NIKOLAOS M. FRERIS

Address: University of Science and Technology of China (USTC)
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EDUCATION

Aug 2010 — UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN — Urbana, IL, USA
Doctorate of Philosophy (Ph.D.) in Electrical & Computer Engineering — GPA: 4.0/4.0
Major: Systems, Decision & Control; Communication Networks — Advisor: P. R. Kumar
Dissertation: "Wireless Networks: Model and Optimization based approaches to Clock Synchronization, Random Access MAC and Video Streaming"

Dec 2008 — UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN — Urbana, IL, USA
Master of Science (MS) in Mathematics — GPA: 4.0/4.0

Dec 2007 — UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN — Urbana, IL, USA
Master of Science (MS) in Electrical & Computer Engineering — GPA: 4.0/4.0
Thesis: "Fundamental limits on network clock synchronization" — Advisor: P. R. Kumar

July 2005 — NATIONAL TECHNICAL UNIVERSITY OF ATHENS — Athens, Greece
Diploma in Electrical & Computer Engineering — GPA: 9.30/10.00
Major: Computer Science and Engineering — Minor: Control & Signal Processing
Thesis: "Parameter estimation of a new insulin-glucose model"

PROFESSIONAL EXPERIENCE

July 2019 – present — UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA (USTC) — Hefei, China
Vice Dean of International College

Jan 2019 – present — UNIVERSITY OF SCIENCE AND TECHNOLOGY OF CHINA (USTC) — Hefei, China
Professor of Computer Science

Aug 2014 – Dec 2018 — NEW YORK UNIVERSITY ABU DHABI — Abu Dhabi, UAE
Assistant Professor of Electrical & Computer Engineering
NEW YORK UNIVERSITY, TANDON SCHOOL OF ENGINEERING — New York, NY, USA
Global Network Assistant Professor of Computer Science & Engineering
- Cyberphysical Systems Laboratory (founder and director)
- Member of the Center for Cyber Security (CCS)

Oct 2012 – July 2014 — ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE (EPFL) — Lausanne, Switzerland
Senior Research Scientist (School of Computer and Communication Sciences)
- Project manager (research project funded by Qualcomm, Inc.)

Sep 2010 – Sep 2012 — IBM RESEARCH — Zurich, Switzerland
Postdoctoral Research Fellow (Mathematical and Computational Sciences)

Mar – Aug 2010 — DEUTSCHE TELEKOM, R&D LABS — Los Altos, CA, USA
Research Intern

May – Aug 2006 — XEROX WILSON CENTER FOR RESEARCH & TECHNOLOGY — Webster, NY, USA
Research Intern

TEACHING

AY 2021-2022	COMP6224P Optimization Theory (Spring 2022)
	CS05136 Queueing Theory & Applications (Fall 2021)
AY 2020-2021	CS05136 Queueing Theory & Applications (Fall 2020)
AY 2019-2020	CS05136 Queueing Theory & Applications (Spring 2020)
AY 2017-2018	ENGR-UH 2019 Circuits Fundamentals (Fall 2017 & Spring 2018); ENGR-UH 2311 Advanced Circuits (Spring 2018)
AY 2016-2017	ENGR-AD 119 Circuits Fundamentals (Fall 2016); ENGR-AD 119 Circuits Fundamentals (Spring 2017)
AY 2015-2016	ENGR-AD 119 Circuits Fundamentals (Fall 2015); ENGR-AD 214 Advanced Circuits (Spring 2016)
AY 2014-2015	ENGR-AD 214 Advanced Circuits (Spring 2015)

