

## Alexandros G. Dimakis

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EER 6.816, Dept. of Electrical and Computer Engineering  
dimakis@austin.utexas.edu

### Education

#### University of California, Berkeley

September 2005-2008: Ph.D in Electrical Engineering and Computer Sciences.

*Advisors:* Kannan Ramchandran and Martin Wainwright

#### University of California, Berkeley

September 2003-2005: MSc in Electrical engineering and Computer Sciences.

#### National Technical University of Athens

September 1998- June 2003: Diploma in Electrical and Computer Engineering (5 year degree)

### Professional Experience

- Professor,  
Archie W. Straiton Endowed Faculty Fellowship in Engineering,  
Dept. of Electrical and Computer Engineering,  
University of Texas, Austin. Sept. 2020 - Present
- Associate Professor,  
Fluor Centennial Teaching Fellowship in Engineering 2,  
Dept. of Electrical and Computer Engineering,  
University of Texas, Austin. Sept. 2015 - Aug. 2020
- Assistant Professor,  
Dept. of Electrical and Computer Engineering,  
University of Texas, Austin. Jan. 2013-Aug. 2015
- Assistant Professor,  
Colleen and Roberto Padovani Early Career Chair in Electrical Engineering,  
University of Southern California. May 2009-Dec 2012.
- California Institute of Technology, Center for the Mathematics of Information (CMI) Postdoctoral Scholar. Sept 2008-May 2009.
- Microsoft Research Communication and Collaboration systems group,  
Project: Coding for storage in data centers.
- Ecole Polytechnique Federale de Lausanne (EPFL) Audiovisual Communications Laboratory - LCAV School of Computer and Communication Sciences (Summer 2005).  
Project: Gossip Algorithms for Distributed Signal Processing.

### Awards and Recognition

- Our team was awarded the 2020 NSF National AI Institute for Foundations of Machine Learning award. Currently serving as co-Director of the new institute.
- Best Paper Award at UAI 2021 Workshop on Tractable Probabilistic Modeling , J. Whang, E. Lindgren, A.G. Dimakis, Composing Normalizing Flows for Inverse Problems. (Longer version appeared in ICML 2021).
- 2019 University of Toronto, Department of ECE. Invited Speaker, Distinguished Lecture Series (DLS).
- 2018 James L. Massey Research and Teaching Award for Young Scholars.
- ITA 2019, Invited Plenary Speaker, February 2019.
- CISS 2018 Invited Plenary speaker, March 2018.

- IEEE Distinguished Lecturer. Nominated by IEEE Information Theory society.
- Army Research Office (ARO) Young Investigator Award, June 2014
- Joint Information Theory and Communications Society Best Paper Award, 2012
- Google Faculty Research Award, 2012.
- IEEE ComSoc Data Storage Committee Best Paper Award, 2010
- NSF Career Award, 2011
- 2008 Eli Jury Dissertation Award.
- Microsoft Research Fellowship for 2007-2008
- Best Paper award in IEEE/ACM Symposium on Information Processing in Sensor Networks (IPSN '05)

## Service

**TPC Member:** AAAI 2021 (Area Chair), NeurIPS 2020 (Area Chair), ICML 2020 (Area Chair), NeurIPS 2019 (Area Chair), ICML 2019 (Area Chair), NeurIPS 2018 (Area Chair), ICML 2018 (Area chair), NIPS 2017 (Area chair), AISTATS 2017 (Senior Committee), ISIT (2013-2020), WWW (2017-2018), Infocom (2012-2013), Mobihoc (2012-2013).

**SysML 2021.** Technical Program Committee Chair.

**SysML 2019.** Publicity chair and member of the technical program committee.

**Information Theory Society.** (Board of Governors). Elected member (2017-2019, 2020-2022).

**Senior Editor.** IEEE Journal on Special Areas in Information Theory (JSAIT). Also served as Lead Guest Editor for the inaugural issue: "Deep Learning: Mathematical Foundations and Applications to Information Science", Vol.1, No.1, May 2020.

**Associate Editor.** IEEE Transactions on Information Theory (2014-2019).

**Associate Editor.** IEEE Signal Processing Letters (2012-2015).

## Publications

### Peer-Reviewed Journal Articles

1. E. Balevi, A. Doshi, A. Jalal, A.G. Dimakis and J.G. Andrews "High Dimensional Channel Estimation Using Deep Generative Networks," IEEE Journal on Selected Areas in Communications (JSAIT), pp. 18-30, Volume: 39, Issue: 1, January, 2021.
2. N. Raviv, I. Tamo, R. Tandon and A. G. Dimakis. "Gradient Coding from Cyclic MDS Codes and Expander Graphs," IEEE Transactions on Information Theory, December 2020.
3. G. Ongie, A. Jalal, C. A. Metzler, R. G. Baraniuk, A. G. Dimakis and R. Willett. "Deep Learning Techniques for Inverse Problems in Imaging," IEEE Journal on Selected Areas in Information Theory, pp. 39-56, Year: 2020, Volume:01, Issue:1, May 2020.

