

FENG GU

Professor of Computer Science
College of Staten Island, City University of New York
2800 Victory Boulevard, Staten Island, NY 10314
Doctoral Faculty of Computer Science
Graduate Center of CUNY
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RESEARCH INTERESTS

Modeling and Simulation, High Performance Computing, Bioinformatics

EDUCATION

Georgia State University, Atlanta
Ph.D. in Computer Science **2011**
Dissertation: "Dynamic Data Driven Application System for Wildfire Spread Simulation"

Georgia State University, Atlanta
M.S. in Computer Science **2009**

Beijing Institute of Machinery, Beijing, China
M.S. in Information Systems **2003**

China University of Mining and Technology, Xuzhou, China
B.S. in Mechanical Engineering **1998**

TEACHING EXPERIENCES

Graduate Center of CUNY

Spring 2024

CSC 90000 Dissertation Supervision, CSC 790000 Independent Study/Research Project

Fall 2023

CSC 90000 Dissertation Supervision

Spring 2023

CSC 90000 Dissertation Supervision

Fall 2022

CSC 90000 Dissertation Supervision

Spring 2022

CSC 90000 Dissertation Supervision

Fall 2021

CSC 90000 Dissertation Supervision

Spring 2021

CSC 90000 Dissertation Supervision

Fall 2020

CSC 90000 Dissertation Supervision

Spring 2020

CSC 90000 Dissertation Supervision

Spring 2017

CSC 76010 Scientific Parallel Computing

Fall 2014

CSC 86030 Modeling & Simulation

*College of Staten Island***Fall 2024**

CSC 211 Intermediate Programming, CSC 229 Introduction to High Performance Computing, CSC 450 Honors Workshop, CSC 759 Graduate Research Laboratory

Spring 2024

CSC 429 Advanced High Performance Computing, CSC 450 Honors Workshop, CSC 770 Parallel Computing

Fall 2023

CSC 229 Introduction to High Performance Computing

Spring 2023

CSC 211 Intermediate Programming, CSC 799 Thesis Research

Fall 2022

CSC 429 Advanced High Performance Computing, CSC 799 Thesis Research

Spring 2022

CSC 211 Intermediate Programming, CSC 799 Thesis Research

Fall 2021

CSC 211 Intermediate Programming

Spring 2020

CSC 229 Introduction to High Performance Computing

Fall 2019

CSC 429 Advanced High Performance Computing, CSC 770 Parallel Computing

Spring 2019

CSC 429 Advanced High Performance Computing

Fall 2018

CSC 211 Intermediate Programming, CSC 754 System Simulation Topics

Spring 2018

CSC 429 Advanced High Performance Computing, CSC 450 Honor's Workshop

Fall 2017

CSC 429 Advanced High Performance Computing, CSC 450 Honor's Workshop

Spring 2017

CSC 229 Introduction to High Performance Computing, CSC 754 System Simulation Topics

Fall 2016

CSC 229 Introduction to High Performance Computing, CSC 429 Advanced High Performance Computing

Spring 2016

CSC 211 Intermediate Programming, CSC 229 Introduction to High Performance Computing

Fall 2015

CSC 429 Advanced High Performance Computing

Spring 2015

CSC 229 Introduction to High Performance Computing, CSC 450 Honor Workshop, CSC 754 System Simulation Topics

Spring 2014

CSC 229 Introduction to High Performance Computing, CSC 770 Parallel Computing

Fall 2013

CSC 429 Advanced High Performance Computing

Voorhees College, Denmark

Spring 2013

CMP 333 Computer Architecture II, CMP 420 Operating Systems, CMP 449 Senior Seminar I, CMP 450 Senior Seminar II

Fall 2012

CMP 333 Computer Architecture I, CMP 410 Data Structures and Algorithms, CMP 449 Senior Seminar I

Spring 2012

CMP 130 Introduction to Computer Concepts, CMP 334 Computer Architecture II, CMP 420 Operating Systems, CMP 450 Senior Seminar II

Fall 2011

CMP 130 Introduction to Computer Concepts, CMP 333 Computer Architecture I, CMP 410 Data Structures and Algorithms, CMP 449 Senior Seminar I

Spring 2011

CMP 130 Introduction to Computer Concepts, CMP 420 Operating Systems, CMP 450 Senior Seminar II

Fall 2010

CMP 130 Introduction to Computer Concepts, CMP 410 Data Structures and Algorithms, CMP 449 Senior Seminar I

Georgia State University, Atlanta

Summer 2009

CSC 3320 System Level Programming

Spring 2009

CSC 1310 Introduction to Computer Programming Non-major (Python)