PROFESSIONAL ACTIVITIES

Keynote/Plenary talks

2022	TBD, International Conference on Fuzzy Systems and Data Mining (FSDM), Xiamen, China, Nov. 4-7
	"Communication-efficient distributed machine learning for AIoT," International Conference on Internet of Things, Communication and Intelligent Technology (IoTCIT), Changsha, China, Sep. TBD
	"Communication-efficient distributed machine learning for AIoT," International Symposium on Computer and Information Processing Technology (ISCIPT), online, June 17-19
	"Communication-efficient distributed machine learning for AIoT," International Conference on Computing, Networks and Internet of Things (CNIOT), Qingdao, China, May 20-22
	"Distributed learning in AIoT," IEEE International Conference on Intelligent Computing and Signal Processing (ICSP), online, April 15-17
	"Distributed learning in AIoT," International Conference on Electrical, Electronics and Computing Technology (EECT), online, March 25-27
	"Distributed learning in AIoT," International Conference on Computer Information and Big Data Applications (CIBDA), Wuhan, China, March 25-27
2021	"Distributed learning in AIoT," International Conference on Algorithms, Computing and Artificial Intelligence (ACAI), Sanya, China, Dec. 22-24
	"Distributed learning in AIoT," International Conference on Machine Learning, Big Data and Business Intelligence (MLBDBI), online, Dec. 3-5
	"AIoT: Learning from distributed data in Cyberphysical Systems," International Conference on Artificial Intelligence and Computer Engineering (ICAICE), Hangzhou, China, Nov. 5-7
	"AIoT: Learning from distributed data in Cyberphysical Systems," IEEE International Conference on Computer Science, Artificial Intelligence and Electronic Engineering (CSAIEE), online, Aug. 20-22
	"From IoT to AIoT: the Cyberphysical Systems perspective," IEEE International Conference on Communications, Information System and Computer Engineering (CISCE), Beijing, China, May 14-16
2020	"From IoT to AIoT: the Cyberphysical Systems perspective," International Conference on Communications, Information Systems and Software Engineering (CISSE), Guangzhou, China, Dec. 18-20
	"AIoT: Learning in Cyberphysical Systems," International Conference on Computer, Big Data and Artificial Intelligence (ICCBDAI), Changsha, China, Oct. 24-25
2019	"Learning in Cyberphysical Systems," International Conference on Artificial Intelligence, Information Processing and Cloud Computing (AIIPCC), Sanya, China, Dec. 19-21
	"Learning in Cyberphysical Systems," International Conference on Machine Learning, Big Data and Business Intelligence (MLBDBI), Taiyuan, China, Nov. 8-10
2017	"Exact data mining from inexact data." International Conference on Big Data Analysis and Data Mining (DataMining), Paris, France, Sep. 7-8

Invited seminars

2019	IET-CSR Workshop on Advances in Cyber-Physical Systems & Robotics
	IEEE Sustainable Power & Energy Conference (iSPEC)—Panel on Emerging Technologies
2018	Zhejiang University, University of Science and Technology of China, Chinese University of Hong Kong (Shenzhen), KTH
2017	Arizona State University, Texas A&M University, National Technical University of Athens, NYU-Tandon School of Engineering
2016	UC Berkeley, KU Leuven
2015	Tsinghua University, Zhejiang University, Khalifa University, Masdar Institute
2014	IMT-Lucca, Qualcomm, IBM Research
2013	EPFL, ETH, Texas A&M University, University of Illinois at Urbana-Champaign

Professional memberships

ACM (Senior member), IEEE (Senior member), SIAM, CCF

Professional development

2011-2012	IBM micro-MBA course, IBM "shape your future" course

SERVICE

Editorial

2020-now	Associate Editor for Journal of Advanced Science and Technology (AST)
2017-2017	Guest Editor: Special Issue on "Distributed Control and Optimization with Resource-Constrained Networked Systems," Elsevier SI in Neurocomputing

