

CURRICULUM VITA

Xiaolin Li

Address: Department of Applied Mathematics and Statistics
SUNY at Stony Brook
Stony Brook, NY 11794
Email: xiaolin.li@stonybrook.edu

1 Education

<i>Degree</i>	<i>From</i>	<i>To</i>	<i>Major</i>	<i>University</i>
B. S.	March, 1978	Jan., 1982	Physics	Wuhan University, P. R. of China
M. S.	Sept., 1982	May, 1985	Applied Mathematics	Columbia University, USA
Ph. D.	Sept., 1982	May, 1987	Applied Mathematics	Columbia University, USA

2 Academic Appointments

1. Professor, Department of Applied Mathematics and Statistics, SUNY at Stony Brook, 2003 to present.
2. Associate Professor, Department of Applied Mathematics and Statistics, SUNY at Stony Brook, 1998 to 2003.
3. Assistant Professor, Mathematics Department and Computer Science Department, Indiana University-Purdue University at Indianapolis, 1991 to 1998.
4. Assistant Professor, Mathematics Department, New Jersey Institute of Technology, 1989 to 1991.
5. Associate Research Scientist, Courant Institute of Mathematical Sciences, 1987 to 1989.

3 Visiting Appointments

1. Visiting Professor, SUNY-Korea, August 20 to December 22, 2017.
2. Visiting Faculty Fellow, Oak Ridge National Laboratory, HERE-FRP Program, June 1 to July 31, 2015.
3. Visiting Faculty Fellow, Edwards Air Force Base, June 1 to August 10, 2013.
4. Visiting Professor, National Taiwan University, February to July, 2012.
5. Visiting Professor, Naval Research Laboratory, summer, 2007.
6. Visiting Scientist, Los Alamos National Laboratory, summer, 1997, 1998.

4 Professional Societies

- (1). Member of Society of Industrial and Applied Mathematics (SIAM).
- (2). Member of American Physical Society (APS).

5 Research Grants Since 2006

1. Principal Investigator (Co-PI Hongshik Ahn), Army Research Office, “Enhance GPU/CPU Hybrid Parallel Computation for Parachute Simulation with Machine Learning, A DURIP Proposal”, 2020-2021, \$144,504.
2. Principal Investigator, Army Research Office, “HSAP-URAP: Challenging Mathematical and Computational Problems in Parachute Simulation”, 2020-2021. \$15,000.
3. Subcontract PI, “RAPIDS: A SciDAC Institute for Computer Science and Data”, Brookhaven National Laboratory, 2019-2020, \$43,654.
4. Subcontract PI, through Kord Technologies (US Air Force) “STTR Phase-I, Multiphysics Modeling of Parachute Deployment”, 2019, \$50,000.
5. Principal Investigator, Army Research Office, “HSAP-URAP: Efficient Parallel Computation of Air Deceleration System”, 2019-2020. \$11,500.
6. Principal Investigator, Army Research Office, “An Efficient Computational Platform for Simulation of Parachute and Other Deformable Structure in Turbulent Flow”, 2018-2021, \$448,000.
7. Subcontract PI, Brookhaven National Laboratory, “Solar Now-Casting Scale Up, Demonstration, and Implementation”, subcontract, 2017-2019, \$78,190.
8. Subcontract PI, Brookhaven National Laboratory, “Anomaly Detection and Inference in the Study of Cloud Physics”, subcontract, 2017-2019, \$86,620.
9. Subcontract PI, Brookhaven National Laboratory, “DNS Simulation and Data Analysis with the WRF-Solar Model”, subcontract, 2017-2019, \$62,708.
10. Principal Investigator, Army Research Office, “HSAP: Computer Simulation of Parachute and Airbag Systems”, 2016-2017, \$6,000.
11. Subcontract PI, Oak Ridge National Laboratory, “Conservative Tracking for Phase Transition Problems”, subcontract, 2015-2016, \$25,000.
12. Principal Investigator, Army Research Office, “HSAP: Numerical Exploration of Fluid Structure Interaction, Parachute and Others”, 2015-2016, \$8,370.
13. Principal Investigator, Army Research Office, “A Transitional Computational Platform to Migrate Parachute Simulation from Workstation to HPC”, 2015-2016, \$143,376.