Fall 2007

CSC 1010 Computers and Applications

WORKING EXPERIENCES

College of Staten Island, Staten Island, NY
CUNY Graduate Center, New York, NY

Professor of Computer Science

August 2023 – Present

College of Staten Island, Staten Island, NY
CUNY Graduate Center, New York, NY

Associate Professor of Computer Science

August 2019 – July 2023

College of Staten Island, Staten Island, NY
CUNY Graduate Center, New York, NY

Assistant Professor of Computer Science

August 2013 – July 2019

Voorhees College, Denmark, South Carolina

Chair, Department of Computer Science and Mathematics

August 2012 – July 2013

Assistant Professor of Computer Science

August 2010 – July 2013

Higher Education Press, Beijing, China

Development Editor

April 2003 – July 2006

China Research Coal Institute, Nanjing, China

Assistant Engineer

August 1998 – August 2000

PUBLICATIONS

REFEREED ARTICLES

1. Ren, H., Yue, Z., **Gu, F.***, Li, M., Chen, T., and Bai, G. A novel reversible data hiding methods in encrypted images using efficient parametric binary tree labeling. *Knowledge-Based Systems*, Elsevier, 300, 112198, 2024.
2. Ren, R., Hao, Q., **Gu, F.***, Niu, S., Zhang, J., and Wang, M. EMF-Net: An edge-guided multi-feature fusion network for text manipulation detection. *Expert Systems with Applications*, Elsevier, 249, 123548, 2024.
3. Wang, M. H., Xing, L., Pan, Y., **Gu, F.**, Fang, J., Yu, X., Pang, C. P., and Chong, K. L. AI-based advanced approaches and dry eye disease detection based on multi-source evidence: Cases, applications, issues, and future directions. *Big Data Mining and Analytics*, Tsinghua University Press, 7(2), 445-484, 2024.
4. Han, J, **Gu, F.***, and Wu, G. Managing cooperation in multipartner project teams with heterogeneous team members. *Journal of Construction Engineering and Management*, American Society of Civil Engineers, 149(10), 2023.
5. Zhang, J., Cui, H, Yang, A. L., **Gu, F.***, Shi, C., Zhang, W., and Niu, S. An intelligent digital twin system for paper manufacturing in the paper industry. *Expert Systems with Applications*, Elsevier, 120614, 2023.

6. Zhang, T. T., Hao, G.-S., Lim, M. H., **Gu, F.**, and Wang, X. A deep hybrid transfer learning-based evolutionary algorithm and its application in the optimization of high-order problems. *Soft Computing*, Springer, 1-12, 2023.
7. Gong, Y., Dai, M., and **Gu, F.*** CARESIM: An integrated agent-based simulation environment for crime analysis and risk evaluation (CARE). *Expert Systems with Applications*, Elsevier, 214, 2023.
8. Yang, A., and **Gu, F.*** A mesh-less, ray-based deep neural network method for the Helmholtz equation with high frequency. *International Journal of Numerical Analysis and Modeling*, Global Science Press, 19(4): 587-601, 2022.
9. Wang, C., Tan, X., Yao, C., **Gu, F.**, Shi, F., and Cao, H. Trusted blockchain-driven IoT security consensus mechanism. *Sustainability*, MDPI, 14(9): 5200, 2022.
10. Hou, Y., Hao, G., Zhang, Y., **Gu, F.**, and Xu, W. A multi-objective discrete particle swarm optimization method for particle routing in distributed particle filters. *Knowledge-Based Systems*, Elsevier, 240: 108068, 2022.
11. Zhang, X., Zhao, L., Zhong, W., and **Gu, F.*** A novel hybrid resampling algorithm for parallel/distributed particle filters. *Journal of Parallel and Distributed Computing*, Elsevier, 151:24-37, 2021.
12. Zhang, X., Zhao, L., Zhong, W., and **Gu, F.*** Performance analysis of resampling algorithms of parallel/distributed particle filters. *IEEE Access*, IEEE, 9: 4711-4725, 2021.
13. Wei, Y., **Gu, F.**, and Zhang, W. A two-phase iterative machine learning method in identifying mechanical biomarkers of peripheral neuropathy. *Expert Systems with Applications*, Elsevier, 169: 114333 (1-13), 2021.
14. Dai, M., Hu, X., and **Gu, F.** Citizen characteristics, neighborhood conditions, and prior contact with the police: A comparative study of public satisfaction with the police. *Canadian Journal of Criminology and Criminal Justice*, UTP, 62, (4): 77-101, 2021.
15. Zhong, W., and **Gu, F.** Predicting local protein 3D structures using clustering deep recurrent neural network. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2020.
16. Hou, Y., Hao, G.-S., Zhang, Y., **Gu, F.**, Wang, X., and Zhang, T. T. A molecular interactions-based social learning particle swarm optimization algorithm. *IEEE Access*, 8: 135661-135674, 2020.
17. Zhong, Wei, and **Gu, F.** A multi-level deep learning system for malware detection. *Expert Systems with Applications*, 133: 151-162, 2019.
18. **Gu, F.*** On-demand data assimilation of large-scale spatial temporal systems using sequential Monte Carlo methods. *Simulation Modelling Practice and Theory*, Elsevier, 85: 1-14, 2018.
19. Dai, M., He, W., Tian, X., Giralddi, A.M., and **Gu, F.** Working with communities on social media: varieties in the use of Facebook and Twitter by local police, *Online Information Review*, Emerald Publishing, 41(6): 782-796, 2017. (Outstanding Paper in the 2018 Emerald Literati Awards)
20. Yu, N., Yu, Z., **Gu, F.**, Li, T., Tian, X., and Pan, Y. Deep learning in genomic and medical image data analysis: challenges and approaches, *Journal of Information Processing Systems*, 13(2): 204-214, KIPS, 2017.