4. E. R. Elenberg, R. Khanna, A. G. Dimakis, and S. Negahban. Restricted Strong Convexity Implies Weak Submodularity, *The Annals of Statistics* Vol. 46, No. 6B, 3539 - 3568, December 2018.
5. H. Yi, Z. Xie, R. Reetzke, A. G. Dimakis and B. Chandrasekaran, "Vowel decoding from single-trial speech-evoked electrophysiological responses: A feature-based machine learning approach." *Brain and Behavior*. April 2017
6. A. Le, A.S. Tehrani, A.G. Dimakis and A. Markopoulou, "Recovery of Packet Losses in Wireless Broadcast for Real-Time Applications," *IEEE ACM Transactions on Networking*, pp. 676 - 689, Year: 2017, Volume: 25, Issue: 2, February 2017.
7. K. Shanmugam, M. Ji, A. Tulino, J. Llorca, A. G. Dimakis, "Finite Length Analysis of Caching-Aided Coded Multicasting," *IEEE Transactions on Information Theory*, Vol: 62, no. 10, pp. 5524-5537, October 2016.
8. I. Tamo, D. Papailiopoulos, A. G. Dimakis, "Optimal Locally Repairable Codes and Connections to Matroid Theory," *IEEE Transactions on Information Theory*, Vol: 62, no. 12, 6661-6671, December 2016.
9. A. Le, A.G. Dimakis, and A. Markopoulou, "Auditing for Distributed Storage Systems," *IEEE/ACM Transactions on Networking*, Vol:24, Issue: 4, Aug. 2016. 2182-2195.
10. A.S. Rawat, D.S. Papailiopoulos, A.G. Dimakis and S. Vishwanath, "Locality and Availability in Distributed Storage." *IEEE Trans. Information Theory* 62(8): 4481-4493, Aug. 2016.
11. A.S. Rawat, Z. Song, A.G. Dimakis and A. Gal, "Batch Codes Through Dense Graphs Without Short Cycles," *IEEE Trans. Information Theory* 62(4): 1592-1604 (2016)
12. I. Mitliagkas, M. Borokhovich, A.G. Dimakis, C. Caramanis, "FrogWild! – Fast PageRank Approximations on Graph Engines." *Proceedings of the VLDB Endowment* 2015, accepted for publication. (Preliminary version appeared in NIPS Workshop.)
13. N. Lee, A.G. Dimakis, and R.W. Heath Jr., "Index Coding with Coded Side-Information," *IEEE Communications Letters*, vol. 19, no. 3, pp. 319-322, March 2015.
14. D. Papailiopoulos and A.G. Dimakis, "Locally Repairable Codes," *IEEE Transactions on Information Theory*, *IEEE Transactions on Information Theory*, vol. 60 (10), pp. 5843-5855, Oct. 2014.
15. M. Sathiamoorthy, A.G. Dimakis, B. Krishnamachari and F. Bai, "Distributed Storage Codes Reduce Latency in Vehicular Networks," *IEEE Transactions on Mobile Computing*, Vol.: 13, Issue: 9, pp. 2016-2027, September 2014.
16. N. Golrezaei, P. Mansourifard, A.F. Molisch and A.G. Dimakis, "Base-Station Assisted Device-to-Device Communications for High-Throughput Wireless Video Networks," *IEEE Transactions on Wireless Communications*, Vol.13, Issue: 7, pp. 3665-3676, July 2014.
17. B. Hassibi, M. Hansen, A.G. Dimakis, H.A.J. Alshamary, W. Xu, "Optimized Markov Chain Monte Carlo for Signal Detection in MIMO Systems: An Analysis of the Stationary Distribution and Mixing Time," *IEEE Transactions on Signal Processing*, Volume: 62 , Issue: 17, July 2014.