Conference activities

2022	International Conference on Cloud Computing, Big Data and Digital Economy (ICCBD), online (TPC chair)
	International Conference on Computing, Networks and Internet of Things (CNIOT), Qingdao, China (program chair)
	International Conference on Electrical, Electronics and Computing Technology (EECT), online (session chair)
	AAAI Conference on Artificial Intelligence (AAAI), Vancouver, BC, Canada (TPC member)
2021	International Academic Exchange Conference on Science and Technology Innovation (IAECST), Guangzhou, China (Publication chair)
	International Conference on Computer Technology and Media Convergence Design (CTMCD), Sanya, China (Publication chair)
	AAAI Conference on Artificial Intelligence (AAAI), online (TPC member)
2020	2nd International Conference on Computer Science Communication and Network Security (CSCNS), Sanya, China (TPC member)
	IEEE Conference on Decision and Control (CDC), online (invited session organizer & chair; two sessions)
2020	European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML-PKDD), online (chair for two sessions & TPC member)
	American Control Conference (ACC), online (session co-chair)
	International Conference on Big Data Computing and Communications (BigCom), online (TPC chair)
	International Conference on Green, Pervasive and Cloud Computing (GPC), Xi'an, China (TPC member)
2019	International Conference on Artificial Intelligence, Information Processing and Cloud Computing (AIIPCC), Sanya, China (general moderator/host)
	International Conference on Big Data Computing and Communications (BigCom), Qingdao, China (TPC co-chair & panel discussion member)
2018	International Symposium on Intelligent Robots: Autonomy and Vision (IRAV), Abu Dhabi, UAE (co-organizer)
2017	International Conference on Big Data Analysis and Data Mining, Paris, France (moderator)
	NYUAD Transportation Symposium, Abu Dhabi, UAE (co-organizer)
2016	Allerton Conference on Communication, Control, and Computing, Allerton, IL, USA (special session co-chair)
	European Conference on Computational Optimization, Leuven, Belgium (special session chair)
	NYUAD Transportation Symposium, Abu Dhabi, UAE (co-organizer)
2015	International Joint Conference on Artificial Intelligence (IJCAI), Buenos Aires, Argentina (TPC member)
2013	FRI workshop at EPFL, Lausanne, Switzerland (general chair)
2008	CSL Student Conference, Urbana, IL, USA (general chair)

Reviewing

IEEE	Transactions: Automatic Control, Information Theory, Networking, Signal Processing, Control of Network Systems, Control of Sensor Networks, Systems, Man and Cybernetics, Industrial Informatics, Circuits & Systems
	Letters: Control Systems, Communications, Signal Processing
	Conferences: CDC, ACC, ECC, ICASSP, ICRA, INFOCOM, CoDIT
Elsevier	Journals: Automatica, Annual Reviews in Control, Systems & Control Letters, Computer Communications, Ad Hoc Networks, Transportation Policy, Nonlinear Analysis: Hybrid Systems
Springer	Journals: VLDBJ, WWW, BIT Numerical Mathematics, Numerische Mathematik, Supercomputing; Conference: VLDB
ACM	Journal: Transactions on Networking; Conference: KDD
SIAM	Journals: SIOPT, SIMAX; Conference: SDM
AMS	Mathematics of Computation
Other	Conferences: AAAI, IJCAI, ECML-PKDD, IFAC, Allerton, GPC, BigCom

PUBLICATIONS

Google Scholar https://scholar.google.com/citations?user=j38QfhkAAAAJ

Journal articles

[J1] N. Freris, A. Ajalloeian, and M. Vlachos, "Embedding and Visualizing Compressed Data." Accepted at ACM Transactions on Knowledge Discovery from Data, 2022.

[J2] M. Li, J. Qin, N. Freris, and D. Ho, "Multi-Player Stackelberg-Nash Game for Nonlinear System via Value Iteration-Based Integral Reinforcement Learning." IEEE Transactions on Neural Networks and Learning Systems, vol. 33, no. 4, pp. 1429-1440, 2022.

[J3] T. Huang, N. Freris, P. R. Kumar, and L. Xie, "A Synchrophasor Data-driven Method for Forced Oscillation Localization under Resonance Conditions." IEEE Transactions on Power Systems, vol. 35, no. 5, pp. 3927-3939, 2020.

[J4] S. Jabari, N. Freris, and D. Dilip, "Sparse travel time estimation from streaming data." Transportation Science, vol. 54, no 1, pp. 1-20, 2020.