21. **Gu, F.*** Localized recursive spatial-temporal state quantification method for data assimilation of wildfire spread simulation, *SIMULATION: Transactions of The Society for Modeling and Simulation International*, 93(4): 343-360, SAGE Publishing, 2017.
22. Yu, N., Guo, X., **Gu, F.**, and Pan, Y. Signalign: An ontology of DNA as signal for comparative gene structure prediction using information-coding-and-processing techniques, *IEEE Transactions on NanoBioscience*, 15(2): 119-130, IEEE, accepted, 2016.
23. Yu, N., Yu, Z., Li, B., **Gu, F.**, and Pan, Y. A comprehensive review of emerging computational methods for gene identification, *Journal of Information Processing Systems*, 12(1): 1-34, KIPS, 2016.
24. Bai, F., **Gu, F.**, Hu, X., and Guo, S. Particle routing in distributed particle filters for large-scale spatial temporal systems, *IEEE Transactions on Parallel and Distributed Systems*, 27(2): 481-493, IEEE, 2016.
25. Wu, S., Zhang, P., Li, F., **Gu, F.**, and Pan, Y. A hybrid discrete particle swarm optimization-genetic algorithm for service-oriented manufacturing systems, *Journal of Central South University*, 23: 421-429, Springer, 2016.
26. **Gu, F.***, and Wang, X. Analysis of allele specific expression--a survey, *Tsinghua Science and Technology*, 20(5): 513-529, IEEE Xplore, 2015.
27. Ai, C., Zhong, W., Yan, M., and **Gu, F.** A partner-matching framework for social activity communities. *Computational Social Networks*, 2014 1:5: 1-12, Springer, 2014.
28. Guo, X., Yu, N., **Gu, F.**, Ding, X., Wang, J., and Pan, Y. Genome-wide interaction-based association of human diseases — a survey. *Tsinghua Science and Technology*, 19(6): 596-616, IEEE Xplore, 2014.
29. Zheng, X., and **Gu, F.** Fast Fourier transform on FCC and BCC lattices with outputs on FCC and BCC lattices respectively, *Journal of Mathematical Imaging and Vision*, 49(3): 530-550, Springer, 2014.
30. Yan, X., **Gu, F.**, Hu, X., and Pan, Y. Dynamic formation control for autonomous underwater vehicles, *Journal of Central South University*, 21:113-123, Springer, 2014.
31. Xue, H., **Gu, F.**, and Hu, X. Data assimilation using sequential Monte Carlo methods in wildfire spread simulation, *ACM Transactions on Modeling and Computer Simulation*, 22(4), ACM, 2012.
32. **Gu, F.**, Hu, X. Analysis and quantification of data assimilation based on sequential Monte Carlo methods for wildfire spread simulation, *International Journal of Modeling, Simulation, and Scientific Computing*, 2010 (4): 445-468, World Scientific, 2010.
33. **Gu, F.**, Lu, T. The study and implementation of web-based office automation. *Journal of Beijing Institute of Machinery*, vol. 17, No.3, 2002.

REFEREED PROCEEDINGS

1. Zhang, X., **Gu, F.**, Zhong, W., and Ai, C. A hybrid resampling technique with adaptive intervals used in the parallel/distributed particle filters. 2023 7th International Conference on Computer Science and Artificial Intelligence, 319-325, 2023.