18. N. Golrezaei, A.G. Dimakis, A.F. Molisch, "Scaling Behavior for Device-to-Device Communications With Distributed Caching," *IEEE Transactions on Information Theory* Vol.60, Issue: 7, pp. 4286-4298, June 2014
19. K. Shanmugam, D.S. Papailiopoulos, A.G. Dimakis, and G. Caire, "A Repair Framework for Scalar MDS Codes," *IEEE Journal on Selected Areas in Communications*, vol. 32(5), pp. 998-1007, May 2014.
20. A. Megasthenis and A.G. Dimakis, "Repairable Fountain Codes," *IEEE Journal on Selected Areas in Communications*, vol. 32(5), pp. 1037-1047, May 2014.
21. T.K. Dikalitotis, A.G. Dimakis, T. Ho, and M. Effros, "On the Delay Advantage of Coding in Packet Erasure Networks," *IEEE Transactions on Information Theory*, vol. 60 (5), pp. 2868-2883. May 2014.
22. K. Shanmugam, N. Golrezaei, A. F. Molisch, A.G. Dimakis, and G. Caire, "FemtoCaching: Wireless Video Content Delivery through Distributed Caching Helpers," *IEEE Transactions on Information Theory*, vol. 59(12), pp. 8402-8413, Dec. 2013.
23. M. Sathiamoorthy, M. Asteris, D. S. Papailiopoulos, A.G. Dimakis, R. Vadali, S. Chen, D. Borthakur, "XORing Elephants: Novel Erasure Codes for Big Data," *Proceedings of the VLDB Endowment*, Volume 6, No 5, 325-336, March 2013,
24. M. Sathiamoorthy, A.G. Dimakis, B. Krishnamachari and F. Bai, "Distributed Storage Codes Reduce Latency in Vehicular Networks," *IEEE Transactions on Mobile Computing*, Issue 99, Pg. 1-12 , 2013.
25. D. S. Papailiopoulos, A.G. Dimakis, V. R. Cadambe, "Repair Optimal Erasure Codes through Hadamard Designs," *IEEE Transactions on Information Theory*, Vol 59 (5), 3021-3037, 2013.
26. N. Golrezaei, A. F. Molisch, A.G. Dimakis, and G. Caire, "Femtocaching and Device-to-Device Collaboration: A New Architecture for Wireless Video Distribution," *IEEE Communications Magazine*, vol. 51(4), 142-149, 2013.
27. A. Khajehnejad, A.G. Dimakis, B. Hassibi, B. Vigoda, W. Bradley, "Reweighted LP Decoding for LDPC Codes," *IEEE Transactions on Information Theory*, Vol. 58 (9): 5972-5984, Sept. 2012.
28. D.S. Papailiopoulos and A.G. Dimakis, "Interference Alignment as a Rank Constrained Rank Minimization," *IEEE Transactions on Signal Processing*, vol. 60(8), pp. 4278-4288, Aug. 2012.
29. D. Leong, A.G. Dimakis, T. Ho, "Distributed Storage Allocations," *IEEE Transactions on Information Theory*, vol. 58(7), pp. 4733-4752, July 2012.
30. A.G. Dimakis, R. Smarandache, P. O. Vontobel, "LDPC Codes for Compressed Sensing," *IEEE Transactions on Information Theory*, vol. 58(5), pp. 3093-3114, May 2012.
31. A.D. Sarwate, A.G. Dimakis, "The Impact of Mobility on Gossip Algorithms," *IEEE Transactions on Information Theory*, vol. 58(3), pp. 1731-1742, March 2012.
32. A. S. Tehrani, A.G. Dimakis, M. J. Neely, "SigSag: Iterative Detection through Soft Message-Passing", *IEEE Journal of Selected Topics in Signal Processing*, vol. 5(8), pp. 1512-1523, Dec. 2011.

33. B. Nazer, A.G. Dimakis and M. Gastpar, "Local Interference can Accelerate Gossip Algorithms," *IEEE Journal of Selected Topics in Signal Processing*, Special Issue on Gossiping Algorithms Design and Application, vol. 5(5), pp. 876-887, August 2011.
34. C. Daskalakis, A.G. Dimakis and E. Mossel, "Connectivity and Equilibrium in Random Games," *Annals of Applied Probability*, 21(3): 987-1016, June 2011.
35. A.G. Dimakis, K. Ramchandran, Y. Wu, C. Suh, "A Survey on Network Codes for Distributed Storage," *the Proceedings of the IEEE*. Vol 99, No 3, 476-489, March 2011.
36. M. A. Khajehnejad, A.G. Dimakis, W. Xu, B. Hassibi, "Sparse Recovery of Nonnegative Signals with Minimal Expansion," *IEEE Transactions on Signal Processing*, Vol. 59(1), 196-208, January 2011.
37. A.G. Dimakis, S. Kar, J. M.F. Moura, M. G. Rabbat, A. Scaglione, "Gossip Algorithms for Distributed Signal Processing," *the Proceedings of the IEEE*. Vol. 98, no. 11, pp. 1847-1864, November 2010.
38. F. Benezit, A.G. Dimakis, P. Thiran, and M. Vetterli, "Order-optimal consensus through randomized path averaging," *IEEE Transactions on Information Theory*, Vol. 56, Issue 10, 5150-5167, Oct. 2010.
39. A.G. Dimakis, P. B. Godfrey, Y. Wu, M. J. Wainwright and K. Ramchandran, "Network Coding for Distributed Storage Systems," *IEEE Transactions on Information Theory*, Vol. 56(9), 4539-4551 Sept. 2010.  
**IEEE ComSoc Data Storage Best paper award, 2010.**  
**IEEE Information Theory Society and ComSoc 2012 Joint paper award.**
40. A.G. Dimakis, A. A. Gohari and M. Wainwright, "Guessing Facets: Polytope Structure and Improved LP Decoding," *IEEE Transactions on Information Theory*, Volume: 55 Issue 8, 3479-3487 Aug. 2009.
41. C. Daskalakis, A.G. Dimakis, R. Karp and M. J. Wainwright, "Probabilistic Analysis of Linear Programming Decoding," *IEEE Transactions on Information Theory* 54(8), 3565-3578, August 2008.
42. A.G. Dimakis, A.D. Sarwate, and M.J. Wainwright, "Geographic Gossip: Efficient Averaging for Sensor Networks," *IEEE Transactions on Signal Processing*, Volume 56, Issue 3, 1205-1216, March 2008.
43. A.G. Dimakis V. Prabhakaran, K. Ramchandran, "Decentralized Erasure Codes for Distributed Networked Storage," *Joint special issue, IEEE Transactions on Information Theory and IEEE/ACM Transactions on Networking*, 2809-2816, June 2006.
44. A.G. Dimakis, P. Maragos, "Phase Modulated Resonances by Self-Similar Processes With Application to Turbulent Sounds," *IEEE Transactions on Signal Processing*, Vol 53. 4261-4272, Nov 2005.

