# Lam M. Nguyen

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**(Updated on February 9, 2026)**

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## EDUCATION

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| 2014 – 2018 | **Ph.D.**, Department of Industrial and Systems Engineering, *Lehigh University,* Bethlehem, PA <br> Thesis advisors: *Katya Scheinberg, Martin Takac,* and *Alexander L. Stolyar* <br> Thesis title: A Service System with On-Demand Agents, Stochastic Gradient Algorithms and the SARAH Algorithm <br> **Elizabeth V. Stout Dissertation Award** <br> Research areas: Optimization for Large Scale Problems, Machine Learning, Deep Learning, Stochastic Models, Optimal Control |
| 2011 – 2013 | **M.B.A.**, College of Business, *McNeese State University,* Lake Charles, LA <br> **Beta Gamma Sigma (Academic Honor)** |
| 2004 – 2008 | **B.S.**, Applied Mathematics and Computer Science, Faculty of Computational Mathematics and Cybernetics, *Lomonosov Moscow State University*, Moscow, Russia <br> Thesis advisor: *Vladimir I. Dmitriev* <br> Thesis title: Methods for Detecting Hidden Period in Some Economics Processes |

## RESEARCH EXPERIENCE

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|---|---|
| 06/2022 – Present | **Staff Research Scientist,** *IBM Research, Thomas J. Watson Research Center,* Yorktown Heights, NY <br> Research areas: Optimization, Machine Learning, Reinforcement Learning, Time Series |
| 04/2021 – 06/2022 | **Research Staff Member,** *IBM Research, Thomas J. Watson Research Center,* Yorktown Heights, NY <br> Research areas: Optimization, Machine Learning, Reinforcement Learning |
| 09/2020 – 12/2025 | **Principal Investigator,** *MIT-IBM Watson AI Lab,* Cambridge, MA <br> Research areas: Dynamical Systems, Time Series, Reinforcement Learning, Adversarial Robustness |
| 10/2018 – 03/2021 | **Research Scientist,** *IBM Research, Thomas J. Watson Research Center,* Yorktown Heights, NY <br> Research areas: Optimization, Machine Learning, Deep Learning, Reinforcement Learning, AI Solutions, Explainable AI |
| 05/2018 – 08/2018 | **Research Intern,** *IBM Research, Thomas J. Watson Research Center,* Yorktown Heights, NY <br> Research areas: Optimization, Machine Learning, Deep Learning, Reinforcement Learning |
| 08/2017 – 05/2018 | **Research Co-op,** *IBM Research, Thomas J. Watson Research Center,* Yorktown Heights, NY <br> Research areas: Optimization, Machine Learning, Deep Learning |
| 06/2017 – 08/2017 | **Research Intern,** *IBM Research, Thomas J. Watson Research Center,* Yorktown Heights, NY <br> Research areas: Optimization, Machine Learning, Deep Learning |
| 09/2014 – 05/2017 | **Research Assistant,** *Lehigh University,* Bethlehem, PA <br> Research areas: Optimization for Large Scale Problems, Machine Learning, Deep Learning, Stochastic Models, Optimal Control |
| 01/2012 – 12/2013 | **Graduate (Research) Assistant,** *McNeese State University,* Lake Charles, LA <br> Research areas: Operations Management and Finance |

# EDITORSHIP / PROGRAM COMMITTEE / ORGANIZING COMMITTEE

### CONFERENCE ORGANIZING COMMITTEE

| | |
|---|---|
| 2026 | **Lead Journal Chair**, The 40th Conference on Neural Information Processing Systems (NeurIPS 2026) |
| 2025 | **Journal Chair**, The 39th Conference on Neural Information Processing Systems (NeurIPS 2025) |
| 2024 | **Journal Chair**, The 38th Conference on Neural Information Processing Systems (NeurIPS 2024) |
| 2023 | **Journal Chair**, The 37th Conference on Neural Information Processing Systems (NeurIPS 2023) |

### EDITORSHIP (PEER-REVIEWED JOURNALS)

| | |
|---|---|
| 06/2022 – Present | **Action Editor**, Journal of Machine Learning Research |
| 06/2021 – Present | **Action Editor**, Machine Learning |
| 06/2022 – Present | **Associate Editor**, Journal of Optimization Theory and Applications |
| 01/2022 – 12/2023 | **Associate Editor**, IEEE Transactions on Neural Networks and Learning Systems |
| 01/2022 – 12/2022 | **Action Editor**, Neural Networks |

### SENIOR AREA CHAIR / SENIOR META-REVIEWER (PEER-REVIEWED CONFERENCES)

| | |
|---|---|
| 2024 - 2025 | **Senior Area Chair**, Conference on Neural Information Processing Systems (NeurIPS) |
| 2026 | **Senior Area Chair**, International Conference on Machine Learning (ICML) |
| 2026 | **Senior Area Chair**, International Conference on Learning Representations (ICLR) |
| 2025 - 2026 | **Senior Area Chair**, International Conference on Artificial Intelligence and Statistics (AISTATS) |

### AREA CHAIR / META-REVIEWER / SENIOR PROGRAM COMMITTEE (PEER-REVIEWED CONFERENCES)

| | |
|---|---|
| 2020 – 2025 | **Area Chair**, International Conference on Machine Learning (ICML) |
| 2022 – 2023 | **Area Chair**, Conference on Neural Information Processing Systems (NeurIPS) |
| 2021 – 2025 | **Area Chair**, International Conference on Learning Representations (ICLR) |
| 2021 – 2024 | **Area Chair**, International Conference on Artificial Intelligence and Statistics (AISTATS) |
| 2022 – 2024 | **Area Chair**, Conference on Uncertainty in Artificial Intelligence (UAI) |
| 2023 – 2025 | **Area Chair**, Conference on Computer Vision and Pattern Recognition (CVPR) |
| 2022 | **Senior Program Committee**, AAAI Conference on Artificial Intelligence (AAAI) |

### WORKSHOP ORGANIZING COMMITTEE

| | |
|---|---|
| 2026 | **Program Chair**, Principled Design for Trustworthy AI - Interpretability, Robustness, and Safety across Modalities, ICLR 2026 Workshop |
| 2023 | **General Chair & Program Chair**, When Machine Learning meets Dynamical Systems: Theory and Applications, AAAI 2023 Workshop |
| 2021 | **General Chair & Program Chair**, New Frontiers in Federated Learning: Privacy, Fairness, Robustness, Personalization and Data Ownership (NFFL 2021), NeurIPS 2021 Workshop |

### REVIEWER (PROPOSALS)

| | |
|---|---|
| 2022 | **Reviewer & Panelist**, Grant proposals, National Science Foundation (NSF) |
| 2022, 2024 | **Evaluation Member**, Grant proposals, AI Singapore (AISG) Research Programme |
| 2021 | **Reviewer**, Workshop proposals, NeurIPS 2021 Workshops |

# GRANT EXPERIENCE

01/2026 – 12/2026    **Principal Investigator,** *"Time Series Data Agent: an Agentic System with Foundation Models for Multimodal Data",* NAIRR Deep Partnership program "IBM & the AI Alliance - Collaboration on Open Source Cloud Platform, Models and Tools", *$110K*
IBM PI: **Lam M. Nguyen**, IBM Co-PI: Chandra Reddy
RPI PI: Agung Julius
RPI Students: Yunshi Wen, Nicolas Lizarralde

01/2025 – 12/2025    **Principal Investigator,** *"Interpretable Foundation Models for General-Purpose Time Series Analysis",* RPI - IBM Future of Computing Research Collaboration, *$150K*
IBM PI: **Lam M. Nguyen**
RPI PI: Agung Julius
RPI Students: Yunshi Wen, Nicolas Lizarralde

01/2023 – 12/2025    **Principal Investigator,** *"Safe Learning for Time Series Problems: Data, Structure and Optimization",* MIT-IBM Watson AI Lab Foundational Project, *$750K + $150K*
IBM PI: **Lam M. Nguyen**, IBM Co-PI: Subhro Das
MIT PI: Luca Daniel, MIT Co-PI: Alexandre Megretski
MIT Students: Wang Zhang, Ziwen (Martin) Ma (Harvard)