14. Principal Investigator, Army Research Office, “Robust and High Order Computational Methods for Parachute Air Delivery and MAV Systems”, 2014-2017, \$484,055.
15. Principal Investigator, Army Research Office, “Verification and Validation of the Spring Model Parachute Air Delivery System”, 2013-2014, \$50,000.
16. Principal Investigator, Brookhaven National Laboratory, “Evolution of Water Droplets and Ice Particles in Cloud Entrainment for Climate Modeling”, subcontract, 2013-2015, \$95,355.
17. Principal Investigator, Army Research Office, “Computational Platform for Optimal Design of Air Delivery and Micro Air Vehicle System, A DURIP Proposal”, 2012-2013, \$67,108.
18. Co-Principal Investigator, Army Research Office, “Mixing, Combustion, and Other Interface Dominated Flows”, 2009-2013, \$398,855.
19. Principal Investigator, Department of Energy, “Interoperable Technologies for Advanced Petascale Simulations”, 2006-2011, \$725,000.
20. Co-Principal Investigator, Army Research Office, “Advanced Parallel Computing Facilities for Interfacial Physics with Defense Interests”, 2010-2011, \$200,111.
21. Co-Principal Investigator, Army Research Office, “Multiscale Physics in Complex Geometry”, 2005-2008, \$297,640.
22. Co-Principal Investigator, National Nuclear Security Administration, “Modeling and Simulation of Fluid Mixing for Laser Experiments and Supernova”, 2006-2009, \$314,989.

6 Publications

1. Investigation of Turbulent Entrainment-Mixing Processes With a New Particle-Resolved Direct Numerical Simulation Model, Zheng Gao, Yangang Liu, Xiaolin Li, and Chunsong Lu, *Journal of Geophysical Research: Atmospheres*, 123, 4, pp.2194–2214, 2018.
2. *Numerical modeling and simulation of flow through porous fabric surface*, Zheng, Gao, Richard D, Charles and Xiaolin, Li, *AIAA Journal*, Vol. 55, No. 2, pp. 686–690, 2017.
3. *A GPU Enhanced Numerical Algorithm for American Option Pricing under Generalized Hyperbolic Distribution*, Y. Yang, Q. Shi, and X.-L. Li, submitted to *Journal of Computational and Applied Mathematics*, 2015.
4. *Efficiency of GPU Computation on Three Computational Models*, Q. Shi, Y. Yang and X.-L. Li, *Far East Journal of Applied Mathematics*, 94, 4, pp.285–316, 2016.
5. *On the Verification and Validation of a Spring Fabric for Modeling Parachute Inflation*, Q. Shi, D. Reasor, Z. Gao, X.-L. Li and R. D. Charles, *Journal of Fluid and Structure*, 58, pp. 20–39, 2015.