#### **Book Chapter**

45. A.G. Dimakis and K. Ramchandran, "Network Coding for Distributed Storage in Wireless Networks," in V. Saligrama, editor, *Networked Sensing Information and Control*, Signals and Communication series, Springer

### Publications in Peer-Reviewed Conference Proceedings

46. S. Ravula, G. Smyrnis, M. Jordan and A.G. Dimakis, "Inverse Problems Leveraging Pre-trained Contrastive Representations," Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2021.
47. A. Jalal, M. Arvinte, G. Daras, E. Price, A.G. Dimakis and J. Tamir, "Robust Compressed Sensing MRI with Deep Generative Priors," Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2021.
48. A. Jalal, S. Karmalkar, A.G. Dimakis and E. Price, "Instance-Optimal Compressed Sensing via Posterior Sampling," International Conference on Machine Learning (ICML), 2021.
49. A. Jalal, J. Hoffmann, S. Karmalkar, A.G. Dimakis and E. Price, "Fairness for Image Generation with Uncertain Sensitive Attributes," International Conference on Machine Learning (ICML), 2021.
50. G. Daras, J. Dean, A. Jalal, and A.G. Dimakis, "Intermediate Layer Optimization for Inverse Problems using Deep Generative Models," International Conference on Machine Learning (ICML), 2021.
51. M. Jordan and A.G. Dimakis, "Provable Lipschitz Certification for Generative Models," International Conference on Machine Learning (ICML), 2021.
52. J. Whang, Q. Lei and A.G. Dimakis, "Solving Inverse Problems with a Flow-based Noise Model," International Conference on Machine Learning (ICML), 2021.
53. J. Whang, E. Lindgren and A.G. Dimakis, "Composing Normalizing Flows for Inverse Problems," International Conference on Machine Learning (ICML), 2021.  
Also received the Best Paper Award at UAI 2021 Workshop on Tractable Probabilistic Modeling
54. A. Jalal, L. Liu, A.G. Dimakis and C. Caramanis, "Robust compressed sensing of generative models," Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2020.
55. M. Jordan and A.G. Dimakis, "Exactly Computing the Local Lipschitz Constant of ReLU Networks," Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2020.
56. I. Daras, N. Kitaev, A. Odena and A.G. Dimakis "SMYRF - Efficient attention using asymmetric clustering," Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2020.
57. M. Kocaoglu, S. Shakkottai, A.G. Dimakis, C. Caramanis and S. Vishwanath, "Applications of Common Entropy in Causal Inference," Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2020.
58. I. Daras, A. Odena, H. Zhang and A. G. Dimakis, "Your Local GAN: Designing Two Dimensional Local Attention Mechanisms for Generative Models," Computer Vision and Pattern Recognition (CVPR) June 2020.

59. S. Kim, J. S. Park, C. G. Bampis, J. Lee, M. K. Markey, A. G. Dimakis and A. C. Bovik, "Adversarial Video Compression Guided by Soft Edge Detection,"  
Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), May 2020.
60. Q. Lei, J. D. Lee, A.G. Dimakis, C. Daskalakis. "SGD Learns One-Layer Networks in WGANs,"  
International Conference on Machine Learning (ICML), 2020.
61. Jiacheng Zhuo, Q. Lei, A.G. Dimakis and Constantine Caramanis, "Communication Efficient Asynchronous Stochastic Frank-Wolfe over Nuclear-norm Balls"  
AISTATS 2020.
62. Matt Jordan, Justin Lewis, Alexandros G. Dimakis, "Provable Certificates for Adversarial Examples: Fitting a Ball in the Union of Polytopes"  
Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2019.
63. Qi Lei, Ajil Jalal, Inderjit S. Dhillon, and Alexandros G. Dimakis. "Inverting Deep Generative models, One layer at a time."  
Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2019.
64. Qi Lei, Jiacheng Zhuo, Constantine Caramanis, Inderjit S Dhillon, Alexandros G Dimakis. "Primal-Dual Block Frank-Wolfe"  
Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2019.
65. Shanshan Wu, Sujay Sanghavi, Alexandros G. Dimakis "Sparse Logistic Regression Learns All Discrete Pairwise Graphical Models"  
Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2019.  
**Spotlight**
66. Shanshan Wu, Alexandros G. Dimakis, Sujay Sanghavi "Learning Distributions Generated by One-Layer ReLU Networks"  
Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2019.
67. S. Wu, A.G. Dimakis, S. Sanghavi, F.X. Yu, D. Holtmann-Rice, D. Storcheus, A. Rostamizadeh, S. Kumar, "Learning a Compressed Sensing Measurement Matrix via Gradient Unrolling"  
International Conference on Machine Learning (ICML), 2019.
68. Q. Lei, L. Wu, P. Chen, A.G. Dimakis, I.S. Dhillon and M. Witbrock, "Discrete Adversarial Attacks and Submodular Optimization with Applications to Text Classification", Systems and Machine Learning (SysML), April 2019.
69. E. Lindgren, M. Kocaoglu, A.G. Dimakis, S. Vishwanath, "Experimental Design for Cost-Aware Learning of Causal Graphs,"  
Proc. of Neural Information Processing Systems (NeurIPS), Dec. 2018.
70. N. Raviv, R. Tandon, A.G. Dimakis, I. Tamo, "Gradient Coding from Cyclic MDS Codes and Expander Graphs."  
International Conference on Machine Learning (ICML), 2018.
71. A. Bora, E. Price, A.G. Dimakis, "AmbientGAN: Generative models from lossy measurements," Proc. of International Conference on Learning Representations (ICLR), May 2018.  
**Selected for full oral presentation**