01/2022 – 12/2022    **Principal Investigator,** *"Safe AI Certification",* MIT-IBM Watson AI Lab Project, *$150K*
IBM PI: **Lam M. Nguyen**, IBM Co-PI: Subhro Das
MIT PI: Alexandre Megretski, MIT Co-PI: Luca Daniel
MIT Student: Wang Zhang

01/2021 – 12/2021    **Principal Investigator,** *"Safety Structures, Certification, and Training for AI in the Feedback Loop",* MIT-IBM Watson AI Lab Exploratory Project, *$150K.*
IBM PI: **Lam M. Nguyen**, IBM Co-PI: Subhro Das, Tsui-Wei Weng
MIT PI: Alexandre Megretski, MIT Co-PI: Luca Daniel
MIT Student: Wang Zhang

09/2020 – 09/2021    **Co-Principal Investigator,** *"Hierarchical Disentangled Representations for Scalable Multi-agent Reinforcement Learning",* MIT-IBM Watson AI Lab Exploratory Project, *$100K.*
IBM PI: Tsui-Wei Weng, IBM Co-PI: **Lam M. Nguyen**
MIT PI: Cathy Wu
MIT Student: Vindula Jayawardana

# BOOK

[1]    Federated Learning: Theory and Practice.
**Lam M. Nguyen**, Trong Nghia Hoang, Pin-Yu Chen
*Elsevier publisher, ISBN 9780443190377, 2024*

# JOURNAL & PEER-REVIEWED CONFERENCE PAPERS

[54]    Stochastic ISTA/FISTA Adaptive Step Search Algorithms for Convex Composite Optimization.
**Lam M. Nguyen**, Katya Scheinberg, Trang H. Tran
*Journal of Optimization Theory and Applications (**JOTA**), 2025*

[53]    Correlated Attention in Transformers for Multivariate Time Series.
Quang M. Nguyen, **Lam M. Nguyen**, Subhro Das
*The 2025 IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP 2025**), 2025*

[52]    Dilated Convolution for Time Series Learning.
Wang Zhang, Subhro Das, **Lam M. Nguyen**, Luca Daniel.
*The 2025 IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP 2025**), 2025*

[51] Foundation Model and Temporal Prios-guided Transductive Few-shot Action Recognition.
Bach Vu, Hoang Nguyen, Quang M. Nguyen, Duong Le, Hieu Pham, Phi Le Nguyen, **Lam M. Nguyen**.
*The 2025 IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP 2025**), 2025*

[50] TabularFM: An Open Framework For Tabular Foundational Models.
Quan M. Tran, Suong N. Hoang, **Lam M. Nguyen**, Dzung Phan, Hoang Thanh Lam
*2024 IEEE International Conference on Big Data (**IEEE BigData 2024**), 2024 (19.7% acceptance rate)*

[49] Abstracted Shapes as Tokens - A Generalizable and Interpretable Model for Time-series Classification.
Yunshi Wen, Tengfei Ma, Tsui-Wei Weng, **Lam M. Nguyen**, Anak Agung Julius
*The 38th Conference on Neural Information Processing Systems (**NeurIPS 2024**), 2024 (25.8% acceptance rate)*

[48] Shuffling Gradient-Based Methods for Nonconvex-Concave Minimax Optimization.
Quoc Tran-Dinh, Trang H. Tran, **Lam M. Nguyen**
*The 38th Conference on Neural Information Processing Systems (**NeurIPS 2024**), 2024 (25.8% acceptance rate)*

[47] Probabilistic Federated Prompt-Tuning in Data Imbalance Settings.
Pei-Yau Weng, Minh Hoang, **Lam M. Nguyen**, My T. Thai, Tsui-Wei Weng, Trong Nghia Hoang
*The 38th Conference on Neural Information Processing Systems (**NeurIPS 2024**), 2024 (25.8% acceptance rate)*

[46] Improving Time Series Encoding with Noise-Aware Self-Supervised Learning and an Efficient Encoder.
Anh Duy Nguyen, Trang H. Tran, Hieu H. Pham, Phi Le Nguyen, **Lam M. Nguyen**
*The 24th IEEE International Conference on Data Mining (**ICDM 2024**), 2024 (19.5% acceptance rate)*

[45] Proactive DP: A Multiple Target Optimization Framework for DP-SGD.
Marten van Dijk, Nhuong Van Nguyen, Toan N. Nguyen, **Lam M. Nguyen**, Phuong Ha Nguyen
*The 41th International Conference on Machine Learning (**ICML 2024**), 2024 (27.5% acceptance rate)*

[44] Shuffling Momentum Gradient Algorithm for Convex Optimization.
Trang H. Tran, Quoc Tran-Dinh, **Lam M. Nguyen**
*Vietnam Journal of Mathematics (**VJOM**), Special issue dedicated to Dr. Tamás Terlaky on the occasion of his 70th birthday, 2024*

[43] Multi-polytope Machine for Classification.
Dzung Phan, **Lam M. Nguyen**, Jayant Kalagnanam, Chandra Reddy
*SIAM Conference on Data Mining (**SDM 2024**), 2024 (29.2% acceptance rate)*

[42] On Partial Optimal Transport: Revising the Infeasibility of Sinkhorn and Efficient Gradient Methods.
Anh Duc Nguyen, Tuan Dung Nguyen, Quang Nguyen, Hoang Nguyen, **Lam M. Nguyen**, Kim-Chuan Toh
*The 38th AAAI Conference on Artificial Intelligence (**AAAI 2024**), 2024 (23.75% acceptance rate)*
**INFORMS 2024 Undergraduate Operations Research Prize**

[41] One Step Closer to Unbiased Aleatoric Uncertainty Estimation.
Wang Zhang, Martin Ma, Subhro Das, Lily Weng, Alexandre Megretsky, Luca Daniel, **Lam M. Nguyen**
*The 38th AAAI Conference on Artificial Intelligence (**AAAI 2024**), 2024 (23.75% acceptance rate)*

[40] On Unbalanced Optimal Transport: Gradient Methods, Sparsity and Approximation Error.
Quang Minh Nguyen, Hoang H. Nguyen, Yi Zhou, **Lam M. Nguyen**
*Journal of Machine Learning Research (**JMLR**), 2023*

[39] On the Convergence to a Global Solution of Shuffling-Type Gradient Algorithms.
**Lam M. Nguyen**, Trang H. Tran
*The 37th Conference on Neural Information Processing Systems (**NeurIPS 2023**), 2023 (26.1% acceptance rate)*

[38] Analyzing Generalization of Neural Networks through Loss Path Kernels.
Yilan Chen, Wei Huang, Hao Wang, Charlotte Loh, Akash Srivastava, **Lam M. Nguyen**, Tsui-Wei Weng
*The 37th Conference on Neural Information Processing Systems (**NeurIPS 2023**), 2023 (26.1% acceptance rate)*

[37] Attacking c-MARL More Effectively: A Data Driven Approach.
Nhan Pham, **Lam M. Nguyen**, Jie Chen, Hoang Thanh Lam, Subhro Das, and Tsui-Wei Weng
*The 23rd IEEE International Conference on Data Mining (**ICDM 2023**), 2023 (19.94% acceptance rate)*

[36] Promoting Robustness of Randomized Smoothing: Two Cost-Effective Approaches.
Linbo Liu, Trong Nghia Hoang, **Lam M. Nguyen**, and Tsui-Wei Weng
*The 23rd IEEE International Conference on Data Mining (**ICDM 2023**), 2023 (19.94% acceptance rate)*

[35] ConCerNet: A Contrastive Learning Based Framework for Automated Conservation Law Discovery and Trustworthy Dynamical System Prediction.
Wang Zhang, Tsui-Wei Weng, Subhro Das, Alexandre Megretski, Luca Daniel, **Lam M. Nguyen**
*The 40th International Conference on Machine Learning (**ICML 2023**), 2023 (27.9% acceptance rate)*

[34] Scalable and Secure Federated XGBoost.
Quang Nguyen, Nhan Khanh Le, **Lam M. Nguyen**.
*The 2023 IEEE International Conference on Acoustics, Speech and Signal Processing (**ICASSP 2023**), 2023*

[33] Label-free Concept Bottleneck Models.
Tuomas Oikarinen, Subhro Das, **Lam M. Nguyen**, Tsui-Wei Weng.
*The 11th International Conference on Learning Representations (**ICLR 2023**), 2023*