6. *Front Tracking Method on Phase Transition Problems and Applications*, Yijing Hu, Valmor F. de Almeida, and X.-L. Li, *Chemical Engineering Science*, 128, pp. 92–108, 2015.
7. *Numerical Method of Fabric Dynamics Using Front Tracking and Spring Model*, Y. Li, I-Liang Chern, J.-D. Kim and X.-L. Li, *Communications in Computational Physics*, Vol. 14, No. 5. pp. 1228–1251, 2013.
8. *Simulation of Parachute FSI Using the Front Tracking Method*, J.-D. Kim, Y. Li and X.-L. Li, *Journal of Fluids and Structures*, 37, pp.101–119, 2013.
9. *A robust front tracking method: Verification and application to simulation of the primary breakup of a liquid jet*, W. Bo, X. Liu, J. Glimm, and X. Li, *SIAM J. Sci. Comput.*, 33, pp. 1505–1524 (2011).
10. *A numerical method for the simulation of turbulent mixing and its basis in mathematical theory, in Lecture Notes on Numerical Methods for Hyperbolic Equations: Theory and Applications: Short Course Book*, T. Kaman, H. Lim, Y. Yu, D. Wang, Y. Hu, J.-D. Kim, Y. Li, L. Wu, J. Glimm, X. Jiao, X.-L. Li, and R. Samulyak, CRC/Balkema, London, 2011, pp. 105–129.
11. *Subgrid models for mass and thermal diffusion in turbulent mixing*, H. Lim, Y. Yu, J. Glimm, X. L. Li, and D. H. Sharp, *Physica Scripta*, T142 (2010), p. 014062.
12. *Study of crystal growth and solute precipitation through front tracking method*, X. Li, J. Glimm, X. Jiao, C. Peyser and Y. Zhao, *Acta Mathematica Scientia*, 20, 377-390, 2010.
13. *Chaos, Transport, and Mesh Convergence for Fluid Mixing*, H. Lim, Y. Yu, J. Glimm, X.-L. Li and D. H. Sharp, *Acta Mathematicae Applicatae Sinica*, 24, 355-368, 2008.
14. *Multi Scale Models for Fluid Mixing*, H. Lim, Y. Yu, H. Jin, D. Kim, H. Lee, J. Glimm, X.-L. Li and D. H. Sharp, *Compu. Methods Appl. Mech. Engrg.*, 197, 3435-3444, 2008.
15. *Simulation of pellet ablation for tokamak fuelling with ITAPS front tracking*, R. Samulyak, T. Lu, P. Parks, J. Glimm and X. Li, *Journal of Physics: Conf. Series*, 125, 2008.
16. *Transonic Shock Formation in a Rarefaction Riemann Problem for the 2D Compressible Euler Equations*, J. Glimm, X. Ji, J. Li, X. Li, P. Zhang, T. Zhang and Y. Zheng, *SIAM J. of Applied Math*, 69, 720-742, 2008.
17. *Subgrid models in turbulent mixing*, H. Lim, Y. Yu, J. Glimm, X. L. Li and D. H. Sharp, *ASTRONUM proceedings*, 2008.
18. *Verification and Validation of FronTier Code and Application to Fluid Interfacial Instabilities*, B. Fix, J. Glimm, R. Kaufman, X. L. Li, and L. L. Wu, *Proceedings of World Conference on Turbulence Mixing and Beyond*, Accepted for publication, *Physica Scripta*, 2008.