72. M. Kocaoglu, C. Snyder, A. G. Dimakis, S. Vishwanath, “CausalGAN: Learning Causal Implicit Generative Models with Adversarial Training,” Proc. of International Conference on Learning Representations (ICLR), May 2018.
73. E. Elenberg, A. G. Dimakis, M. Feldman, A. Karbasi, “Streaming Weak Submodularity: Interpreting Neural Networks on the Fly,” Proc. of Neural Information Processing Systems (NIPS), Dec. 2017.  
**Selected for full oral presentation**
74. R. Sen, A.T. Suresh, K. Shanmugam, A. G. Dimakis, S. Shakkottai, “Model-Powered Conditional Independence Test,” Proc. of Neural Information Processing Systems (NIPS), Dec. 2017.
75. A. Bora, A. Jalal, E. Price, A. G. Dimakis, “Compressed Sensing using Generative Models,” International Conference on Machine Learning (ICML), 2017.
76. R. Tandon, Q. Lei, A. G. Dimakis, N. Karampatziakis, “Gradient Coding: Avoiding Stragglers in Distributed Learning,” International Conference on Machine Learning (ICML), 2017.
77. R. Khanna, E. Elenberg, A. G. Dimakis, S. Negahban, “On Approximation Guarantees for Greedy Low Rank Optimization,” International Conference on Machine Learning (ICML), 2017.
78. E. M. Lindgren, A. G. Dimakis, A. Klivans, “Exact MAP Inference by Avoiding Fractional Vertices,” International Conference on Machine Learning (ICML), 2017.
79. M. Kocaoglu, A. G. Dimakis, S. Vishwanath. “Cost-Optimal Learning of Causal Graphs,” International Conference on Machine Learning (ICML), 2017.
80. R. Sen, K. Shanmugam, A. G. Dimakis and S. Shakkottai, “Identifying Best Interventions through Online Importance Sampling,” International Conference on Machine Learning (ICML), 2017.
81. M. Kocaoglu, A. G. Dimakis, S. Vishwanath and B. Hassibi, “Entropic Causality and Greedy Minimum Entropy Coupling,” IEEE International Symposium on Information Theory (ISIT) June 2017.
82. K. Shanmugam, A. M. Tulino and A. G. Dimakis, “Coded Caching with Linear Subpacketization is Possible using Ruzsa-Szemredi Graphs.” IEEE International Symposium on Information Theory (ISIT) June 2017.
83. R. Sen, K. Shanmugam, M. Kocaoglu, A. G. Dimakis, S. Shakkottai, “Contextual Bandits with Latent Confounders: An NMF Approach,” AISTATS, April 2017.
84. R. Khanna, E. Elenberg, J. Ghosh, A.G. Dimakis, “Scalable Greedy Support Selection via Weak Submodularity,” AISTATS, April 2017.
85. M. Kocaoglu, A.G. Dimakis, S. Vishwanath, B. Hassibi, “Entropic Causal Inference,” Thirty-first AAAI conference on Artificial Intelligence, (AAAI), February 2017,
86. E. Lindgren, S. Wu, A.G. Dimakis, “Leveraging Sparsity for Efficient Submodular Data Summarization,” Proc. of Neural Information Processing Systems (NIPS), Dec. 2016.



87. S. Wu, S. Bhojanapalli, S. Sanghavi, A.G. Dimakis, "Single Pass PCA of Matrix Products," Proc. of Neural Information Processing Systems (NIPS), Dec. 2016.
88. E.R. Elenberg, K. Shanmugam, M. Borokhovich, and A.G. Dimakis. Distributed Estimation of Graph 4-profiles, in Proc. International World Wide Web Conference (WWW), 2016.
89. M. Asteris, A. Kyrillidis, D. Papailiopoulos, A.G. Dimakis, "Bipartite Correlation Clustering: Maximizing Agreements," Artificial Intelligence and Statistics (AISTATS), 2016
90. M. Asteris, D. Papailiopoulos, A. Kyrillidis, A.G. Dimakis, "Sparse PCA via Bipartite Matchings," Proc. of Neural Information Processing Systems (NIPS), Dec. 2015.
91. M. Asteris, D. Papailiopoulos, A.G. Dimakis, "Orthogonal NMF through Subspace Exploration," Proc. of Neural Information Processing Systems (NIPS), Dec. 2015.
92. K. Shanmugam, M. Kocaoglu, A.G. Dimakis, S. Vishwanath, "Learning Causal Graphs with Small Interventions," Proc. of Neural Information Processing Systems (NIPS), Dec. 2015.
93. E.R. Elenberg, K. Shanmugam, M. Borokhovich and A.G. Dimakis, "Beyond Triangles: A Distributed Framework for Estimating 3-profiles of Large Graphs," Conference on Knowledge Discovery and Data Mining (KDD), August 2015.
94. K. Shanmugam, M. Asteris and A.G. Dimakis, "On approximating the sum-rate for multiple unicasts," IEEE International Symposium on Information Theory (ISIT) June 2015.
95. A.S. Rawat, Z. Song, A.G. Dimakis and A. Gal, "Batch Codes through Dense Graphs with High Girth," IEEE International Symposium on Information Theory (ISIT) June 2015.
96. M. Asteris, A. Kyrillidis, A.G. Dimakis, H.G. Yi, B. Chandrasekaran, "Stay on path: PCA along graph paths," International Conference on Machine Learning (ICML), 2015.
97. M. Kazdagli, A.S. Rawat, A.G. Dimakis, S. Vishwanath, M. Tiwari, "Understanding Contention-driven Covert Channels and using them for Defense," in Proc. of the International Symposium on High Performance Computer Architecture (HPCA), February 2015.
98. M. Kocaoglu, K. Shanmugam, A.G. Dimakis, A. Klivans, "Sparse Polynomial Learning and Graph Sketching," Proc. of Neural Information Processing Systems (NIPS), Dec. 2014.  
**Selected for full oral presentation**
99. R. Tandon, K. Shanmugam, P. Ravikumar, A.G. Dimakis, "On the Information Theoretic Limits of Learning Ising Models," Proc. of Neural Information Processing Systems (NIPS), Dec. 2014
100. M. Asteris, A.G. Dimakis and D.S. Papailiopoulos "Nonnegative Sparse PCA with Provable Guarantees," International Conference on Machine Learning (ICML), 2014.
101. D.S. Papailiopoulos, I. Mitliagkas, A.G. Dimakis, C. Caramanis "Finding Dense Subgraphs via Low-Rank Bilinear Optimization," International Conference on Machine Learning (ICML), 2014.