[32] Optimal Control via Linearizable Deep Learning.
Vinicius Lima, Dzung T. Phan, **Lam M. Nguyen**, Jayant R. Kalagnanam
*The 2023 American Control Conference (**ACC 2023**), 2023*

[31] Nesterov Accelerated Shuffling Gradient Method for Convex Optimization.
Trang H. Tran, Katya Scheinberg, **Lam M. Nguyen**
*The 39th International Conference on Machine Learning (**ICML 2022**), 2022 (21.9% acceptance rate)*

[30] Finite-Sum Smooth Optimization with SARAH.
**Lam M. Nguyen**, Marten van Dijk, Dzung T. Phan, Phuong Ha Nguyen, Tsui-Wei Weng, Jayant R. Kalagnanam
*Computational Optimization and Applications (**COAP**), 2022*

[29] AI-based Real-time Site-wide Optimization for Process Manufacturing.
Jayant Kalagnanam, Dzung Phan, Pavankumar Murali, **Lam M. Nguyen**, Nianjun Zhou, Dharmashankar Subramanian, Raju Pavuluri, Xiang Ma, Crystal Lui, Giovane Cesar da Silva
*INFORMS Journal on Applied Analytics (**IJAA**), 2022*

[28]    StepDIRECT - A Derivative-Free Optimization Method for Stepwise Functions.
Dzung Phan, Hongsheng Liu, **Lam M. Nguyen**
*SIAM International Conference on Data Mining (**SDM22**), 2022 (27.8% acceptance rate)*

[27]    Besting the Black-Box: Barrier Zones for Adversarial Example Defense.
Kaleel Mahmood, Phuong Ha Nguyen, **Lam M. Nguyen**, Thanh Nguyen, Marten van Dijk
*IEEE Access, 2022*

[26]    Interpretable Clustering via Multi-Polytope Machines.
Connor Lawless, Jayant Kalagnanam, **Lam M. Nguyen**, Dzung Phan, Chandra Reddy
*The 36th AAAI Conference on Artificial Intelligence (**AAAI 2022**), 2022 (15% acceptance rate)*

[25]    FedDR - Randomized Douglas-Rachford Splitting Algorithms for Nonconvex Federated Composite Optimization.
Quoc Tran-Dinh, Nhan Pham, Dzung T. Phan, **Lam M. Nguyen**
*The 35th Conference on Neural Information Processing Systems (**NeurIPS 2021**), 2021 (26% acceptance rate)*

[24]    Ensembling Graph Predictions for AMR Parsing.
Thanh Lam Hoang, Gabriele Picco, Yufang Hou, Young-Suk Lee, **Lam M. Nguyen**, Dzung T. Phan, Vanessa López, Ramon Fernandez Astudillo
*The 35th Conference on Neural Information Processing Systems (**NeurIPS 2021**), 2021 (26% acceptance rate)*

[23]    On the Equivalence between Neural Network and Support Vector Machine.
Yilan Chen, Wei Huang, **Lam M. Nguyen**, Tsui-Wei Weng
*The 35th Conference on Neural Information Processing Systems (**NeurIPS 2021**), 2021 (26% acceptance rate)*

[22]    A Unified Convergence Analysis for Shuffling-Type Gradient Methods.
**Lam M. Nguyen**, Quoc Tran-Dinh, Dzung T. Phan, Phuong Ha Nguyen, Marten van Dijk
*Journal of Machine Learning Research (**JMLR**), volume 22, 1-43, 2021*

[21]    SMG: A Shuffling Gradient-Based Method with Momentum.
Trang H. Tran, **Lam M. Nguyen**, Quoc Tran-Dinh
*The 38th International Conference on Machine Learning (**ICML 2021**), PMLR 139, 2021 (21.47% acceptance rate)*

[20]    Regression Optimization for System-level Production Control.
Dzung T. Phan, **Lam M. Nguyen**, Pavankumar Murali, Nhan H. Pham, Hongsheng Liu, Jayant R. Kalagnanam
*The 2021 American Control Conference (**ACC 2021**), 2021*

[19]    Hogwild! over Distributed Local Data Sets with Linearly Increasing Mini-Batch Sizes.
Nhuong V. Nguyen, Toan N. Nguyen, Phuong Ha Nguyen, Quoc Tran-Dinh, **Lam M. Nguyen**, Marten van Dijk
*The 24th International Conference on Artificial Intelligence and Statistics (**AISTATS 2021**), 2021 (29.8% acceptance rate)*

[18]    A Hybrid Stochastic Optimization Framework for Stochastic Composite Nonconvex Optimization.
Quoc Tran-Dinh, Nhan H. Pham, Dzung T. Phan, **Lam M. Nguyen**
*Mathematical Programming (**MAPR**), 2021*
**IBM 2022 Pat Goldberg Memorial Best Paper Award**

[17]    Hybrid Variance-Reduced SGD Algorithms for Nonconvex-Concave Minimax Problems.
Quoc Tran-Dinh, Deyi Liu, **Lam M. Nguyen**
*The 34th Conference on Neural Information Processing Systems (**NeurIPS 2020**), 2020 (20.1% acceptance rate)*

[16]    A Scalable MIP-based Method for Learning Optimal Multivariate Decision Trees.
Haoran Zhu, Pavankumar Murali, Dzung T. Phan, **Lam M. Nguyen**, Jayant R. Kalagnanam
*The 34th Conference on Neural Information Processing Systems (**NeurIPS 2020**), 2020 (20.1% acceptance rate)*

[15]    Inexact SARAH Algorithm for Stochastic Optimization.
**Lam M. Nguyen**, Katya Scheinberg, Martin Takac
*Optimization Methods and Software (**GOMS**), volume 36(1), 237-258, 2020*

[14]    Pruning Deep Neural Networks with L0-constrained Optimization.
Dzung T. Phan, **Lam M. Nguyen**, Nam H. Nguyen, Jayant R. Kalagnanam
*The 20th IEEE International Conference on Data Mining (**ICDM 2020**), 2020 (19.7% acceptance rate)*

[13]    Stochastic Gauss-Newton Algorithms for Nonconvex Compositional Optimization.
Quoc Tran-Dinh, Nhan H. Pham, **Lam M. Nguyen**
*The 37th International Conference on Machine Learning (**ICML 2020**), PMLR 119, 2020 (21.8% acceptance rate)*

[12]    ProxSARAH: An Efficient Algorithmic Framework for Stochastic Composite Nonconvex Optimization.
Nhan H. Pham, **Lam M. Nguyen**, Dzung T. Phan, Quoc Tran-Dinh
*Journal of Machine Learning Research (**JMLR**), volume 21(110), 1-48, 2020*
**IBM 2020 Pat Goldberg Memorial Best Paper Competition - Finalist**

[11]    A Hybrid Stochastic Policy Gradient Algorithm for Reinforcement Learning.
Nhan H. Pham, **Lam M. Nguyen**, Dzung T. Phan, Phuong Ha Nguyen, Marten van Dijk, Quoc Tran-Dinh
*The 23rd International Conference on Artificial Intelligence and Statistics (**AISTATS 2020**), PMLR 108, 2020*

[10]    New Convergence Aspects of Stochastic Gradient Algorithms.
**Lam M. Nguyen**, Phuong Ha Nguyen, Peter Richtarik, Katya Scheinberg, Martin Takac, Marten van Dijk
*Journal of Machine Learning Research (**JMLR**), volume 20(176), 1-49, 2019*

[9]    Tight Dimension Independent Lower Bound on the Expected Convergence Rate for Diminishing Step Sizes in SGD.
Phuong Ha Nguyen, **Lam M. Nguyen**, Marten van Dijk
*The 33th Conference on Neural Information Processing Systems (**NeurIPS 2019**), 2019 (21.17% acceptance rate)*

[8]    PROVEN: Verifying Robustness of Neural Networks with a Probabilistic Approach.
Tsui-Wei Weng, Pin-Yu Chen, **Lam M. Nguyen**, Mark S. Squillante, Akhilan Boopathy, Ivan Oseledets, Luca Daniel
*The 36th International Conference on Machine Learning (**ICML 2019**), PMLR 97, 2019 (22.5% acceptance rate)*