[J5] P. Latafat, N. Freris, and P. Patrinos, "A new randomized block-coordinate primal-dual algorithm for distributed optimization." IEEE Transactions on Automatic Control, vol. 64, no. 10, pp. 4050-4065, 2019.

[J6] A. Darabseh and N. Freris, "A software-defined control for IoT Cyberphysical Systems." Journal of Cluster Computing, vol. 22, no. 4, pp. 1107–1122, 2019.

[J7] M. Vlachos, N. Freris, and A. Kyrillidis, "Compressive Mining: Fast and Optimal Data Mining in the Compressed Domain." International Journal on Very Large Data Bases (VLDB Journal), vol. 24(1), pp. 1-24, 2015.

[J8] S. Zoumpoulis, M. Vlachos, N. Freris, and C. Lucchese, "Right-Protected Data Publishing with Provable Distance-based Mining." IEEE Transactions on Knowledge and Data Engineering, vol. 26(8), pp. 2014-2028, 2014.

[J9] A. Zouzias and N. Freris, "Randomized Extended Kaczmarz for Solving Least Squares." SIAM Journal on Matrix Analysis and Applications, vol. 34(2), pp. 773-793, 2013.

[J10] N. Freris, C. Hsu, J. Singh, and X. Zhu, "Distortion-Aware Scalable Video Streaming to Multinetwork Clients." IEEE/ACM Transactions on Networking, vol. 21, no. 2, pp. 469-481, 2013.

[J11] N. Freris, S. Graham, and P. R. Kumar, "Fundamental Limits on Synchronizing Clocks over Networks." IEEE Transactions on Automatic Control, vol. 56, no. 2, pp. 1352-1364, 2011.

[J12] N. Freris, H. Kowshik, and P. R. Kumar, "Fundamentals of large sensor networks: Connectivity, Capacity, Clocks and Computation." Proceedings of the IEEE, vol. 98, no. 1, pp. 1828-1846, 2010.

Conference papers

[C1] Y. Gong, Y. Li, and N. Freris, "FedADMM: A Robust Federated Deep Learning Framework with Adaptivity to System Heterogeneity." Proceedings of the 38th IEEE International Conference on Data Engineering (ICDE), May 2022.

[C2] T. Wen, Y. Zhang, and N. Freris, "PF-MOT: Probability Fusion Based 3D Multi-Object Tracking for Autonomous Vehicles." Proceedings of the 39th International Conference on Robotics and Applications (ICRA), May 2022.

[C3] Y. Li, P. Voulgaris, and N. Freris, "A communication efficient quasi-Newton method for large-scale distributed multi-agent optimization." Proceedings of the 47th IEEE International Conference on Acoustics, Speech and Signal Processing (ICASSP), pp. 4268-4272, May 2022.

[C4] X. Yu, X. Li, J. Zhao, G. Shen, N. Freris, and L. Zhang, "ANTIGONE: Accurate Navigation Path Caching in Dynamic Road Networks leveraging Route APIs." Proceedings of the 41st IEEE International Conference on Computer Communications (INFOCOM), May 2022.

[C5] Y. Li, N. Freris, P. Voulgaris, and D. Stipanovic, "DN-ADMM: Distributed Newton ADMM for Multi-agent Optimization." Proceedings of the 60th IEEE Conference on Decision and Control (CDC), pp. 3343-3348, Dec. 2021.

[C6] Y. Li, Y. Gong, N. Freris, P. Voulgaris, and D. Stipanovic, "BFGS-ADMM for Large-Scale Distributed Optimization." Proceedings of the 60th IEEE Conference on Decision and Control (CDC), pp. 1689-1694, Dec. 2021.

[C7] J. Huang, R. Huang, W. Liu, N. Freris, and H. Ding, "A Novel Sequential Coreset Method for Gradient Descent Algorithms." Proceedings of the 38th International Conference on Machine Learning (ICML), pp. 4412-4422, July 2021.

[C8] X. Wang, H. Zhou, N. Freris, W. Zhou, X. Guo, and X. Li, "CALM: Contactless Accurate Load Monitoring via Modality Distillation." Proceedings of the 18th IEEE International Conference on Sensing, Communication and Networking (SECON), pp. 1-9, July 2021.

