 11/29/06-12/31/09, PI: Carey E. Priebe.

DARPA MTO, “A Compressed Sensing Approach to SIGINT Processing,” N66001-06-1-2009, 02/02/06-12/31/08, PI: Carey E. Priebe.

DARPA/AlgoTek, “Visual Brain,” 06/29/05-06/28/06, PI: Carey E. Priebe.

DARPA/AlgoTek, “BICA,” 04/10/06–1/30/07, PI: Carey E. Priebe.

DARPA Applied and Computational Mathematics Program, (subcontract from Lockheed Martin) “ISP Phase II,” 09/01/2004-09/30/2006, PI: Carey E. Priebe.

Raytheon, “Transitioning Automatic Target Recognition/Classification Algorithms to Signals and Image Domains,” 8/15/2005-12/31/2005, PI: Carey E. Priebe.

DARPA, (subcontract from AlgoTeks Contract MDA972-03-C0014) “Novel Mathematical and Computational Approaches to Exploitation of Massive, Non-physical Data,” 06/01/03-09/30/04, PI: Carey E. Priebe.

Awards

“Comparing Dissimilarity Representations”, *R.L. Anderson Award, Clint Miller Award honorable mention for best poster*, Southern Regional Council on Statistics Summer Research Conference, Charleston, SC, July, 2008.

“On Combining Dissimilarity Representations”, *R.L. Anderson Award, Clint Miller Award honorable mention for best poster*, Southern Regional Council on Statistics Summer Research Conference, Charleston, SC, July, 2008.

Mentorship

JHU AMS Ph.D. Students: Ting Chao, Percy Li, Runge Tang, Jordan Yoder, Heng Wang, Lee Chen, Sancar Adali, Zhiliang Ma

JHU CS Ph.D. Kendall Giles

JHU EE Ph.D. Student: Ming Sun

JHU AMS M.S. Student: Nikhil Ram Mohan

JHU AMS B.S. Student: Eugene Cho