[7]    Characterization of Convex Objective Functions and Optimal Expected Convergence Rates for SGD.
Marten van Dijk, **Lam M. Nguyen**, Phuong Ha Nguyen, Dzung T. Phan
*The 36th International Conference on Machine Learning (**ICML 2019**), PMLR 97, 2019 (22.5% acceptance rate)*

[6]    ChieF: A Change Pattern based Interpretable Failure Analyzer.
Dhaval Patel, **Lam M. Nguyen**, Akshay Rangamani, Shrey Shrivastava, Jayant Kalagnanam
*2018 IEEE International Conference on Big Data (**IEEE BigData 2018**), 2018*

[5]    SGD and Hogwild! Convergence Without the Bounded Gradients Assumption.
**Lam M. Nguyen**, Phuong Ha Nguyen, Marten van Dijk, Peter Richtarik, Katya Scheinberg, Martin Takac
*The 35th International Conference on Machine Learning (**ICML 2018**), PMLR 80, 2018 (25% acceptance rate)*
**IBM Research AI − Selected Publications 2018**

| [4] | SARAH: A Novel Method for Machine Learning Problems Using Stochastic Recursive Gradient. |
|---|---|
| | **Lam M. Nguyen**, Jie Liu, Katya Scheinberg, Martin Takac |
| | *The 34th International Conference on Machine Learning (**ICML 2017**), PMLR 70:2613-2621, 2017 (25% acceptance rate)* |
| | **Van Hoesen Family Best Publication Award** |
| [3] | A Queueing System with On-demand Servers: Local Stability of Fluid Limits. |
| | **Lam M. Nguyen**, Alexander L. Stolyar |
| | *Queueing Systems (**QUESTA**), 1-26, Springer, 2017* |
| [2] | A Service System with Randomly Behaving On-demand Agents. |
| | **Lam M. Nguyen**, Alexander L. Stolyar |
| | *The 42nd International Conference on Measurement and Modeling of Computer Systems (**SIGMETRICS 2016**), ACM SIGMETRICS Performance Evaluation Review, 44(1):365-366, 2016 (25% acceptance rate)* |
| [1] | CEO Compensation: Does Financial Crisis Matter? |
| | Prasad Vemala, **Lam Nguyen**, Dung Nguyen, Alekhya Kommasani |
| | *International Business Research, 7(4):125-131, 2014* |

## PEER-REVIEWED WORKSHOP PAPERS

| [8] | Guaranteeing Conservation Laws with Projection in Physics-Informed Neural Networks. |
|---|---|
| | Anthony Baez, Wang Zhang, Ziwen Ma, Subhro Das, **Lam M. Nguyen**, Luca Daniel |
| | *The 38th Conference on Neural Information Processing Systems (**NeurIPS 2024**), Data-driven and Differentiable Simulations, Surrogates, and Solvers (D3S3), 2024* |
| [7] | Stochastic FISTA Step Search Algorithm for Convex Optimization. |
| | Trang H. Tran, **Lam M. Nguyen**, Katya Scheinberg |
| | *The 37th Conference on Neural Information Processing Systems (**NeurIPS 2023**), Optimization for Machine Learning (OPT 2023), 2023* |
| [6] | c-MBA: Adversarial Attack for Cooperative MARL Using Learned Dynamics Model. |
| | Nhan H. Pham, **Lam M. Nguyen**, Jie Chen, Hoang Thanh Lam, Subhro Das, Tsui-Wei Weng |
| | *The 36th Conference on Neural Information Processing Systems (**NeurIPS 2022**), ML Safety, 2022* |
| [5] | Fast Convergence for Unstable Reinforcement Learning Problems by Logarithmic Mapping. |
| | Wang Zhang, **Lam M. Nguyen**, Subhro Das, Alexandre Megretski, Luca Daniel, Tsui-Wei Weng |
| | *The 39th International Conference on Machine Learning (**ICML 2022**), Decision Awareness in Reinforcement Learning, 2022* |
| [4] | Robust Randomized Smoothing via Two Cost-Effective Approaches. |
| | Linbo Liu, Trong Nghia Hoang, **Lam M. Nguyen**, Tsui-Wei Weng |
| | *The 10th International Conference on Learning Representations (**ICLR 2022**), PAIR2Struct: Privacy, Accountability, Interpretability, Robustness, Reasoning on Structured Data, 2022* |
| [3] | Addressing Solution Quality in Data Generated Optimization Models. |
| | Orit Davidovich, Parikshit Ram, Segev Wasserkrug, Dharmashankar Subramanian, Nianjun Zhou, Dzung Phan, Pavankumar Murali, **Lam M. Nguyen** |
| | *The 36th AAAI Conference on Artificial Intelligence (**AAAI 2022**), AI for Decision Optimization, AI4DO, 2022* |
| [2] | Automated Decision Optimization: Data and Knowledge Driven Optimization Model Generation with Human-in-the-loop. |
| | Lisa Amini, Arunima Chaudhary, Yishai Feldman, Pavankumar Murali, **Lam M. Nguyen**, Dzung Phan, Aviad Sela, Carolina Spina, Dharmashankar Subramanian, Abel Valente, Long Vu, Dakuo Wang, Segev Wasserkrug, Ritesh Yadav, Nianjun Zhou |
| | *The 36th AAAI Conference on Artificial Intelligence (**AAAI 2022**), AI for Decision Optimization, AI4DO, 2022* |

[1]      Ensuring the Quality of Optimization Solutions in Data Generated Optimization Models.
Segev Wasserkrug, Orit Davidovith, Evgeny Shindin, Dharmashankar Subramanian,
Parikshit Ram, Pavankumar Murali, Dzung Phan, Nianjun Zhou, **Lam M. Nguyen**
*The 30th International Joint Conference on Artificial Intelligence (**IJCAI 2021**), Data
Science Meets Optimisation, DSO@IJCAI2021, 2021*

## PREPRINTS

[17]      Revisiting the Generic Transformer: Deconstructing a Strong Baseline for Time Series
Foundation Models.
Yunshi Wen, Wesley M. Gifford, Chandra Reddy, **Lam M. Nguyen**, Jayant Kalagnanam,
Anak Agung Julius
*Technical report, arXiv preprint, 2026*

[16]      Graph Concept Bottleneck Models.
Haotian Xu, Tsui-Wei Weng, **Lam M. Nguyen**, Tengfei Ma
*Technical report, arXiv preprint, 2025*

[15]      Adjusted Shuffling SARAH: Advancing Complexity Analysis via Dynamic Gradient
Weighting.
Duc Toan Nguyen, Trang H. Tran, **Lam M. Nguyen**
*Technical report, arXiv preprint, 2025*

[14]      A Supervised Contrastive Learning Pretrain-Finetune Approach for Time Series.
Trang H. Tran, **Lam M. Nguyen**, Kyongmin Yeo, Nam Nguyen, Roman Vaculin
*Technical report, arXiv preprint, 2023*

[13]      Batch Clipping and Adaptive Layerwise Clipping for Differential Private Stochastic
Gradient Descent.
Toan N. Nguyen, Phuong Ha Nguyen, **Lam M. Nguyen**, Marten van Dijk
*Technical report, arXiv preprint, 2023*

[12]      An End-to-End Time Series Model for Simultaneous Imputation and Forecast.
Trang H. Tran, **Lam M. Nguyen**, Kyongmin Yeo, Nam Nguyen, Dzung Phan, Roman
Vaculin, Jayant Kalagnanam
*Technical report, arXiv preprint, 2023*

[11]      Generalizing DP-SGD with Shuffling and Batching Clipping.
Marten van Dijk, Phuong Ha Nguyen, Toan N. Nguyen, **Lam M. Nguyen**
*Technical report, arXiv preprint, 2022*

[10]      Finding Optimal Policy for Queueing Models: New Parameterization.
Trang H. Tran, **Lam M. Nguyen**, Katya Scheinberg
*Technical report, arXiv preprint, 2022*

[9]      Finite-Sum Optimization: A New Perspective for Convergence to a Global Solution.
**Lam M. Nguyen**, Trang H. Tran, Marten van Dijk
*Technical report, arXiv preprint, 2022*

[8]      Differential Private Hogwild! over Distributed Local Data Sets.
Marten van Dijk, Nhuong V. Nguyen, Toan N. Nguyen, **Lam M. Nguyen**, Phuong Ha
Nguyen
*Technical report, arXiv preprint, 2021*