[C9] X. Wang, H. Zhou, N. Freris, W. Zhou, X. Guo, Z. Liu, Y. Ji, and X. Li, "LCL: Light Contactless Low-delay Load Monitoring via Compressive Attentional Multi-label Learning." Proceedings of the 29th IEEE/ACM International Symposium on Quality of Service (IWQoS), pp. 1-6, June 2021.

[C10] A. Li, L. Zhang, J. Wang, J. Tan, F. Han, Y. Qin, N. Freris, and X. Li, "Efficient Federated-Learning Model Debugging." Proceedings of the 37th IEEE International Conference on Data Engineering (ICDE), pp. 372-383, April 2021.

[C11] K. Zhang, S. Cong, Y. Tang, and N. Freris, "An Efficient Online Estimation Algorithm for Evolving Quantum States." Proceedings of the 28th European Signal Processing Conference (EUSIPCO), pp. 2249-2253, Jan. 2021.

[C12] N. Freris, M. Vlachos, and A. Ajalloeian, "An Interpretable Data Embedding under Uncertain Distance Information." Proceedings of the 20th IEEE International Conference on Data Mining (ICDM), pp. 1022-1027, Nov. 2020.

Conference papers (cont'd)

[C13] C. Zhang, H. Tan, H. Huang, Z. Han, S. Jiang, N. Freris, and X. Li, "Online Dispatching and Scheduling of Jobs with Heterogeneous Utilities in Edge Computing." Proceedings of the 21st International Symposium on Theory, Algorithmic Foundations, and Protocol Design for Mobile Networks and Mobile Computing (MobiHoc), pp. 101-110, Oct. 2020.

[C14] P. Li, X. He, N. Freris, and P. Yang, "Capacity Analysis of Ambient Backscatter System with Bernoulli Distributed Excitation." Proceedings of the 15th International Conference on Wireless Algorithms, Systems, and Applications (WASA), pp. 218-230, Sep. 2020.

[C15] N. Freris, C. Yang, and M. Vlachos, "FIDE: Fast and Interpretable 2D Embedding with correlation, distance, and rank considerations." Proceedings of the 6th International Conference on Big Data Computing and Communications (BigCom), pp. 57-65, July 2020.

[C16] Y. Li, N. Freris, P. Voulgaris, and D. Stipanovic, "D-SOP: Distributed Second Order Proximal Method for Convex Composite Optimization." Proceedings of the 62nd American Control Conference (ACC), pp. 2844-2849, July 2020.

[C17] W. Li, T. Huang, N. Freris, P. R. Kumar, and L. Xie, "Data-driven Localization of Forced Oscillations in Power Systems." Proceedings of the 9th International Conference on Innovative Smart Grid Technologies (ISGT Asia), pp. 239-243, May 2019.

[C18] H. Wai, N. Freris, A. Nedich, and A. Scaglione, "SUCAG: Stochastic Unbiased Curvature-aided Gradient Method for Distributed Optimization." Proceedings of the 57th IEEE Conference on Decision and Control (CDC), pp. 1751-1756, Dec. 2018.

[C19] M. Smyrnakis, N. Freris, and H. Tembine, "Consensus over evolutionary graphs." Proceedings of the 17th IEEE European Control Conference (ECC), pp. 2218-2223, June 2018.

[C20] T. Huang, N. Freris, P. R. Kumar, and L. Xie, "Localization of forced oscillations in the power grid under resonance conditions." Proceedings of the 52nd Annual Conference on Information Sciences and Systems (CISS), March 2018.

[C21] H. Nahas, A. Sirhindi, and N. Freris, "A new solution for UWB localization: Online algorithms, implementation and testbed." Proceedings of the 8th International Conference on Indoor Positioning and Indoor Navigation (IPIN), Sep. 2017.

[C22] A. Darabseh and N. Freris, "A Software Defined Architecture for Cyberphysical Systems." Proceedings of the 4th IEEE International Conference on Software Defined Systems (SDS), pp. 54-60, May 2017.