102. K. Shanmugam and A.G. Dimakis “Bounding Multiple Unicasts through Index Coding and Locally Repairable Codes,” IEEE International Symposium on Information Theory (ISIT 2014).
103. A.S. Rawat, D.S. Papailiopoulos, A.G. Dimakis, and S. Vishwanath “Locality and Availability in Distributed Storage,” IEEE International Symposium on Information Theory (ISIT 2014).
104. K. Shanmugam, A.G. Dimakis and M. Langberg “Graph Theory versus Minimum Rank for Index Coding,” IEEE International Symposium on Information Theory (ISIT 2014).
105. K. Shanmugam, A.G. Dimakis, G. Caire “Index Coding Problem with Side Information Repositories” Allerton Conference on Communication, Control, and Computing, 2013.
106. D.S. Papailiopoulos, A.G. Dimakis, S. Korokythakis, “Sparse PCA through Low-rank Approximations,” International Conference on Machine Learning (ICML), 2013.
107. A. Le, A.S. Tehrani, A.G. Dimakis, A. Markopoulou, A “Instantly Decodable Network Codes for Real-Time Applications,” International Symposium on Network Coding (NetCod), June 2013.
108. I. Tamo, D. Papailiopoulos and A.G. Dimakis, “Optimal Locally Repairable Codes and Connections to Matroid Theory,” IEEE International Symposium on Information Theory (ISIT 2013).
109. Y. Kao, A.G. Dimakis, D. Leong and T. Ho, “Distributed Storage Allocations and a Hypergraph Conjecture of Erdos,” IEEE International Symposium on Information Theory (ISIT 2013).
110. A.S. Tehrani, A.G. Dimakis and G. Caire, “Optimal Measurement Matrices for Neighbor Discovery,” IEEE International Symposium on Information Theory (ISIT 2013).
111. K. Shanmugam, A.G. Dimakis and M. Langberg, “Local Graph Coloring and Index Coding,” IEEE International Symposium on Information Theory (ISIT 2013).
112. A.S. Tehrani, A.G. Dimakis, G. Caire, “Optimal Deterministic Compressed Sensing Matrices,” ICASSP 2013.
113. N. Golrezaei, A.G. Dimakis, and A.F. Molisch, “Device-to-Device Collaboration through Distributed Storage,” IEEE Globecom 2012.
114. A.S. Tehrani and A.G. Dimakis, “Finding Three Transmissions is Hard,” IEEE Globecom 2012.
115. W. Xu, A.G. Dimakis and B. Hassibi, “On the Mixing Time of Markov Chain Monte Carlo for Integer Least-Square Problems,” IEEE Conference on Decision and Control (CDC), Dec. 2012.
116. N. Golrezaei, A.G. Dimakis and A.F. Molisch, “Base Station Assisted Device-to-Device Communications for High-Throughput Wireless Video Networks,” ICC Workshop on Video Delivery Optimization (ICC-ViOpt), pp. 7077-7081, 2012.
117. N. Golrezaei, K. Shanmugam, A.G. Dimakis, A.F. Molisch and G. Caire, “Wireless Video Content Delivery through Coded Distributed Caching,” IEEE International Conference on Communications (ICC), pp. 2467-2472, 2012.