[7]      An Optimal Hybrid Variance-Reduced Algorithm for Stochastic Composite Nonconvex
Optimization.
Deyi Liu, **Lam M. Nguyen**, Quoc Tran-Dinh
*Technical report, arXiv preprint, 2020*

[6]      Asynchronous Federated Learning with Reduced Number of Rounds and with Differential
Privacy from Less Aggregated Gaussian Noise.
Marten van Dijk, Nhuong V. Nguyen, Toan N. Nguyen, **Lam M. Nguyen**, Quoc
Tran-Dinh, Phuong Ha Nguyen
*Technical report, arXiv preprint, 2020*

[5]     Finite-Time Analysis of Stochastic Gradient Descent under Markov Randomness.
        Thinh T. Doan, **Lam M. Nguyen**, Nhan H. Pham, Justin Romberg
        *Technical report, arXiv preprint, 2020*

[4]     Convergence Rates of Accelerated Markov Gradient Descent with Applications in Reinforcement Learning.
        Thinh T. Doan, **Lam M. Nguyen**, Nhan H. Pham, Justin Romberg
        *Technical report, arXiv preprint, 2020*

[3]     Hybrid Stochastic Gradient Descent Algorithms for Stochastic Nonconvex Optimization.
        Quoc Tran-Dinh, Nhan H. Pham, Dzung T. Phan, **Lam M. Nguyen**
        *Technical report, arXiv preprint, 2019*

[2]     When Does Stochastic Gradient Algorithm Work Well?
        **Lam M. Nguyen**, Nam H. Nguyen, Dzung T. Phan, Jayant R. Kalagnanam, Katya Scheinberg
        *Technical report, arXiv preprint, 2018*

[1]     Stochastic Recursive Gradient Algorithm for Nonconvex Optimization.
        **Lam M. Nguyen**, Jie Liu, Katya Scheinberg, Martin Takac
        *Technical report, arXiv preprint, 2017*

## GRANTED PATENTS

[16]    Optimizer Agnostic Explanation System for Large Scale Schedules. *Patent US12443454B2*
        Surya Shravan Kumar Sajja, Kanthi Sarpatwar, **Lam M. Nguyen**, Yuan Yuan Jia, Stephane Michel, Roman Vaculin

[15]    Unsupervised Learning from Public Tabular Datasets. *Patent US12436924B2*
        Thanh Lam Hoang, Gabriele Picco, **Lam M. Nguyen**, Dzung Tien Phan

[14]    System-level Control using Tree-based Regression with Outlier Removal. *Patent US20220058515A1*
        Dung Tien Phan, Pavankumar Murali, **Lam M. Nguyen**

[13]    Automated Generation of Optimization Model for System-Wide Plant Optimization. *Patent US20220027685A1*
        Dung Tien Phan, **Lam M. Nguyen**, Pavankumar Murali, Nianjun Zhou

[12]    Providing a Semantic Encoding and Language Neural Network. *Patent US12217007B2*
        Thanh Lam Hoang, Dzung Phan, Gabriele Picco, **Lam M. Nguyen**, Marco Luca Sbodio, Vanessa Lopez Garcia

[11]    Blending Graph Predictions. *Patent US12242801B2*
        Thanh Lam Hoang, Gabriele Picco, Yufang Hou, Young-Suk Lee, **Lam M. Nguyen**, Dzung Tien Phan, Vanessa Lopez Garcia, Ramon Fernandez Astudillo

[10]    Reasonable Language Model Learning for Text Generation from a Knowledge Graph. *Patent US12216996B2*
        Hoang Thanh Lam, Dzung T. Phan, Gabriele Picco, **Lam M. Nguyen**, Vanessa Lopez Garcia

[9]     Intelligent Dynamic Condition-based Infrastructure Maintenance Scheduling. *Patent US12158797B2*
        Pavankumar Murali, Dzung Tien Phan, Nianjun Zhou, **Lam M. Nguyen**

[8]     Regression-Optimization Control of Production Process with Dynamic Inputs. *US Patent 12399469*
        **Lam M. Nguyen**, Pavankumar Murali, Nianjun Zhou, Binny Winston Samuel

[7]     Compression of Deep Neural Networks. *US Patent US20200293876A1*
        Dzung T. Phan, **Lam M. Nguyen**, Nam H. Nguyen, Jayant R. Kalagnanam

[6]     Federated Learning for Training Machine Learning Models. *Patent US20230196081A1*
        **Lam M. Nguyen**, Dung Tien Phan, Jayant R. Kalagnanam

| [5] | A Method for Tuning Hyper-Parameters for Classification. *Patent US20220027757A1* |
| | Dung Tien Phan, Hongsheng Liu, **Lam M. Nguyen** |
| [4] | Optimal Interpretable Decision Trees Using Integer Linear Programming Techniques. *Patent US20210264290A1* |
| | Pavankumar Murali, Haoran Zhu, Dung Tien Phan, **Lam M. Nguyen** |
| [3] | Site-wide Operations Management Optimization for Manufacturing and Processing Control. *Patent US20220057786A1* |
| | Dung Tien Phan, **Lam M. Nguyen**, Pavankumar Murali, and Hongsheng Liu |
| [2] | A Shuffling-Type Gradient Method for Training Machine Learning models with Big Data. *Patent US20220171996A1* |
| | **Lam M. Nguyen**, Dung Tien Phan |
| [1] | Prediction Optimization for System-level Production Control. *Patent US11099529B2* |
| | Dzung T. Phan, **Lam M. Nguyen**, Pavankumar Murali, Jayant R. Kalagnanam |

## PATENTS APPLICATIONS

| [25] | Time-Series Modeling Using Function-to-Function Mapping. *Filed on February 06, 2026* |
| | Kyong Min Yeo, Chandrasekhara K. Reddy, Wesley M. Gifford, Kanthi Sarpatwar, **Lam M. Nguyen**, Chandni Nagda |
| [24] | Tokenizer-Predictor Architecture Designed for Zero-Shot Modeling of Time Series Data. *Filed on January 30, 2026* |
| | Yunshi Wen, **Lam M. Nguyen**, Chandrasekhara K. Reddy, Wesley M. Gifford, Jayant R. Kalagnanam, Agung Julius |
| [23] | Deep Learning Architecture For Multivariate Time Series. *Filed on December 14, 2024* |
| | Quang Minh Nguyen, **Lam M. Nguyen**, Subhro Das |
| [22] | Generative Schrodinger Network. *Filed on March 11, 2024* |
| | Thanh Lam Hoang, Marcos Martínez Galindo, **Lam M. Nguyen**, Niall Robertson, Vanessa Lopez Garcia |
| [21] | Process Control Based on Simultaneous Machine Learning of Spatial and Temporal Relations of Time Series Data. *Filed on January 05, 2024* |
| | **Lam M. Nguyen**, Trang H. Tran |
| [20] | Neural Network-Based Dynamical System Modeling for Contrastively Learned Conservation Laws. *Filed on July 21, 2023* |
| | **Lam M. Nguyen**, Wang Zhang, Subhro Das, Alexandre Megretski, Luca Daniel |
| [19] | Generative Modeling and Representational Learning from Multi-Sequence Alignment and Phylogenetic Tree Data. *Filed on June 30, 2023* |
| | Thanh Lam Hoang, Marcos Martínez Galindo, Gabriele Picco, Mykhaylo Zayats, Nhan Huu Pham, **Lam M. Nguyen**, Marco Luca Sbodio, Dzung Tien Phan, Vanessa Lopez Garcia |
| [18] | Time Series Forecasting Using Multivariate Time Series Data with Missing Values. *Filed on January 28, 2023* |
| | **Lam M. Nguyen**, Trang H. Tran, Kyong Min Yeo, Nam H. Nguyen, Dzung Tien Phan, Roman Vaculin, Jayant R. Kalagnanam |
| [17] | Multivariable Time-Series Feature Extraction. *Filed on January 27, 2023* |
| | **Lam M. Nguyen**, Wang Zhang, Subhro Das, Alexandre Megretski, Luca Daniel |
| [16] | Privacy Enhanced Machine Learning over Graph Data. *Filed on January 23, 2023* |
| | Ambrish Rawat, Naoise Holohan, Heiko H. Ludwig, Ehsan Degan, Nathalie Baracaldo Angel, Alan Jonathan King, Swanand Ravindra Kadhe, Yi Zhou, Keith Coleman Houck, Mark Purcell, Giulio Zizzo, Nir Drucker, Hayim Shaul, Eyal Kushnir, **Lam M. Nguyen** |
| [15] | Providing Trained Reinforcement Learning Systems. *Filed on December 12, 2022* |
| | **Lam M. Nguyen**, Wang Zhang, Subhro Das, Alexandre Megretski, Luca Daniel |