2. Gong, Y., **Gu, F.**, and Dai, M. A methodology of face validation with domain experts for agent-based crime risk prediction. 2023 IEEE 3rd International Conference on Software Engineering and Artificial Intelligence (SEAI 2023), 96-103, 2023.
3. Feng, W., Zhang, W., Meng, M., Gong, Y., and **Gu, F.** A novel binary classification algorithm for carpal tunnel syndrome detection using LSTM, 2023 IEEE 3rd International Conference on Software Engineering and Artificial Intelligence (SEAI 2023), 143-147, 2023.
4. Gong, Y., **Gu, F.**, and Dai, M. Predicting the risks of street violent crimes using agent-based modeling. 2021 IEEE SmartWorld, Ubiquitous Intelligence & Computing, Advanced & Trusted Computing, Scalable Computing & Communications, Internet of People and Smart City Innovation (SmartWorld/SCALCOM/UIC/ATC/IOP/SCI), 433-439, 2021.
5. Zhang, X., Zhao, L., and **Gu, F.** Boosting the speed of real-time multi-object trackers. 2021 IEEE SmartWorld, Ubiquitous Intelligence & Computing, Advanced & Trusted Computing, Scalable Computing & Communications, Internet of People and Smart City Innovation (SmartWorld/SCALCOM/UIC/ATC/IOP/SCI), 487-493, 2021.
6. Zhang, X., Zhao, L., and **Gu, F.** Speech enhancement with topology-enhanced generative adversarial networks (GANs). Interspeech, 2726-2730, 2021.
7. Wei, Y., Zhang, W., and **Gu, F.** Towards diagnosis of carpal tunnel syndrome using machine learning. 2020 3rd Artificial Intelligence and Cloud Computing Conference (AICCC 2020), 76-82, 2020.
8. Gong, Y., Chen, K., **Gu, F.**, and Wang, F. The design and implementation of a campus web information system based on micro-service architecture. 2020 2nd International conference on Applied Machine Learning and Data Science, 012044:1-7, 2020.
9. Gong, Y., **Gu, F.**, Chen, K., and Wang, F. The architecture of micro-services and the separation of front-end and back-end applied in a campus information system. 2020 IEEE International Conference on Advances in Electrical Engineering and Computer Applications, 321-324, 2020.
10. Zhang, X., Xiao, J., Gong, Y., Yu, N., Zhang, W., Jang, S., and **Gu, F.** Handling the missing data problem in electronic health records for cancer prediction, MSM 2020, 2020 Spring Simulation Multi-Conference, 57: 1-9, 2020.
11. Zhang, X., and **Gu, F.** Adaptive particle sampling and resampling parallel/distributed particle filters, HPC 2019, 2019 Spring Simulation Multi-Conference, 2019.
12. Zhang, X., Xiao, J., and **Gu, F.** Applying support vector machine to electronic health records for cancer classification, MSM 2019, 2019 Spring Simulation Multi-Conference, 2019.
13. Zhang, X., Mohamed, A., Nguyen, L., and **Gu, F.** Performance analysis of parallel/distributed particle filters, TMS/DEVS 2018, 2018 Spring Simulation Multi-Conference, 761-771, 2018. (**TMS/DEVS 2018 best paper award**)
14. Yu, N., Yu, Z., **Gu, F.**, and Pan, Y. Evaluating the impact of encoding schemes on deep auto-encoders for DNA annotation, 13th International Symposium on Bioinformatics Research and Applications (ISBRA 2017), 390-395, 2017.
15. Zhang, X., Huang, L., Ferguson-Hull, E., and **Gu, F.** Adaptive particle routing in parallel/distributed particle filters, HPC 2017, 2017 Spring Simulation Multi-Conference, 580-589, 2017.

16. Liao, S., Xiao, J., Xie, Y., and **Gu, F.** Towards use of electronic health records: Cancer classification, MSM 2017, 2017 Spring Simulation Multi-Conference, accepted, 2017.
17. **Gu, F.**, Syeda, R., and Ai, C. Geo-referenced image data assimilation for wildfire spread simulation, ANSS 2016, 2016 Spring Simulation Multi-Conference, 78-85, 2016.
18. Xie, X., Verbraeck, A., and **Gu, F.** Data assimilation in discrete event simulations-A rollback based sequential Monte Carlo approach, TMS/DEVS 2016, 2016 Spring Simulation Multi-Conference, 522-529, 2016.
19. **Gu, F.**, Butt, M., Ai, C., Shen, X., and Xiao, J. Adaptive particle filtering in data assimilation of wildfire spread simulation, 2015 Summer Simulation Multi-Conference, 159-168, 2015.
20. Yu, N., Guo, X., **Gu, F.**, and Pan, Y. DNA as X: an information-coding-based model to improve comparative gene analysis, 11th International Symposium on Bioinformatics Research and Applications (ISBRA 2015), 366-377, 2015.
21. **Gu, F.** Adaptively perturbing localized state space in data assimilation of wildfire spread simulation, ANSS 2015, Spring Simulation Multi-Conference 2015, 254-263, 2015. (**ANSS best paper runner-up**)
22. Yu, N., **Gu, F.**, Guo, X., and He, Z. A Fine-grained flow control model for cloud-assisted data broadcasting, 18th CNS, Spring Simulation Multi-Conference 2015, 324-331, 2015.
23. Ai, C., Zhong, W., Yan, M., and **Gu, F.** Partner matching applications of social networks. COCOON 2014, 647-656, 2014.
24. Yan, X., **Gu, F.**, Hu, X., and Engstrom, C. Dynamic data driven event reconstruction for traffic system using sequential Monte Carlo methods, 2013 Winter Simulation Conference, 2042-2053, 2013.
25. **Gu, F.**, Hu, X. Analysis of sequential Monte Carol methods in dynamic data driven simulation of wildfire, Huntsville Simulation Conference 2010.
26. Yan, X., **Gu, F.**, Hu, X., Guo, S. A dynamic data driven application system for wildfire spread simulation, Proc. 2009 Winter Simulation Conference (WSC'09), 2009.
27. Yan, X., Chen, B., Qian, H., **Gu, F.**, Hu, X. A handover scheme for subnet mobility in heterogeneous networks. World Conference on Engineering, 2009.
28. **Gu, F.**, Yan, X., Hu, X. State estimation using particle filters in wildfire spread simulation. Proc. 42nd Annual Simulation Symposium (ANSS), 2009.
29. **Gu, F.**, Hu, X. Towards applications of particle filter in wildfire spread simulation. Proc. 2008 Winter Simulation Conference (WSC'08), 2008.
30. **Gu, F.**, Hu, X., Ntamo, L. Towards validation of DEVS-FIRE wildfire simulation model. Proc. High Performance Computing and Simulation Symposium (HPCS08), part of SpringSim'08, 2008.