19. *FronTier and Applications to Scientific, Engineering Problem*, W. Bo, B. Fix, J. Glimm, X. L. Li, X. T. Liu, R. Samulyak and L. L. Wu, Proceedings of International Congress of Industrial, Applied Mathematics, 2008.
20. *Recent Progress in the Stochastic Analysis of Turbulent Mixing*, W. Bo, B. Cheng, J. Du, B. Fix, E. George, J. Glimm, J. Grove, X. Jia, H. Jin, H. Lee, Y. Li, X. Li, X. Liu, D. H. Sharp, L. Wu, and Yan Yu, Contemporary Mathematics, 429, 33-44, 2007.
21. *Front Tracking under TSTT*, J. Glimm, B. Fix, X.-L. Li, J.-J. Liu, X.-F. Liu, T.-S. Liu, R. Samulyak, and Z.-L. Xu, Proceedings of the IGPP-CalSpace Conference, Astronomical Society of the Pacific, 359, 15, 2007.
22. *A Front Tracking Algorithm For Limited Mass Diffusion*, X. F. Liu, Y. H. Li, J. Glimm, and X. L. Li, J. of Comp. Phys., 222, 644-653, 2007.
23. *A Conservative Front Tracking Method in N-Dimensions*, Jinjie Liu and Hyun-Kyun Lim, James Glimm, and Xiaolin Li, J. of Sci. Comp., 31, 213-236, 2007.
24. *A Simple Package for Front Tracking*, Jian Du, Brian Fix, James Glimm, Xiaolin Li, Yunhua Li, Lingling Wu, J. Comp. Phys., 213, pp. 613-628, 2006.
25. *A TSTT integrated FronTier code and its applications in computational fluid physics*, B. Fix, J. Glimm, X. Li, Y. Li, X. Liu, R. Samulyak, and Z. Xu, Journal of Physics: Conf. Series, 16, pp. 471-475, 2005.
26. *Shock Wave Interactions in Spherical and Perturbed Spherical Geometries*, S. Dutta, E. George, J. Glimm, J. Grove, H. Jin, T. Lee, X. Li, D. H. Sharp, K. Ye, Y. Yu, Y. Zhang and M. Zhao, Nonlinear Analysis, 63, pp. 644-652, 2005, In Press.
27. *Jet Simulation in a Diesel Engine*, James Glimm, M.-N. Kim, X.-L. Li, R. Samulyak and Z.-L. Xu, MIT Conference on Computational Fluid and Solid Mechanics, Elsevier Science, In press, 2004.
28. *Front Tracking Algorithm Using Adaptively Refined Meshes*, J. Glimm, X.-L. Li and Z.-L. Xu, Proceedings of the 2003 Chicago Workshop on adaptive Mesh Refinement Methods, the Lecture Notes in Computational Science and Engineering, 2004.
29. *The Influence of Scale Breaking Phenomena on Turbulent Mixing Rates*, E. George, J. Glimm, X. L. Li, Y. H. Li and X. F. Liu, Phys. Rev. E, 73, pp. 056301-1-8, 2006.
30. *Errors in Numerical Solutions of Spherically Symmetric Shock Physics Problems* J. Glimm, J. W. Grove, Y. Kang, T. Lee, X. Li, D. H. Sharp, Y. Yu, K. Ye and M. Zhao, Contemporary Mathematics, 371, pp. 163-179, 2005.
31. *A Conservative Front Tracking Method*, J.-J. Liu, J. Glimm and X.-L. Li, Proceedings of the Tenth International Conference on Hyperbolic Problems: Theory, Numerics, and Applications, Yokohama Publishers, Osaka, Japan, pp.57-62, 2006.

