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Publications

Link to Google Scholar.

(* denotes joint authorship).

Preprints

P2 **S. Prakash**, H. Hashemi, Y. Wang, M. Annavaram, S. Avestimehr, "Byzantine-resilient federated learning with heterogeneous data distribution," *arXiv:2109.07706*, Jul. 2021. *Partly presented at the Enclaved AI/ML Workshop 2021, Private AI Research Institute.*

P1 A. R. Elkordy, **S. Prakash**, S. Avestimehr, "Basil: A fast and Byzantine-resilient approach for decentralized training," *arXiv:2109.07706*, Sep. 2021. *Part of it to be presented at the NeurIPS Workshop on Privacy in Machine Learning, 2021.*

Journal Papers

J4 **S. Prakash**, S. Dhakal, M. Akdeniz, Y. Yona, S. Talwar, S. Avestimehr, N. Himayat, "Coded computing for low-latency federated learning over wireless edge networks," *IEEE Journal on Selected Areas in Communications*, volume 39, issue 1, pages 233–250, Jan. 2021**.** *Was partly presented at the FL-ICML Workshop on User Privacy and Data Confidentiality, 2020.*

J3 A. Reisizadeh*, **S. Prakash***, R. Pedarsani, S. Avestimehr, "CodedReduce: A fast and robust framework for gradient aggregation in distributed learning," to appear in the *IEEE/ACM Transactions on Networking.*

J2 **S. Prakash***, A. Reisizadeh*, R. Pedarsani, S. Avestimehr, "Coded computing for distributed graph analytics," *IEEE Transactions on Information Theory*, volume 66, issue 10, pages 6534–6554, Oct. 2020 .

J1 A. Reisizadeh, **S. Prakash**, R. Pedarsani, S. Avestimehr, "Coded computation over heterogeneous clusters," *IEEE Transactions on Information Theory*, volume 65, issue 7, pages 4227–4242, Jul. 2019 .

Conference/Workshop Proceedings

C7 **S. Prakash***, A. Reisizadeh*, R. Pedarsani, S. Avestimehr, "Hierarchical coded gradient aggregation for learning at the edge," in *Proceedings of IEEE International Symposium on Information Theory (ISIT)*, Aug. 2020 .

C6 S. Dhakal, **S. Prakash**, Y. Yona, S. Talwar, N. Himayat, "Coded federated learning," in *Proceedings of IEEE Globecom Workshops (GC Wkshps)*, Mar. 2020.

C5 S. Kundu*, **S. Prakash***, H. Akrami, P. Beerel, K. Chugg, "pSConv: A pre-defined sparse kernel based convolution for deep CNNs," in *Proceedings of IEEE 57th Annual Allerton Conference on Communication, Control, and Computing (Allerton)*, Dec. 2019.

C4 S. Dhakal*, **S. Prakash***, Y. Yona, S. Talwar, N. Himayat, "Coded computing for distributed machine learning in wireless edge network," in *Proceedings of IEEE 90th Vehicular Technology Conference (VTC2019-Fall)*, Nov. 2019.

C3 A. Reisizadeh*, **S. Prakash***, R. Pedarsani, S. Avestimehr, "Tree gradient coding," in *Proceedings of IEEE International Symposium on Information Theory (ISIT)*, Sep. 2019.

C2 **S. Prakash***, A. Reisizadeh*, R. Pedarsani, S. Avestimehr, "Coded computing for distributed graph analytics," in *Proceedings of IEEE International Symposium on Information Theory (ISIT) Conference*, Aug. 2018.

C1 A. Reisizadeh, **S. Prakash**, R. Pedarsani, S. Avestimehr, "Coded computation over heterogeneous clusters," in *Proceedings of IEEE International Symposium on Information Theory (ISIT) Conference*, Aug. 2017.