[C23] D. Dilip, N. Freris, and S. Jabari, "Sparse estimation of travel time distributions using Gamma kernels." Proceedings of the 96th Transportation Research Board Annual Meeting (TRB), Jan. 2017.

[C24] X. Duan, N. Freris, and P. Cheng, "Secure clock synchronization under collusion attacks." Proceedings of the 54th Annual Allerton Conference on Communication, Control, and Computing (Allerton), pp. 1142-1148, Sep. 2016.

[C25] N. Freris and P. Patrinos, "Distributed computing over encrypted data." Proceedings of the 54th Annual Allerton Conference on Communication, Control, and Computing (Allerton), pp. 1116-1122, Sep. 2016.

[C26] P. Sopasakis, N. Freris, and P. Patrinos, "Accelerated reconstruction of a compressively sampled data stream." Proceedings of the 24th European Signal Processing Conference (EUSIPCO), pp. 1078-1082, Aug. 2016.

[C27] A. Darabseh, N. Freris, Y. Jararweh, and M. Al-Ayyoub, "SDCache: Software Defined Data Caching Control for Cloud Services." Proceedings of the 4th IEEE International Conference on Future Internet of Things and Cloud (FiCloud), pp. 164-169, Aug. 2016.

[C28] A. Zouzias and N. Freris, "Randomized Gossip Algorithms for Solving Laplacian Systems." Proceedings of the 14th IEEE European Control Conference (ECC), pp. 1920-1925, July 2015.

[C29] N. Freris, O. Öçal, and M. Vetterli, "Compressed Sensing of streaming data." Proceedings of the 51st Allerton Conference on Communication, Control and Computing (Allerton), pp. 1242-1249, Oct. 2013.

[C30] G. Baechler, N. Freris, F. Quick, and R. Crochiere, "Finite rate of innovation based modeling and compression of ECG signals." Proceedings of the 38th International Conference on Acoustics, Speech, and Signal Processing (ICASSP), pp. 1252-1256, May 2013.

[C31] N. Freris and A. Zouzias, "Fast distributed smoothing of relative measurements." Proceedings of the 51st IEEE Conference on Decision and Control (CDC), pp. 1411-1416, Dec. 2012.

[C32] A. Zouzias, M. Vlachos, and N. Freris, "Unsupervised Sparse Matrix Co-Clustering for Marketing and Sales Intelligence." Proceedings of the 16th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD), pp. 591-603, May 2012.

[C33] N. Freris, M. Vlachos, and S. Kozat, "Optimal Distance Estimation Between Compressed Data Series." Proceedings of the 12th SIAM International Conference on Data Mining (SDM), pp. 343-354, April 2012.

[C34] N. Freris, M. Vlachos, and D. Turaga, "Cluster-Aware Compression with Provable K-means Preservation." Proceedings of the 12th SIAM International Conference on Data Mining (SDM), pp. 82-93, April 2012.

[C35] N. Freris, "Performance bounds for CSMA-based Medium Access Control." Proceedings of the 50th IEEE Conference on Decision and Control (CDC), pp. 5945-5950, Dec. 2011.

[C36] N. Freris, C. Hsu, J. Singh, and X. Zhu, "Resource allocation for multihomed scalable video streaming to multiple clients." Proceedings of the 12th IEEE International Symposium on Multimedia (ISM), pp. 9-16, Dec. 2010.

[C37] C. Hsu, N. Freris, J. Singh, and X. Zhu, "Rate control and stream adaptation for scalable video streaming over multiple access networks." Proceedings of the 18th International Packet Video Workshop (PV), pp. 33-40, Dec. 2010.

[C38] N. Freris, V. Borkar, and P. R. Kumar, "A model-based approach to clock synchronization." Proceedings of the 48th IEEE Conference on Decision and Control (CDC), pp. 5744-5749, Dec. 2009.