32. *An Enhanced Front Tracking Method for Computation of Discontinuous Structures in Fluid Dynamics*, J. Glimm, X. L. Li, Y. H. Li, and Z. L. Xu, Proceedings of WCCM-6, Edited by Z. H. Yao, M. W. Yuan and W. X. Zhong, Springer, pp. 340-344, 2004.
33. *Statistical Riemann Problems and a Composition Law for Errors in Numerical Solutions of Shock Physics Problems*, J. Glimm, J. W. Grove, Y. Kang, T. Lee, X. Li, D. H. Sharp, Y. Yu, K. Ye and M. Zhao, SISC, 26, pp. 666-697, 2004.
34. *Unstructured Grids in 3D and 4D for a Time-dependent Interface in Front Tracking with Improved Accuracy*, J. Glimm, J. W. Grove, X. L. Li, Yingjie Li, Zhiliang Xu, Proceedings of the 8th International Symposium of Grid Generation in Comp. Field Simulations, Edited by B. K. Soni et al., pp. 179-188, 2003.
35. *Simplification, Conservation and Adaptivity in the Front Tracking Method*, E. George, J. Glimm, J. W. Grove, X. L. Li, Y. J. Liu, Z. L. Xu and N. Zhao, Hyperbolic Problems: Theory, Numerics and Applications, Edited by T. Hou and E. Tadmor, pp. 175-184, Springer Verlag, Berlin and New York, 2003.
36. *All Isomorphic Distinct Cases for Multi-component Interfaces in a Block*, L. Li, J. Glimm, X. L. Li, J. Comp. Appl. Math, 152, pp.263-276, 2003.
37. *Jet Breakup and Spray Formation in a Diesel Engine*, J. Glimm, X. L. Li, W. Oh, A. Marchese, M.-N. Kim, R. Samulyak and C. Tzanos, Proceedings of the Second MIT Conference on Computational Fluid and Solid Mechanics, Edited by K. J. Bathe, pp. 912-914, Elsevier, 2003.
38. *Simulation of Fluid Mixing in Acceleration Driven Instabilities*, E. George, J. Glimm, X. L. Li and Z. L. Xu, Proceedings of the Second MIT Conference on Computational Fluid and Solid Mechanics, Edited by K. J. Bathe, pp. 908-911, Elsevier, 2003.
39. *Conservative Front Tracking with Improved Accuracy*, J. Glimm, X.-L. Li, Y.-J. Liu, Z. L. Xu and N. Zhao, SIAM J Sci. Comp., 41, pp. 1926-1947, 2003.
40. *Numerical methods for the determination of mixing*, S. Dutta, E. George, J. Glimm, X. L. Li, A. Marchese, Z. L. Xu, Y. Zhang, J. Grove and D. Sharp, Laser and Particle Beams, 21, pp.437-442, 2003.
41. *A Comparison of Experimental, Theoretical, and Numerical Simulation Rayleigh-Taylor Mixing Rates*, E. George, J. Glimm, X. L. Li, A. Marchese, and Z. L. Xu, Proc. National Academy of Sci., Vol. 99, 5, pp. 2587-2592, 2002.
42. *Conservative Front Tracking in One Space Dimension*, J. Glimm, X.-L. Li and Y.-J. Liu, *Contemporary Mathematics*, Amer. Math. Soc., Edited by Z. X. Chen and R. Ewing, Providence, RI, 295, pp. 253-264, 2002.
43. *Conservative Front Tracking in Higher Space Dimensions*, Transactions of Nanjing University of Aeronautics and Astronautics, edited by Dewang Liang, Vol. 18, pp. 1-15, 2001.

44. *Subgrid Models and DNS Studies of Fluid Mixing*, B. Cheng , J. Glimm, X. L. Li and D. H. Sharp, Proceedings of the 7th International Conference on the Physics of Compressible Turbulent Mixing, Edited by E. Meshkov, Y. Yanilkin and V. Zhmailo, RFNC-VNIIEF, Russia, pp. 385-390, 2001.
45. *High Resolution Numerical Methods for Multiphase Flows*, J. W. Grove, J. Glimm, and X. L. Li, Modelisation Numerique des Couplages Thermiques, Mecaniques et Chimiques dan les Ecoulements Industriels, Institut Universitaire des Systems Thermiques Industriels, Universite Marseille, 2000, (LANL Report LA-UR-00-2639).
46. *Conservative Front Tracking and Level Set Algorithms*, J. Glimm, X.-L. Li, Y.-J. Liu and N Zhao, Proc. National Academy of Sci., Vol. 98, 25, pp. 14198-14201, 2001.
47. *Nonuniform approach to terminal velocity for single mode Rayleigh-Taylor instability*, J. Glimm, X.-L. Li and A.-D. Lin, ACTA MATHEMATICAE APPLICATAE SINICA, 18, pp. 1-8, 2002.
48. *A Critical Analysis of Rayleigh-Taylor Growth Rates*, J. Glimm, J. Grove, X. L. Li, W. Oh and D. Sharp, Journal of Comp. Phys., 169, pp. 652-677, 2000.
49. *Simulation of 3D Fluid Jets with Application to the Muon Collider Target Design*, J. Glimm, H. Kirk, X. L. Li, J. Pinezich, R. Samulyak and N. Simos, Advances in Fluid Mechanics III, Edited M. Rahman, C.A. Brebbia, WIT Press, Southampton, Boston, pp. 191-200, 2000.
50. *Simple Front Tracking*, J. Glimm, J. Grove, X. L. Li and N. Zhao, Nonlinear Partial Differential Equations, Contemporary Mathematics, Edited by G.-Q. Chen and E. DiBenedetto, American Mathematical Society, 238, pp. 133-150, 1999.
51. *Robust Computational Algorithms for Dynamic Interface Tracking in Three Dimensions*, J. Glimm, J. Grove, X. L. Li and D. C. Tan, SIAM Journal of Scientific Computing, 21, 6, pp. 2240-2256, 2000.
52. *Three Dimensional Front Tracking*, J. Glimm, J. Grove, X. L. Li, K. Shyue, Y. Zeng, and Q. Zhang, SIAM J. of Sci. Comp., 19, pp. 703-727, 1998.
53. *Front Tracking in Two and Three Dimensions*, J. Glimm, M. J. Graham, J. Grove, X. L. Li, T. M. Smith, D. Tan, F. Tangerman, Q. Zhang, J. Comp. Math. (7), pp. 1-12, 1998.
54. *A Comparative Numerical Study of the Richtmyer-Meshkov Instability with Nonlinear Analysis in Two and Three Dimensions*, X. L. Li and Q. Zhang, Phys. Fluids 9 (10), pp. 2719-2727, 1997.
55. *A Comparative Numerical Study of the Richtmyer-Meshkov Instability with Nonlinear Analysis Three Dimensions* X. L. Li and Q. Zhang, Proceedings of the 6th International Workshop on the Physics of Compressible Turbulent Mixing, pp. 325-330, Edited by Ed. G. Jourdan and L. Houas, Imprimerie Caractere, France, 1997.