[14]     Active Learning in Model Training. *Filed on November 22, 2022*

Dzung Tien Phan, Huozhi Zhou, **Lam M. Nguyen**, Chandrasekhara K. Reddy, Jayant R. Kalagnanam

[13]     Automated Decision Optimization for Maintenance of Physical Assets. *Filed on October 31, 2022*

Nianjun Zhou, Pavankumar Murali, Dzung T. Phan, **Lam M. Nguyen**

[12]     Adversarial Attacks for Improving Cooperative Multi-Agent Reinforcement Learning Systems. *Filed on September 23, 2022*

Nhan Huu Pham, **Lam M. Nguyen**, Jie Chen, Thanh Lam Hoang, Subhro Das

[11]     Training Neural Networks with Convergence to a Global Minimum. *Filed on September 23, 2022*

**Lam M. Nguyen**

[10]     Machine Learning-based Decision Framework for Physical Systems. *Filed on September 20, 2022*

Dzung Tien Phan, **Lam M. Nguyen**

[9]     Certification-based Robust Training by Refining Decision Boundary. *Filed on September 19, 2022*

**Lam M. Nguyen**, Wang Zhang, Subhro Das, Pin-Yu Chen, Alexandre Megretski, Luca Daniel

[8]     Training A Neural Network Using an Accelerated Gradient with Shuffling. *Filed on July 14, 2022*

**Lam M. Nguyen**, Trang H. Tran

[7]     System and Method for unsupervised Learning of Semantic Graph from textual data and language generation from Semantic grapH via Reinforcement learning. *Filed on July 11, 2022*

Thanh Lam Hoang, Dzung Tien Phan, Gabriele Picco, **Lam M. Nguyen**, Marco Luca Sbodio, Vanessa Lopez Garcia

[6]     Integrated Machine Learning Prediction and Optimization for Decision-Making. *Filed on March 30, 2022*

Dzung T. Phan, Long Vu, **Lam M. Nguyen**, Dharmashankar Subramanian

[5]     Interpretable Clustering via Multi-Polytope Machines. *Filed on February 18, 2022*

Dzung T. Phan, Connor Lawless, Jayant R. Kalagnanam, **Lam M. Nguyen**, Chandrasekhara K. Reddy

[4]     Optimal Control of Dynamic Systems via Linearizable Deep Learning. *Filed on February 07, 2022*

Dung Tien Phan, Jayant R. Kalagnanam, **Lam M. Nguyen**

[3]     Boosting Classification and Regression Tree Performance with Dimension Reduction. *Filed on December 14, 2021*

Dzung T. Phan, Michael Huang, Pavankumar Murali, **Lam M. Nguyen**

[2]     Multi-Polytope Machine for Classification. *Filed on September 30, 2021*

Dzung T. Phan, **Lam M. Nguyen**, Jayant R. Kalagnanam, Chandrasekhara K. Reddy, Srideepika Jayaraman

[1]     Site-Wide Optimization for Mixed Regression Models and Mixed Control Variables. *Filed on May 25, 2021*

Dung Tien Phan, Nhan H. Pham, **Lam M. Nguyen**

## THESES

| | |
|---|---|
| 2018 | A Service System with On-Demand Agents, Stochastic Gradient Algorithms and the SARAH Algorithm.<br>**Lam M. Nguyen**<br>*PhD dissertation, Lehigh University,* Bethlehem, PA<br>**Elizabeth V. Stout Dissertation Award** |
| 2008 | Methods for Detecting Hidden Period in Some Economics Processes.<br>**Lam M. Nguyen**<br>*Undergraduate thesis, Lomonosov Moscow State University,* Moscow, Russia |

## ORGANIZING WORKSHOPS

| | |
|---|---|
| [3] | Principled Design for Trustworthy AI: Interpretability, Robustness, and Safety Across Modalities.<br>Tsui-Wei Weng, Trong Nghia Hoang, Tengfei Ma, Jake C. Snell, Francesco Croce, Chandan Singh, Subarna Tripathi, **Lam M. Nguyen**<br>*Workshop at The 14th International Conference on Learning Representations (**ICLR 2026**), 2026* |
| [2] | When Machine Learning meets Dynamical Systems: Theory and Applications.<br>**Lam M. Nguyen**, Trang H. Tran, Wang Zhang, Subhro Das, Tsui-Wei Weng<br>*Workshop at The 37th Conference on Artificial Intelligence (**AAAI 2023**), 2023* |
| [1] | New Frontiers in Federated Learning: Privacy, Fairness, Robustness, Personalization and Data Ownership.<br>Nghia Hoang, **Lam M. Nguyen**, Pin-Yu Chen, Tsui-Wei Weng, Sara Magliacane, Bryan Kian Hsiang Low, Anoop Deoras<br>*Workshop at The 35th Conference on Neural Information Processing Systems (**NeurIPS 2021**), 2021* |

## INVITED TALKS

| | |
|---|---|
| 10/2023 | On the Convergence to a Global Solution of Shuffling-Type Gradient Algorithms.<br>*INFORMS Annual Meeting,* Phoenix, AZ |
| 10/2022 | New Perspective On The Convergence To A Global Solution Of Finite-sum Optimization.<br>*INFORMS Annual Meeting,* Indianapolis, IN |
| 09/2022 | Nesterov Accelerated Shuffling Gradient Method for Convex Optimization.<br>*Johns Hopkins University,* Baltimore, MD |
| 10/2021 | Hogwild! Over Distributed Local Data Sets With Linearly Increasing Mini-batch Sizes.<br>*INFORMS Annual Meeting,* Anaheim, CA |
| 11/2020 | A Unified Convergence Analysis for Shuffling-Type Gradient Methods.<br>*INFORMS Annual Meeting,* Virtual Conference |
| 10/2019 | Finite-Sum Smooth Optimization with SARAH.<br>*INFORMS Annual Meeting,* Seattle, WA |
| 11/2018 | Inexact SARAH for Solving Stochastic Optimization Problems.<br>*INFORMS Annual Meeting,* Phoenix, AZ |
| 08/2018 | Inexact SARAH for Solving Stochastic Optimization Problems.<br>*DIMACS/TRIPODS/MOPTA,* Bethlehem, PA |
| 03/2018 | When does stochastic gradient algorithm work well?<br>*INFORMS Optimization Society Conference,* Denver, CO |
| 10/2017 | SARAH: Stochastic Recursive Gradient Algorithm.<br>*INFORMS Annual Meeting,* Houston, TX |
| 08/2017 | SARAH Algorithm.<br>*IBM Thomas J. Watson Research Center,* Yorktown Heights, NY |
| 11/2016 | A Queueing System with On-demand Servers: Local Stability of Fluid Limits.<br>*INFORMS Annual Meeting,* Nashville, TN |

| | |
|---|---|
| 08/2016 | A Queueing System with On-demand Servers: Local Stability of Fluid Limits. *Modeling and Optimization: Theory and Applications*, Bethlehem, PA |

## PROFESSIONAL ACTIVITIES

**MEMBER**

| | |
|---|---|
| 03/2024 – Present | **Senior Member**, Institute for Operations Research and the Management Sciences (INFORMS) |
| 06/2020 – Present | **Editorial Board**, Journal of Machine Learning Research |
| 06/2021 – Present | **Editorial Board**, Machine Learning |
| 06/2022 – Present | **Editorial Board**, Journal of Optimization Theory and Applications |
| 01/2022 – 12/2023 | **Editorial Board**, IEEE Transactions on Neural Networks and Learning Systems |
| 01/2022 – 12/2022 | **Editorial Board**, Neural Networks |
| 2023 | **Program Committee**, "*When Machine Learning meets Dynamical Systems: Theory and Applications (MLmDS 2023)*", AAAI 2023 Workshop |
| 2021 | **Program Committee**, "*New Frontiers in Federated Learning: Privacy, Fairness, Robustness, Personalization and Data Ownership (NFFL 2021)*", NeurIPS 2021 Workshop |
| 2020 | **Program Committee**, "*Optimization for Machine Learning (OPT 2020)*", NeurIPS 2020 Workshop |
| 2018 | **Program Committee**, "*Modern Trends in Nonconvex Optimization for Machine Learning*", ICML 2018 Workshop |