[C39] R. McCabe, N. Freris, and P. R. Kumar, "Controlled Random Access MAC for Network Utility Maximization in Wireless Networks." Proceedings of the 47th IEEE Conference on Decision and Control (CDC), pp. 2350-2355, Dec. 2008.

[C40] N. Freris and P. R. Kumar, "Fundamental Limits on Synchronization of Affine Clocks in Networks." Proceedings of the 46th IEEE Conference on Decision and Control (CDC), pp. 921-926, Dec. 2007.

Patents

[P1] N. Freris, O. Öçal, and M. Vetterli, "Method for compressed sensing of streaming data and apparatus for performing the same." CN105531934B, 2019 / JP6495292B2, 2019 / ES2782830T3, 2020 / HUE047132T2, 2020 / EP3044881B1, 2020 / US10728298B2, 2020.

[P2] N. Freris, F. Fusco, and M. Vlachos, "Method and device for data mining on compressed data vectors." CN104335176B, 2017 / US10528578B2, 2020.

[P3] C. Hsu, N. Freris, J. Singh, and X. Zhu, "Distortion-aware multihomed scalable video streaming to multiple clients." US8793391B2, 2014.

Technical reports

[TR1] N. Freris, O. Öçal, and M. Vetterli, "Recursive Compressed Sensing," 2013.

[TR2] N. Freris, V. Borkar, and P. R. Kumar, "Model-based clock synchronization protocol for wireless sensor networks," 2013.

Theses

[TH1] N. Freris, "Wireless Networks: Model and Optimization based approaches to Clock Synchronization, Random Access MAC and Video Streaming." PhD dissertation, Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, Aug. 2010.

[TH2] N. Freris, "Fundamental limits on network clock synchronization." MS thesis, Electrical and Computer Engineering, University of Illinois at Urbana-Champaign, Dec. 2007.

[TH3] N. Freris, "Parameter estimation of a new insulin-glucose model." Diploma thesis, Electrical and Computer Engineering, National Technical University of Athens, July 2005 (in Greek).

FUNDING

2022-2024 **USTC Research Department** (co-Principal Investigator)
"Artificial Intelligence Theory and Algorithms for Automatic Chip Design"
Award: RMB 500,000

2020-2022 **FR202003**, Tencent Holdings Ltd (Principal Investigator)
"A Multi-Objective Deep Reinforcement Learning Framework for Guaranteed-Delivery Advertising"
Award: RMB 200,000

2019-2022 **2019YFB21012200**, Ministry of Science and Technology of China (co-Principal Investigator)
"New Group Intelligence Sensing Technology and Application for City Precision Management"
Award: RMB 17,960,000; *Principal Investigator* for Sub-project: RMB 3,510,000

2019-2022 **201903a05020049**, Anhui Department of Science and Technology, China (Principal Investigator)
"Vehicle-Road-Network Collaborative Automatic Driving Based on 5G"
Award: RMB 2,000,000

2019-2023 **USTC Starting grant** (Principal Investigator)
"Distributed Learning for Internet of Things"
Award: RMB 3,000,000

2017-2020 **NSF #1717207**, USA (Principal Investigator)
"AF: Small: Distributed Quasi-Newton Methods for Nonsmooth Optimization"
Division of Computing and Communication Foundations (CCF); Algorithmic Foundations (AF)
Award: $163,160.00

2014-2018 **NYUAD Starting grant**, UAE (Principal Investigator)
"Algorithms for Cyberphysical Systems"
Award: $1,230,000

AWARDS & RECOGNITION

2021	USTC Alumni Foundation Innovation Scholar award
2020	ACM Senior member
	USTC Alumni Foundation Innovation Scholar award
2019	USTC Alumni Foundation Innovation Scholar award
2016	IEEE Senior Member
2014	IBM High Value Patent award
2012	SDM travel award
	IBM Invention Achievement award
2011	IBM Invention Achievement award
2010	Gerondelis Foundation Scholarship
2008	Vodaphone graduate fellowship
2001-2004	Papakyriakopoulos award
	Tziafetas award
	Scholarship from the Greek National Scholarship Foundation