56. *Numerical Study for the Three Dimensional Rayleigh-Taylor Instability through the TVD/AC Scheme and Parallel Computation*, X. L. Li, B. X. Jin, and J. Glimm, *J. of Comp. Phys*, 126, pp. 343-355, 1996.
57. *A Parallelized Approach for Internal Boundaries and Interfaces*, J. Glimm, J. Grove, X. L. Li, R. Young, Q. Zhang, Y. Zeng, *Applied Parallel Computing, Lecture Notes in Computer Science*, 1041, pp. 257-266, Springer Verlag, 1996.
58. *A Numerical Study of 3-D Bubble Merger in the Rayleigh-Taylor Instability*, X. L. Li, *Phys. Fluids*, vol 8, 2, pp. 322-335, 1996.
59. *A Characteristic Based Numerical Method with Tracking for Nonlinear Wave Equations*, B. Bukiet, J. Pelesko, X. L. Li, P. L. Sachdev, *Computer and Math. Applic.*, vol. 31, 7 pp. 75-99, 1996.
60. *A Numerical Study of the Richtmyer-Meshkov Instability in Three Dimensions*, X. L. Li, and J. Glimm, *Proceedings of the Second Asia CFD Conference*, 2, pp.87-92, 1996.
61. *Parallel Computation of Rayleigh-Taylor Instability through High Resolution Scheme for Contact Discontinuity*, X. L. Li and B. X. Jin, *Proceedings of First Asia Conference of Computational Fluid Dynamics*, Vol. 2 pp. 811-817, 1995.
62. *Parallel Computation of Three Dimensional Rayleigh-Taylor Instability in Compressible Fluids through Front Tracking and Level Set Methods*, X. L. Li, J. Grove, and Q. Zhang, *Proceedings of 4th International Workshop on Compressible Turbulent Mixing*, pp. 94-104, Cambridge, UK, 1994.
63. *Study of Three Dimensional Rayleigh-Taylor Instability in Compressible Fluids through Level Set Method and Parallel Computation*, X. L. Li, *Phys. Fluids A* 5 (8), pp. 1904-1913, 1993.
64. *Parallel Computation of 3D Interface Instabilities in Compressible Fluids Using Lagrangian and Eulerian Approaches*, X. L. Li, *Proceedings Conference on Scientific and Engineering Computing*, Academia Sinica, China, pp. 235-241, 1993.
65. *Statistical Theories of Rayleigh-Taylor Instability for Compressible Fluids*, J. Glimm, X. L. Li, Q. Zhang, R. Menikoff and D. Sharp, *Advances in Compressible Turbulent Mixing*, U.S. Department of Commerce, pp. 85-94, Springer-Verlag, 1992.
66. *The growth and Interaction of bubbles in Rayleigh-Taylor Unstable Interface*, J. Glimm, X. L. Li, R. Menikoff, D. Sharp and Q. Zhang, *The IMA Volumes in Mathematics and Its Applications*, Vol. 29, pp. 107-122, Springer-Verlag, 1991.
67. *Chaotic Mixing at Unstable Interfaces*, J. Glimm, J. Grove, Y. Chen and X. L. Li, *3rd International Workshop on the Physics of Compressible Turbulent Mixing*, pp. 19-28, 1991.