**REVIEWER / PROGRAM COMMITTEE (PEER-REVIEWED CONFERENCES)**

| | |
|---|---|
| 2017 – 2019 | International Conference on Machine Learning (ICML) |
| 2017 – 2021 | Conference on Neural Information Processing Systems (NIPS/NeurIPS) |
| 2018 – 2020 | International Conference on Learning Representations (ICLR) |
| 2019 – 2020 | International Conference on Artificial Intelligence and Statistics (AISTATS) |
| 2021 – 2022 | Conference on Learning Theory (COLT) |
| 2019 – 2021 | AAAI Conference on Artificial Intelligence (AAAI) |
| 2020 | International Joint Conferences on Artificial Intelligence (IJCAI) |
| 2019 – 2022 | IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR) |
| 2019 – 2021 | IEEE International Conference on Computer Vision (ICCV) |
| 2020 | European Conference on Computer Vision (ECCV) |
| 2019 – 2021 | Conference on Uncertainty in Artificial Intelligence (UAI) |

**REVIEWER (PEER-REVIEWED JOURNALS)**

| | |
|---|---|
| 2018 – 2022 | Journal of Machine Learning Research |
| 2020 – 2022 | Mathematical Programming |
| 2020 – 2021 | SIAM Journal on Optimization |
| 2021 | SIAM Journal on Numerical Analysis |
| 2020 – 2021 | IEEE Transactions on Neural Networks and Learning Systems |
| 2019 – 2020 | IEEE Transactions on Signal Processing |
| 2019 | Artificial Intelligence |
| 2018 | Optimization Methods and Software |
| 2020 | SIAM Journal on Mathematics of Data Science |

**SESSION CHAIR / ORGANIZER (CONFERENCES)**

| | |
|---|---|
| | International Conference on Machine Learning (ICML) |
| 2022 | - Sessions "*OPT: Non-Convex*" and "*Optimization/Reinforcement Learning*" |
| 2021 | - Sessions "*Optimization (Stochastic)*" and "*Optimization (Nonconvex)*" |
| | International Conference on Learning Representations (ICLR) |

| | |
|---|---|
| 2021 | - Session "*Oral Session 6*" |
| | International Conference on Artificial Intelligence and Statistics (AISTATS) |
| 2021 | - Session "*Theory and Practice of Machine Learning*" |
| | INFORMS Annual Meeting |
| 2023 | - Session "*First-Order Methods for Machine Learning*" |
| 2022 | - Session "*Optimization for Machine Learning*" |
| 2021 | - Session "*Recent Advances in Stochastic Gradient Algorithms*" |
| 2020 | - Session "*Recent Advances in Stochastic Gradient Algorithms for Machine Learning*" |
| 2019 | - Session "*Fast and Provable Nonconvex Optimization Algorithms in Machine Learning*" |
| 2018 | - Session "*Recent Advances in Optimization Methods for Machine Learning*" |
| | DIMACS/TRIPODS/MOPTA |
| 2018 | - Sessions "*Sparse Optimization*" and "*Stochastic Gradient Descent*" |

**IBM ACTIVITIES**

| | |
|---|---|
| 01/2022 – 12/2025 | **Champion**, International Conference on Machine Learning (ICML) |
| 09/2024 – Present | **Co-Chair**, Invention Development Team (IDT) |
| 11/2021 – Present | **Member**, Invention Development Team (IDT) |
| 07/2021 – 12/2024 | **Champion**, Professional Interest Community (PIC) - Learning |
| 2022 | **Member**, Research AI Pillar Accomplishment Committee |
| 2021 - 2023 | **Reviewer**, Pat Goldberg Memorial Best Paper Competition |
| 2020 | **Reviewer**, IBM Ph.D. Fellowships |

**SOCIETY MEMBERSHIPS**

| | |
|---|---|
| 2023 – Present | INFORMS Optimization Society |
| 2022 – Present | Association for the Advancement of Artificial Intelligence (AAAI) |
| 2016 – Present | Society for Industrial and Applied Mathematics (SIAM) |
| 2014 – Present | The Institute for Operations Research and the Management Sciences (INFORMS) |
| 2014 – Present | Beta Gamma Sigma (The International Business Honor Society) |

# MENTORSHIP

**PH.D. STUDENTS**

| | |
|---|---|
| 03/2021 – 02/2025 | **Wang Zhang**, Ph.D. student, Department of Mechanical Engineering, *Massachusetts Institute of Technology* (co-advise with Prof. Luca Daniel). |
| 10/2019 – 01/2025 | **Trang H. Tran**, Ph.D. student, School of Operations Research and Information Engineering, *Cornell University* (co-advise with Prof. Katya Scheinberg). |
| 08/2018 – 12/2021 | **Nhan H. Pham**, Ph.D. student, Department of Statistics and Operations Research, *University of North Carolina at Chapel Hill* (co-advise with Prof. Quoc Tran-Dinh). Now at *IBM Research*, USA. |

**IBM PH.D. FELLOWSHIP STUDENTS**

| | |
|---|---|
| 09/2026 – 06/2027 | **Hoang H. Nguyen**, Ph.D. student, H. Milton Stewart School of Industrial and Systems Engineering, *Georgia Institute of Technology*. |

**IBM RESEARCH INTERNS**

| | |
|---|---|
| 05/2025 – 08/2025 | **Chandni Nagda**, Ph.D. student, Department of Computer Science, *University of Illinois Urbana-Champaign*. |
| 05/2025 – 08/2025 | **Yating Zhou**, Ph.D. Student, Department of Electrical, Computer, and Systems Engineering, *Rensselaer Polytechnic Institute*. |
| 05/2025 – 08/2025 | **Yunshi Wen**, Ph.D. Student, Department of Electrical, Computer, and Systems Engineering, *Rensselaer Polytechnic Institute*. |

| | |
|---|---|
| 06/2023 – 09/2023 | **Quang M. Nguyen**, Ph.D. student, Department of Electrical Engineering and Computer Science, *Massachusetts Institute of Technology*. |
| 06/2022 – 09/2022 | **Tuomas Oikarinen**, Ph.D. student, Department of Computer Science and Engineering, *University of California San Diego*. |
| 05/2022 – 08/2022 | **Vinicius Lima Silva**, Ph.D. student, Department of Electrical and Systems Engineering, *University of Pennsylvania*. |
| 05/2023 – 08/2023, 05/2022 – 08/2022 | **Trang H. Tran**, Ph.D. student, School of Operations Research and Information Engineering, *Cornell University*. |
| 05/2021 – 08/2021 | **Connor Lawless**, Ph.D. student, School of Operations Research and Information Engineering, *Cornell University*. |
| 05/2021 – 08/2021 | **Huozhi Zhou**, Ph.D. student, Department of Electrical and Computer Engineering, *University of Illinois Urbana-Champaign*. |
| 05/2021 – 08/2021 | **Nathanael Assefa**, Ph.D. student, Department of Computer Science, *University of Illinois Urbana-Champaign*. |
| 06/2020 – 09/2020 | **Michael Huang**, Ph.D. student, Department of Data Science and Operations, Marshall School of Business, *University of Southern California*. |
| 06/2020 – 08/2020 | **Nhan H. Pham**, Ph.D. student, Department of Statistics and Operations Research, *University of North Carolina at Chapel Hill* (student of Prof. Quoc Tran-Dinh) (IBM Research Intern). Now at *IBM Research*, USA. |
| 05/2019 – 12/2019 | **Hongsheng Liu**, Ph.D. student, Department of Statistics and Operations Research, *University of North Carolina at Chapel Hill*. Now at *Huawei Technologies Co.*, Ltd., China. |
| 01/2019 – 08/2019 | **Haoran Zhu**, Ph.D. student, Department of Industrial and Systems Engineering, *University of Wisconsin – Madison. Now at Microsoft, USA*. |