PROFESSIONAL ACTIVITIES

Peer Reviewer for the following journals and conferences

1. Complexity
2. Smart Science
3. Mathematical Problems in Engineering

4. Big Data and Analytics
5. IEEE Access
6. IEEE Transactions on Parallel and Distributed Systems
7. Expert Systems with Applications
8. Concurrency and Computation
9. Personal and Ubiquitous Computing
10. International Journal of Simulation and Process Modelling
11. Physica A
12. IEEE Transactions on Neural Networks and Learning Systems
13. IEEE INFOCOM 2017
14. Tsinghua Science and Technology
15. Transactions on Spatial Algorithms and Systems
16. IEEE INFOCOM 2016
17. Engineering Application of Artificial Intelligence
18. Symposium on Theory of Modeling and Simulation (TMS/DEVS) 2015
19. IEEE INFOCOM 2015
20. IEEE/ACM Transactions on Computational Biology and Bioinformatics
21. IEEE INFOCOM 2014
22. ACM Transaction on Modeling and Computer Simulation
23. Symposium on Theory of Modeling and Simulation (TMS/DEVS) 2013
24. Intelligent Agent Technology 2013
25. 26th ACM/IEEE/SCS Workshop on Principles of Advanced and Distributed Simulation (PADS 2012)
26. 9th International Conference on Modeling, Optimization and SIMulation (MOSIM 2012)
27. International Journal of Agent Technologies and Systems
28. Simulation: Transactions of the Society for Modeling and Simulation International
29. International Journal of Modeling, Simulation, and Scientific Computing
30. International Journal of Knowledge and Systems Science
31. Agent-Directed Simulation Symposium 2011 (ADS 2011)
32. Huntsville Simulation Conference 2010

Member of Scientific Working Group Board of SC EPSCoR/IDeA

Demo/Exhibition Co-Chair of The 36th IEEE Sarnoff Symposium

Demo/Exhibition Co-Chair of The 38th IEEE Sarnoff Symposium

Technical Program Committee and Session Chair

1. 2023 International Conference on Communications, Computing and Artificial Intelligence (CCCAI 2023)
2. 2023 International Conference on Mathematics, Computation and Modeling (CMCM 2023)
3. 2023 4th International Conference on Computing, Networks and Internet of Things (CNIOT 2023)
4. 2023 7th International Conference on Cloud and Big Data Computing (ICCBDC 2023)