118. N. Golrezaei, A.G. Dimakis and A.F. Molisch, "Wireless Device-to-Device Communications with Distributed Caching," pp. 2781-2785, IEEE International Symposium on Information Theory (ISIT 2012).
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130. D. Papailiopoulos, A.G. Dimakis, "Distributed Storage Codes Through Hadamard Designs," IEEE International Symposium on Information Theory (ISIT 2011).
131. D. S. Papailiopoulos and A.G. Dimakis, "Repairing Erasure Codes," Refereed Work-In-Progress (WiP) and Poster at USENIX Conference on File and Storage Technologies (FAST) 2011.
132. A. S. Tehrani, A.G. Dimakis, M. J. Neely, "SigSag: Iterative Detection through Soft Message-Passing," IEEE Conference on Computer Communications. (INFOCOM), 2011.
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135. B. Hassibi, A.G. Dimakis, D. Papailiopoulos, "MCMC Methods for Integer Least-Squares Problems," Proceedings of the 47th Annual Allerton Conference on Communication, Control and Computation, September 2010.
136. D. Papailiopoulos and A.G. Dimakis, "Interference Alignment as a Rank Constrained Rank Minimization," IEEE Global Telecommunications Conference (GLOBECOM) 2010.
137. D. Leong, A.G. Dimakis, T. Ho, "Symmetric Allocations for Distributed Storage," IEEE Global Telecommunications Conference (GLOBECOM) 2010.
138. Z. Wang, A.G. Dimakis, J. Bruck, "Rebuilding for Array Codes in Distributed Storage Systems," Workshop on the Application of Communication Theory to Emerging Memory Technologies (ACTEMT) (in conjunction with GLOBECOM), 2010.
139. Y. Lin, A. Ortega, A.G. Dimakis, "Sparse Recovery for Discrete Tomography," IEEE International Conference on Image Processing (ICIP), 2010.
140. M. J. Neely, A. S. Tehrani, A.G. Dimakis "Efficient Algorithms for Renewable Energy Allocation to Delay Tolerant Consumers," First IEEE International Conference on Smart Grid Communications. (SmartGridComm), 2010.
141. T.K. Dikaliotis, A.G. Dimakis, T. Ho, M. Effros, "On the Delay Advantage of Coding in Packet Erasure Networks," IEEE Information Theory Workshop, Dublin (ITW 2010).
142. T.K. Dikaliotis, A.G. Dimakis, T. Ho, "Security in Distributed Storage Systems by Communicating a Logarithmic Number of Bits," IEEE International Symposium on Information Theory (ISIT 2010).
143. D. Leong, A.G. Dimakis, T. Ho, "Distributed Storage Allocation for High Reliability," IEEE International Conference on Communications (ICC) 2010.
144. A.G. Dimakis, R. Smarandache, P.O. Vontobel, "Channel coding LP decoding and compressed sensing LP decoding: further connections," Proc. 2010 International Zurich Seminar on Communications, 2010.
145. A.G. Dimakis and P.O. Vontobel, "LP Decoding Meets LP Decoding: A Connection between Channel Coding and Compressed Sensing," Proceedings of the 47th Annual Allerton Conference on Communication, Control and Computation, September 2009.
146. T.C. Aysal, A.D. Sarwate, A.G. Dimakis, "Reaching Consensus in Wireless Networks with Probabilistic Broadcast," Proceedings of the 47th Annual Allerton Conference on Communication, Control and Computation, September 2009.
147. D. Cullina, A.G. Dimakis, T. Ho, "Searching for Minimum Storage Regenerating Codes," Proceedings of the 47th Annual Allerton Conference on Communication, Control and Computation, September 2009.
148. A.D. Sarwate, A.G. Dimakis, "Gossip and consensus in mobile networks," Proc. of the Third International Workshop on Computational Advances in Multi-Sensor Adaptive Processing (CAMSAP) 2009.

149. M. Hansen, B. Hassibi, A.G. Dimakis, W. Xu “Near-Optimal Detection in MIMO Systems using Gibbs Sampling,” IEEE Global Communications Conference (GLOBECOM), 2009.
150. Y. Wu and A.G. Dimakis “Reducing Repair Traffic for Erasure Coding-Based Storage via Interference Alignment,” IEEE International Symposium on Information Theory (ISIT), 2009
151. T. Dikaliotis, A.G. Dimakis, T. Ho, M. Effros, “On the Delay of Network Coding over Line Networks,” IEEE International Symposium on Information Theory (ISIT), 2009
152. D. Leong A.G. Dimakis, T. Ho “Distributed Storage Allocation Problems,” Network Coding Workshop (NetCod), 2009.
153. M. A. Khajehnejad A.G. Dimakis, B. Hassibi, “Nonnegative Compressed Sensing with Minimal Perturbed Expanders,” Digital Signal Processing Workshop 2009.
154. B. Nazer, A.G. Dimakis, and M. Gastpar, “Neighborhood Gossip: Concurrent Averaging through Local Interference,” Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), Taipei, Taiwan, April 2009.
155. A.D. Sarwate and A.G. Dimakis, “The Impact of Mobility on Gossip Algorithms,” IEEE Conference on Computer Communications. (INFOCOM), April 2009.
156. B. Nazer, A.G. Dimakis, and M. Gastpar, “Local Interference Can Accelerate Gossip Algorithms,” Proceedings of the 46th Annual Allerton Conference on Communication, Control and Computation, September 2008.
157. A.G. Dimakis, J. Wang and K. Ramchandran, “Unequal Growth Codes: Intermediate Performance and Unequal Error Protection for Video Streaming,” International workshop on Multimedia Signal Processing. (MMSP) October 2007. **Best student paper runner-up**
158. Y. Wu, A.G. Dimakis and K. Ramchandran, “Deterministic Regenerating Codes for Distributed Storage,” Forty-Fifth Annual Allerton Conference, September 2007.
159. F. Benezit, A.G. Dimakis, P. Thiran and M. Vetterli, “Gossip Along the Way: Order-Optimal Consensus through Randomized Path Averaging,” Forty-Fifth Annual Allerton Conference, September 2007.
160. A.G. Dimakis, M. J. Wainwright and K. Ramchandran, “Lower bounds on the rate-distortion function of LDGM codes,” Information Theory workshop (ITW) 2007.
161. A.G. Dimakis, P. B. Godfrey, M. J. Wainwright and K. Ramchandran “Network Coding for Distributed Storage Systems,” IEEE Conference on Computer Communications. (INFOCOM), May 2007.
162. J. Schiff, D. Antonelli, A.G. Dimakis, D. Chu and M. Wainwright “Robust Message-Passing for Statistical Inference in Sensor Networks,” ACM/IEEE Symposium on Information Processing in Sensor Networks (IPSN) 2007.
163. C. Daskalakis, A.G. Dimakis, R. Karp and M. J. Wainwright, “Probabilistic Analysis of Linear Programming Decoding”. SIAM Symposium on Discrete Algorithms (SODA), January 2007.