68. *A Numerical Study of Bubble Interaction in Rayleigh-Taylor Instability for Compressible Fluids*, J. Glimm, X. L. Li, Q. Zhang, R. Menikoff and D. Sharp, Phys. Fluids A 2 (11), pp. 2046-2054, November 1990.
69. *On Validation of the Sharp-Wheeler Bubble Model from Experimental and Computational Data*, J. Glimm and X. L. Li, Phys. Fluids 31, pp. 2077-2085 1988.
70. *Front Tracking and The Interaction of Nonlinear Hyperbolic Waves*, F. Furtado, J. Glimm, J. Grove, X. L. Li, B. Lindquist, R. Menikoff, D. H. Sharp and Q. Zhang, Lecture Notes in Engineering, 43, pp. 99-111, Springer-Verlag, 1989.
71. *Three Remarks on Front Tracking Method*, J. Glimm, J. Grove and X. L. Li, Proceedings of Torimina Conference, Italy, 1988.
72. *Plasma Formation and Equilibrium in a High β Tokamak*, A. V. Deniz X. L. Li and T. C. Marshall, Phys. Fluids 30, pp. 2527-2537, (1987).
73. *Transition of a Low β Tokamak to a High β State*, A. V. Deniz, T. Ivers, T. C. Marshall, X. L. Li and M. Mauel, Phys. Fluids 29, pp. 4119-4122 1986.

7 Research Presentations (last 3 years)

1. *Front Tracking Method at Its Applications in Parachute Modeling*, International Congress of Industrial and Applied Mathematics, Valencia, Spain, July 18, 2019.
2. *Tracking the Fabric Surface in Air for the Study of Parachute Inflation*, International Conference on Applied Mathematics, Hong Kong City University, June 6, 2018.
3. *Front Tracking Method at Its Best Applications in Fluid Structure Interactions*, International Workshop on Numerical Analysis with Application in Medium Imaging and Computer Vision, Shing-Tung Yau Center, Plenary Presentation, Southeast University, China, November 14, 2018.
4. *Dual-Stiffness Spring-Mass Fabric Model and Simulation of Parachute Inflation*, invited presentation at the Korean Mathematical Society 70th Anniversary Meeting, October 22, 2016.
5. *Computer Simulation of Interface Problems* invited presentation at the Computational Science Department, Yonsei University, November 22, Korea.
6. *Numerical Modeling and Simulation of Parachute/Airbag System* invites presentation at Shanghai Jiaotong University, November 25, 2016, Shanghai, China.
7. *Front Tracking and Application to Parachute/Airbag Problem* invited presentation at the Institute of Applied Physics and Computational Mathematics (IAPCM), December 22, 2016, Beijing, China.

8. *Fluid-structure interaction method for parachute simulation using fabric spring model based on Rayleigh-Ritz analysis*, International Workshop on Fluid-Structure Interaction Problems, National University of Singapore, Singapore, June 2, 2016.