5. 2023 The 15th International Conference on Computer Research and Development (ICCRD 2023)
6. The International Conference on Management Engineering, Software Engineering and Service Sciences (ICMSS 2023)
7. 2022 the 8th International Conference on Communication and Information Processing (ICCIP 2022)
8. 2022 5th International Conference on Machine Learning and Natural Language Processing (MLNLP 2022)
9. Artificial Intelligence for Industries 2022 (ai4i 2022)
10. 2022 5th International Conference on Computer Science and Software Engineering (CSSE 2022)
11. 2022 5th Artificial Intelligence and Cloud Computing Conference (AICCC 2022)
12. 2022 the 5th International Conference on Computing and Big Data (ICCBD 2022)
13. The Fourteenth International Conference on Advances in System Simulation (SIMUL 2022)
14. 2022 11th International Conference on Computer Technologies and Development (ICCTD 2022)
15. International Conference on Pattern Recognition, Machine Vision and Intelligent Algorithms (PRMVIA 2022)
16. Annual Modeling and Simulation Conference 2021 (ANNSIM 2022)
17. The 6th International Conference on Cloud and Big Data Computing (ICCBDC 2022)
18. 2022 5th International Conference on Data Science and Information Technology (DSIT 2022)
19. 2022 4th International Conference on Information Technology and Computer Communications (ITCC 2022)
20. The 7th IEEE International Conference on Cloud Computing and Big Data Analysis (ICCCBDA 2022)
21. 2022 6th International Symposium on Computer Science and Intelligent Control (ISCSIC 2022)
22. 2022 4th International Conference on Applications of Big Data and Artificial Intelligence (ABDAI 2022)
23. 2022 6th International Conference on Data Mining, Communications and Information Technology (DMCIT 2022)
24. 2022 4th International Conference on Pattern Recognition and Intelligent Systems (PRIS 2022)
25. 2022 1st Asia Pacific Computer Technologies Conference (APCT 2022)
26. 2022 International Conference on Big Data and Education (ICBDE 2022)
27. 2021 the 4th International Conference on Computing and Big Data (ICCBD 2021)
28. Annual Modeling and Simulation Conference 2021 (ANNSIM 2021)
29. 2021 4th International Conference on Algorithms, Computing and Artificial Intelligence (ACAI 2021)
30. 2021 IEEE International Conference on Educational Technology (ICET 2021)
31. Artificial Intelligence for Industries 2021 (ai4i 2021)

32. 2021 4th International Conference on Computer Science and Software Engineering (CSSE 2021)
33. 2021 4th Artificial Intelligence and Cloud Computing Conference (AICCC 2021)
34. The 3rd International Conference on Industrial Applications of Big Data and Artificial Intelligence (BDAI 2021)
35. The 5th International Conference on Cloud and Big Data Computing (ICCBDC 2021)
36. 2021 6th International Conference on Big Data and Computing (ICBDC 2021)
37. 2021 4th International Conference on Computer Graphics and Virtuality (ICCGV 2021)
38. 2021 International Symposium on Neural Computing and Applications (ISNCA 2021)
39. 2021 3rd International Conference on Information Technology and Computer Communications (ITCC 2021)
40. Artificial Intelligence for Industries 2020 (ai4i 2020)
41. 2020 International Symposium on Neural Computing and Applications (ISNCA 2020)
42. 2020 2nd International Conference on Information Technology and Computer Communications (ITCC 2020)
43. 2020 the 3rd International Conference on Computing and Big Data (ICCBD 2020)
44. 2020 3rd Artificial Intelligence and Cloud Computing Conference (AICCC 2020)
45. 2020 The 4th International Conference on E-Business and Internet (ICEBI 2020)
46. 2020 International Conference on Electronics, Communications and Information Technology (CECIT 2020)
47. 2020 2nd International Conference on Advanced Information Science and System (AISS 2020)
48. 2020 3rd International Conference on Data Science and Information Technology (DSIT 2020)
49. 2020 International Conference on Big Data Engineering (BDE 2020)
50. 2020 International Conference on Computing, Networks, and Internet of Things (CNIOT 2020)
51. 2020 5th International Conference on Big Data and Computing (ICBDC 2020)
52. 2020 International Conference on Big Data and Education (ICBDE 2020)
53. 2020 the 3rd International Conference on Big Data Management (ICBDM 2020)
54. The 5th IEEE International Conference on Cloud Computing and Big Data Analysis (ICCCBDA 2020)
55. Artificial Intelligence for Industries 2019 (ai4i 2019)
56. 2019 2nd Artificial Intelligence and Cloud Computing Conference (AICCC 2019)
57. 2019 International Conference on Advanced Information Science and System (AISS 2019)
58. 2019 International Conference on Big Data Engineering (BDE 2019)
59. 2019 International Conference on Information Technology and Computer Communications (ITCC 2019)
60. The 2nd International Conference on Computing and Big Data (ICCBD 2019)
61. 2019 4th International Conference on Big Data and Computing (ICBDC 2019)