**RPI-IBM PROJECT**

| | |
|---|---|
| 04/2025 – Present | **Nicolas Lizarralde**, Ph.D. Student, Department of Electrical, Computer, and Systems Engineering, *Rensselaer Polytechnic Institute* (student of Prof. Agung Julius). |
| 01/2024 – Present | **Yunshi Wen**, Ph.D. Student, Department of Electrical, Computer, and Systems Engineering, *Rensselaer Polytechnic Institute* (student of Prof. Agung Julius). |

**MIT-IBM PROJECTS**

| | |
|---|---|
| 04/2023 – 02/2025 | **Martin Ma**, M.E. Student, School of Engineering and Applied Sciences, *Harvard University*. |
| 03/2021 – 02/2025 | **Wang Zhang**, Ph.D. student, Department of Mechanical Engineering, *Massachusetts Institute of Technology* (student of Prof. Luca Daniel). |
| 09/2020 – 09/2021 | **Vindula Jayawardana**, Ph.D. student, Department of Electrical Engineering and Computer Science, *Massachusetts Institute of Technology* (student of Prof. Cathy Wu). |

**MIT SUPERUROP UNDERGRADUATE RESEARCH PROGRAM**

| | |
|---|---|
| 09/2023 – 05/2024 | **Anthony Baez**, Undergraduate student, Electrical Engineering and Computer Science, *Massachusetts Institute of Technology* (co-advise with Prof. Luca Daniel). |
| 06/2022 – 05/2023 | **Angelos Assos**, Undergraduate student, Computer Science and Mathematics, *Massachusetts Institute of Technology* (co-advise with Prof. Luca Daniel). |

**EXTERNAL STUDENTS**

| | |
|---|---|
| 04/2024 – Present | **Duc Toan Nguyen**, Ph.D. student, Department of Electrical and Computer Engineering, *Rice University*. |
| 09/2022 – 12/2024 | **Anh Duy Nguyen**, Ph.D. student, Department of Electrical and Computer Engineering, *University of Illinois at Urbana-Champaign*. |
| 10/2021 – 12/2022 | **Linbo Liu**, Ph.D. student, Department of Mathematics, *University of California San Diego*. |

| | |
|---|---|
| 06/2021 – Present | **Quang M. Nguyen**, Ph.D. student, Department of Electrical Engineering and Computer Science, *Massachusetts Institute of Technology*. |
| 06/2021 – Present | **Hoang H. Nguyen**, Ph.D. student, H. Milton Stewart School of Industrial and Systems Engineering, *Georgia Institute of Technology*. |
| 03/2021 – 12/2022 | **Yilan Chen**, Ph.D. student, Department of Computer Science and Engineering, *University of California San Diego* (student of Prof. Tsui-Wei Weng). |
| 01/2019 – 12/2022 | **Toan N. Nguyen**, Ph.D. student, Department of Computer Science and Engineering, *University of Connecticut* (student of Prof. Marten van Dijk). |
| 01/2019 – 11/2021 | **Nhuong V. Nguyen**, Ph.D. student, Department of Computer Science and Engineering, *University of Connecticut* (student of Prof. Marten van Dijk). |

## PH.D. THESIS COMMITTEE MEMBERSHIP

| | |
|---|---|
| 10/2025 – 12/2025 | **Thi My Le Le**, Ph.D. student, Laboratoire de Conception, Optimisation et Modélisation des Systèmes, *Université de Lorraine* (student of Prof. Le Thi Hoai An). |
| 10/2021 – 01/2025 | **Trang H. Tran**, Ph.D. student, School of Operations Research and Information Engineering, *Cornell University* (student of Prof. Katya Scheinberg). |
| 09/2020 – 06/2022 | **Deyi Liu**, Ph.D. student, Department of Statistics and Operations Research, *University of North Carolina at Chapel Hill* (student of Prof. Quoc Tran-Dinh). Now at *Bytedance*, USA. |

## TEACHING EXPERIENCE

| | |
|---|---|
| 08/2024 – Present | **Adjunct Professor**, Department of Industrial and Systems Engineering, *Lehigh University*, Bethlehem, PA <br> Course: Optimization Methods in Machine Learning (ISE 444) (Fall 2024, Fall 2025) |
| 09/2014 – 05/2015 | **Teaching Assistant**, Department of Industrial and Systems Engineering, *Lehigh University*, Bethlehem, PA <br> Courses: Engineering Probability (ISE 111), Applied Engineering Statistics (ISE 121) |
| 01/2012 – 12/2013 | **Graduate (Teaching) Assistant**, College of Business, *McNeese State University*, Lake Charles, LA <br> Courses: Human Resource Management (MGMT 310), Staffing (MGMT 315), Strategic Management (MGMT 481), Management Theory and Organizational Behavior (MGMT 604), Issues in Global Business (BADM 218), Entrepreneurial Finance for Small Business (FIN 308) |
| 09/2007 – 05/2008 | **Teaching Assistant**, Faculty of Computational Mathematics and Cybernetics, *Lomonosov Moscow State University*, Moscow, Russia <br> Courses: Mathematical Analysis (Calculus), Linear Algebra and Analytic Geometry |

## OTHER WORK EXPERIENCE

| | |
|---|---|
| 05/2013 – 08/2013 | **Graduate Assistant (Web Developer)**, College of Business, *McNeese State University*, Lake Charles, LA |
| 09/2008 – 08/2009 | **Software Engineer**, *FPT Software Company*, Ho Chi Minh City, Vietnam |

## IBM RESEARCH ACCOMPLISHMENTS

| | |
|---|---|
| 2024 | Granite Time Series Foundation Models (O-level) |
| 2023 | Research Contributions to Time Series Foundation Models (A-level) |
| 2022 | Federated Learning Security and Privacy (O-level) |
| 2022 | Dynamic Approaches for Machine Learning (A-level) |
| 2022 | Regression Optimization for Heavy Processing Industries (A-level) |
| 2022 | Combinatorial Sparsity for AI (A-level) |
| 2021 | Stochastic Gradient Methods: Theory and Applications (A-level) |

| | |
|---|---|
| 2019 | SROM: Smarter Resource & Operations Management (A-level) |

## HONORS & AWARDS

| | |
|---|---|
| 2024 | INFORMS Senior Member |
| 2023 | 2022 Pat Goldberg Memorial Best Paper Award |
| 2023 | IBM 9th Plateau Invention Achievement Award |
| 2023 | IBM Outstanding Technical Achievement Award, "*Dynamic Approaches for Machine Learning*" |
| 2023 | IBM Outstanding Technical Achievement Award, "*Regression Optimization for Heavy Processing Industries*" |
| 2023 | IBM Outstanding Technical Achievement Award, "*Federated Learning Security and Privacy*" |
| 2023 | IBM Outstanding Technical Achievement Award, "*Combinatorial Sparsity for AI*" |
| 2023 | IBM 8th Plateau Invention Achievement Award |
| 2022 | IBM Master Inventor |
| 2022 | IBM 7th Plateau Invention Achievement Award |
| 2022 | IBM 6th Plateau Invention Achievement Award |
| 2022 | IBM Outstanding Technical Achievement Award, "*Stochastic Gradient Methods: Theory and Applications*" |
| 2022 | IBM 5th Plateau Invention Achievement Award |
| 2022 | IBM 4th Plateau Invention Achievement Award |
| 2021 | IBM 3rd Plateau Invention Achievement Award |
| 2020 | IBM 2nd Plateau Invention Achievement Award |
| 2020 | IBM Research Division Award |
| 2020 | IBM Outstanding Technical Achievement Award, "*SROM: Smarter Resource & Operations Management*" |
| 2020 | IBM 1st Plateau Invention Achievement Award |
| 2019 | NeurIPS 2019 Top Reviewers |
| 2019 | Elizabeth V. Stout Dissertation Award, *Lehigh University*, Bethlehem, PA |
| 2018 | Van Hoesen Family Best Publication Award, *Lehigh University*, Bethlehem, PA |
| 2016 – 2017 | Dean's Doctoral Fellowship (RCEAS), *Lehigh University*, Bethlehem, PA |
| 2014 – 2015 | Dean's Doctoral Assistantship, *Lehigh University*, Bethlehem, PA |
| 2014 | Beta Gamma Sigma (Academic Honor Society) |