164. A.G. Dimakis, P. B. Godfrey, M. J. Wainwright and K. Ramchandran “On the benefits of Network coding for peer-to-peer storage,” Third Workshop on Network Coding, Theory, and Applications (NetCod), January 2007.
165. A.G. Dimakis, A.D. Sarwate, and M.J. Wainwright, “Geographic Gossip: Efficient Aggregation for Sensor Networks”. ACM/IEEE Symposium on Information Processing in Sensor Networks (IPSN). 2006.
166. A.G. Dimakis, M.J. Wainwright, “Guessing Facets: Improved LP decoding and Polytope structure,” IEEE International Symposium on Information Theory (ISIT) , 2006.
167. A.G. Dimakis V. Prabhakaran K. Ramchandran “Distributed Fountain Codes for Networked Storage,” IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) May 2006.
168. A.G. Dimakis, V. Prabhakaran, K. Ramchandran, “Ubiquitous Access to Distributed Data in Large-Scale Sensor Networks Through Decentralized Erasure Codes,” IEEE/ACM Symposium on Information Processing in Sensor Networks (IPSN). 2005  
**Best Paper Award.**
169. A.G. Dimakis, V. Prabhakaran, K. Ramchandran, “Distributed Data Storage in Sensor Networks using Decentralized Erasure Codes,” Asilomar Conference on Signals, Systems, and Computers, November 2004.
170. A.G. Dimakis, P. Maragos, “Modeling Resonances with Phase Modulated Self-Similar Processes,” IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP) May 2004.
171. P. Maragos, A.G. Dimakis, I. Kokkinos, “Some advances in nonlinear Speech Modeling using Modulations, Fractals and Chaos,” IEEE International Conference on Digital Signal Processing (DSP), July 2002.

**Mentor and PhD Students:**

**Academic Sponsor**

1. Georgios Smyrnis (2020-)
2. Ioannis Daras (2020-)
3. Jay Whang (2019-)
4. David Van Veen (2017-) (joint with S. Vishwanath)
5. Sriram Ravula (2018-)
6. Matthew Jordan (2017-)
7. Ajil Jalal (2016-)

**MS Students Graduated:**

- Eirini Asteri (2016-2018). Graduated from UT Austin. Joined Google. (joint with C. Caramanis)
- Samer Chucuri (2012-2013). Graduated from UT Austin. Joined Google.

- Negin Golrezaei (2011-2013). Graduated from USC. Joined USC Business school Phd Program.
- Sarabjot Khangura (2011-2012). Graduated from USC. Joined Startup.
- Yi-Hsuan (Griffey) Kao (2011-2012). Graduated from USC. Joined USC Phd Program.

**Phd Students Graduated:**

- Erik Lindgren (Phd from UT ECE, August 2020), Joined Google Research.
- Qi Lei (Phd from UT ODEN institute, joint with I. Dhillon, August 2020), Joined Princeton as a Postdoc.
- Shanshan Wu (Phd from UT ECE, joint with S. Sanghavi, August 2019), joined Google.
- Ethan Elenberg (Phd from UT ECE, joint with S. Vishwanath, August 2018), joined ASAPP.
- Murat Kocaoglu (Phd from UT ECE, joint with S. Vishwanath, August 2018), joined IBM Research.
- Rashish Tandon (PhD from CS department, UT Austin, August 2017), joined Apple research.
- Karthikeyan Shanmugam (PhD from UT, August 2016 ), Goldstine Post-doctoral Fellow in IBM Research.
- Megasthenis Asteris (PhD from UT, August 2016 ), Joined Google (Mountain View)
- Dimitris Papailiopoulos (Phd from UT, 2014). Assistant Professor, ECE department in Univ. of Wisconsin-Madison.
- Maheswaran Sathiamoorthy (Phd from USC, 2013 Co-Advised with Prof. Krishnamachari). Joined Google.

**Undergraduate Research supervised:**

- Mihir Mongia (2013) UT Austin Undergraduate REU (co-supervised with S. Vishwanath).
- Matthew Thill (2009)  
Undergraduate student at Caltech.  
Current Position (PhD Student at Caltech)
- Dan Cullina (2009)  
Undergraduate student at Caltech.  
Current Position (PhD Student at UIUC)

**Ph.D Student Visitors:**

- Bernat Gaston Braso (2011)  
Ph.D student from Universitat Autònoma de Barcelona. Received funding from Catalan government and visited for three months.