62. 2019 International Conference on Big Data and Education (ICBDE 2019)
63. The 4th IEEE International Conference on Cloud Computing and Big Data Analysis (ICCCBDA 2019)
64. The 3rd International Conference on Cloud and Big Data Computing (ICCBDC 2019)
65. The 3rd IEEE International Conference on Cloud Computing and Big Data Analysis (ICCCBDA 2018)
66. The Fourth International Workshop on Mobile Cloud Computing Systems, Management, and Security (MCSMS 2018)
67. First IEEE International Conference on Artificial for Industries (IEEE AI4I 2018)
68. Tools with Artificial Intelligence (ICTAI), 2018 IEEE 30th International Conference on (IEEE ICTAI 2018)
69. Winter Simulation Conference 2018 (WSC 2018)
70. Annual Simulation Symposium 2018 (ANSS 2018)
71. International Conference on Cloud and Big Data Computing (ICCBDA 2018)
72. The 2nd International Conference on Cloud and Big Data Computing (ICCBDC 2018)
73. Tools with Artificial Intelligence (ICTAI), 2017 IEEE 29th International Conference on (IEEE ICTAI 2017)
74. Winter Simulation Conference 2017 (WSC 2017)
75. The 2nd IEEE International Conference on Cloud Computing and Big Data Analysis (ICCCBDA 2017)
76. The 1st International Conference on Cloud and Big Data Computing (ICCBDC 2017)
77. Annual Simulation Symposium (ANSS 2017)
78. Symposium on Theory of Modeling and Simulation 2017 (TMS/DEVS 2017)
79. The 6th IEEE International Conference on Big Data and Cloud Computing (BDCloud 2016)
80. Tools with Artificial Intelligence (ICTAI), 2016 IEEE 28th International Conference on (IEEE ICTAI 2016)
81. 13th ACS/IEEE International Conference on Computer Systems and Applications (AICCSA 2016)
82. The 1st International Workshop on Dew Computing (DEWCOM 2016)
83. Annual Simulation Symposium 2016 (ANSS 2016)
84. Symposium on Theory of Modeling and Simulation 2016 (TMS/DEVS 2016)
85. Winter Simulation Conference 2015 (WSC 2015)
86. The 3rd International IBM Cloud Academy Conference
87. 5th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH 2015)
88. Symposium on Theory of Modeling and Simulation 2015 (TMS/DEVS 2015)
89. 4th International Conference on Simulation and Modeling Methodologies, Technologies and Applications (SIMULTECH 2014)
90. Winter Simulation Conference 2014 (WSC 2014)
91. ACM Southeast Conference 2014 (ACMSE 2014)

PRESENTATIONS

1. Using an integrated agent-based simulation environment to conduct randomized controlled trials in policing. 2022 American Society of Criminology Meeting, Atlanta, GA, USA, November 17, 2022.
2. Dynamic data driven application systems. Zhongnan University of Economics and Law, Wuhan, Hubei, China, September 27, 2022.
3. Dynamic data driven application systems, Wuhan University, Wuhan, Hubei, China, April 7, 2022.
4. Dynamic data driven application systems, Tongji University, Shanghai, China, March 30, 2022.
5. Predicting the risk in person-based policing strategies. Annual meeting of the Academy of Criminal Justice Sciences, Las Vegas, NV, USA, March 2022.
6. Simulating high-risk individuals for person-based policing strategies. Annual meeting of Western Society of Criminology, Honolulu, HI, USA, February 2022.
7. Dynamic data driven application systems, Dalian Maritime University, Dalian, Liaoning, China, January 6, 2022.
8. Dynamic data driven application systems, Soochow University, Suzhou, Jiangsu, China, December 29, 2021.
9. Designing an agent-based model in person-based policing strategies. The annual meeting of American Society of Criminology, Chicago, USA, November 2021.
10. Predicting the risks of street violent crimes using agent-based modeling. 2021 IEEE Smart World Congress (SmartWorld/SCALCOM/UIC/ATC/IOP/SCI). Atlanta, GA, USA, October 2021.
11. Boosting the speed of real-time multi-object trackers. 2021 IEEE Smart World Congress (SmartWorld/SCALCOM/UIC/ATC/IOP/SCI). Atlanta, GA, USA, October 2021.
12. Speech enhancement with topology-enhanced generative adversarial networks (GANs). InterSpeech 2021, Brno, Czechia, August 30-September 3, 2021.
13. Computation and sociology, Chengdu, Sichuan University, Sichuan, China, April 30, 2021.
14. Computational sociology, Chengdu, Sichuan Normal University, Sichuan, China, April 30, 2021.
15. Towards diagnosis of carpal tunnel syndrome using machine learning. 2020 3rd Artificial Intelligence and Cloud Computing Conference (AICCC 2020), Kyoto, Japan, December 18-20, 2020.
16. Handling the missing data problem in electronic health records for cancer prediction, MSM 2020, 2020 Spring Simulation Multi-Conference, May 18-21, 2020.
17. Adaptive particle sampling and resampling in parallel/distributed particle filters, HPC 2019, 2019 Spring Simulation Multi-Conference, Tucson, AZ, April 29-May 2, 2019.
18. Support vector machine to electronic health records for cancer classification, MSM 2019, 2019 Spring Simulation Multi-Conference, Tucson, AZ, April 29-May 2, 2019.
19. Dynamic data driven application system for wildfire spread simulation, Changsha University of Science & Technology, Changsha, Hunan, China, July 3, 2018.
20. Performance analysis of parallel/distributed particle filters, 2018 Spring Simulation Multi-conference, Baltimore, MD, April 15-18, 2018.

21. Evaluating the impact of encoding schemes on deep auto-encoders for DNA annotation, 13th International Symposium on Bioinformatics Research and Applications (ISBRA 2017), Honolulu, Hawaii, May 29 to June 2, 2017.
22. Adaptive particle routing in parallel/distributed particle filter, 2017 Spring Simulation Multi-Conference, Virginia Beach, VA, April 23-26, 2017.
23. Towards use of electronic health records: cancer classification, 2017 Spring Simulation Multi-Conference, Virginia Beach, VA, April 23-26, 2017.
24. Geo-referenced image data assimilation for wildfire spread simulation, 2016 Spring Simulation Multi-Conference, Pasadena, CA, April 3-6, 2016.
25. Dynamic data driven application system for wildfire spread simulation, Guangdong University of Petrochemical Technology, Maoming, Guangdong, China, January 8, 2016.
26. Adaptive particle filtering in data assimilation of wildfire spread simulation, 2015 Summer Simulation Multi-Conference, Chicago, IL, July 26-29, 2015.
27. Adaptively perturbing localized state space in data assimilation of wildfire spread simulation, Spring Simulation Multi-Conference 2015, Alexandria, VA, April 2015.
28. A fine-grained flow control model for cloud-assisted data broadcasting, Spring Simulation Multi-Conference 2015, Alexandria, VA, April 2015.
29. Dynamic data driven application system for wildfire spread simulation, Beijing Normal University Zhuhai, Zhuhai, China, June 2014.
30. Dynamic data driven application system for wildfire spread simulation, Civil Aviation University of China, Tianjin, China, June 2014.
31. Dynamic data driven application system for wildfire spread simulation, Tianjin University, Tianjin, China, December 2013.
32. Dynamic data driven event reconstruction for traffic system using sequential Monte Carlo methods, 2013 Winter Simulation Conference (WSC'13), Washington, D.C., December 8-11, 2013.
33. Dynamic data driven application system for wildfire spread simulation, Jiangsu Normal University, Xuzhou, Jiangsu, China, December 2012.
34. A dynamic data driven application system for wildfire spread simulation, 2009 Winter Simulation Conference (WSC'09), Austin, TX, December 13-26, 2009.
35. State estimation using particle filters in wildfire spread simulation, 42nd Annual Simulation Symposium (ANSS), San Diego, CA, March 22-27, 2009.
36. Towards applications of particle filter in wildfire spread simulation, 2008 Winter Simulation Conference, Miami, FL, December 7-10, 2008.
37. Towards validation of DEVS-FIRE wildfire simulation model, HPCS 2008, Ottawa, Canada, April 14-16, 2008.

EXTERNAL GRANTS

- Identify Hand Behavioral biomarkers by Means of Machine Learning, CUNY-IRG, co-PI, \$40,000, 2022-2023.
- Applying Artificial Intelligence to Person-Based Policing Practices, National Institute of Justice, co-PI, \$563,411, 2019-2022.

- An Integrated Agent-Based Model with Geographic Information System of Childhood Obesity in the Urban Communities in New York City, CUNY-IRG, co-PI, \$40,000, 2018-2019.
- Exploring Introduction of High Performance Computing and Big Data in High Schools, NSF, co-PI, \$50,000, 2018-2019
- Integrating NSF/IEEE-TCPP Curriculum Initiative on PDC to Software Engineering Course System at Beijing Normal University Zhuhai, NSF/IEEE, co-PI, \$2,000, 2014-2015.
- Integrating NSF/TCPP Curriculum Initiative on PDC into Undergraduate Courses at Guangdong University of Petrochemical Technology, NSF/IEEE, co-PI, \$2,000, 2014-2015.
- Enhance Parallel and Distributed Computing Teaching by Infusing NSF/IEEE-TCPP Curriculum Initiative into the Existing Courses and Developing a New Course, NSF/IEEE, co-PI, \$2,500, 2014-2015.
- Research Initiation Award: Spatial-temporal Information Fusion and Real-time Sensor Data Assimilation Using Sequential Monte Carlo Methods, NSF, PI, \$199,884, 2013-2015.
- Experimentally Guided In-silico Analysis of Cellular Aggregate Fusion in Bioprinting, Grants for Exploratory Academic Research, South Carolina EPSCoR/IDeA, co-PI, \$100,000, 2013-2014.
- Modeling and Simulation of Fusion and Phase Evolution in Biofabrication Processes, Grants for Exploratory Academic Research, South Carolina EPSCoR/IDeA, co-PI, \$85,000, 2011-2012.