CURRICULUM VITAE

SHAOSHUAI CHU

AFFILIATIONS

Department of Mathematics, Southern University of Science and Technology, Shenzhen, China
Phone: +86-17620461755, e-mail: chuss@mail.sustech.edu.cn

PERSONAL DATA

Date & place of birth:	October 18, 1993, Xinyang, China
Marital Status:	Married
Citizenship:	Chinese
Languages:	Chinese (native), English (fluent)

ACADEMIC EXPERIENCE

2023–Present Research Scholar,
Department of Mathematics and Shenzhen International Center for Mathematics,
Southern University of Science and Technology, Shenzhen, China

ACADEMIC EDUCATION

2019–2023 PhD in Computational Mathematics
Department of Mathematics, Southern University of Science and Technology,
Shenzhen, China

Thesis: *High-Order Finite-Difference Schemes for Nonconservative Hyperbolic System Based on the Path-Conservative Central-Upwind Scheme*

Advisor: *Chair Professor Alexander Kurganov*

2017–2019 MS in Computational Mathematics
School of Mathematics, Harbin Institute of Technology, Harbin, China
Department of Mathematics, Southern University of Science and Technology,
Shenzhen, China

Thesis: *Some Numerical methods for Determining the Implied Volatility in Option Pricing*

Advisors: *Professor Jingzhi Li*

2013–2017 BS in Information and Computing Science
School of Mathematics and Statistics, Beijing Institute of Technology, Beijing, China

Advisors: *Associate Professor Jing Shi*

TEACHING ASSISTANT EXPERIENCE

2023 Spring	ODE
2022 Fall	Linear Algebra & Scientific Computing
2022 Spring	ODE & Numerical Solutions to PDEs
2021 Fall	Calculus I
2021 Spring	Calculus II
2020 Fall	Linear Algebra
2020 Spring	Calculus II
2019 Fall	Calculus I
2019 Spring	Calculus II
2018 Fall	Calculus I
2018 Spring	Calculus II
2017 Fall	Calculus I

AWARDS

2023. 06 Top 10 Graduates with a Postgraduate Degree of the University,
Southern University of Science and Technology, Shenzhen, China

2023. 05 Top 10 Graduates with a Postgraduate Degree of the School of Science,
Southern University of Science and Technology, Shenzhen, China

2022. 10 National Scholarship,
Southern University of Science and Technology, Shenzhen, China

2016. 10 National Encouragement Scholarship,
Scholarship for Outstanding Students,
Outstanding Students of the University,
Beijing Institute of Technology, Beijing, China

2016. 05 Honorable Mention in MCM/ICM,
Beijing Institute of Technology, Beijing, China

2015. 10 National Encouragement Scholarship,
Scholarship for Outstanding Students,
Outstanding Students of the University,
Beijing Institute of Technology, Beijing, China

2014. 10 National Encouragement Scholarship,
Scholarship for Outstanding Students,
Outstanding Students of the University,
Beijing Institute of Technology, Beijing, China

LIST OF PUBLICATIONS (in the reversed chronological order)

[14] S. Chu and A. Kurganov,

New Adaptive Low-Dissipation Central-Upwind Schemes,

submitted to ESAIM: Mathematical Modelling and Numerical Analysis.

[13] S. Chu, A. Kurganov and R. Xin,

Low-Dissipation Central-Upwind Schemes for Compressible Multifluids,

submitted to Journal of Computational Physics.

[12] S. Chu, A. Kurganov and R. Xin,

New More Efficient A-WENO Schemes,

submitted to Journal of Computational Physics.

[11] A. Chertock, S. Chu, and A. Kurganov,

Accurate Deterministic Projection Methods for Stiff Detonation Waves,

to appear in Communications in Mathematical Sciences.

[10] S. Chu and A. Kurganov,

Local Characteristic Decomposition Based Central-Upwind Scheme for Compressible Multifluids,

Proceedings of Finite Volumes for Complex Applications X (Strasbourg, 2023).

[9] S. Chu, O. Kovyrkina, A. Kurganov, and V. Ostapenko,

Experimental Convergence Rate Study for Three Shock-Capturing Schemes and Development of Highly Accurate Combined Schemes,

Numerical Methods for Partial Differential Equations, 39 (2023), pp. 4317-4346.

[8] V. A. Kolotilov, A. A. Kurganov, V. V. Ostapenko, N. A. Khandeeva and S. Chu,

On the Accuracy of Shock-Capturing Schemes Calculating Gas-Dynamic Shock Waves,

Computational Mathematics and Mathematical Physics, 63 (2023), pp. 1341-1349.

[7] A. Chertock, S. Chu and A. Kurganov,

Adaptive High-Order A-WENO Schemes Based on a New Local Smoothness Indicator,

East Asian Journal on Applied Mathematics, 13 (2023), pp. 576-609.

[6] S. Chu, A. Kurganov and R. Xin,

A Fifth-Order A-WENO Scheme Based on the Low-Dissipation Central-Upwind Fluxes,

Proceedings of the XVIII International Conference on Hyperbolic Problems: Theory, Numerics, Applications.

[5] S. Chu, A. Kurganov, S. Mohammadian and Z. D. Zheng,

Fifth-Order A-WENO Path-Conservative Central-Upwind Scheme for Behavioral Non-Equilibrium Traffic Models,

Communications in Computational Physics, 33 (2023), pp. 692-732.

[4] S. Chu and A. Kurganov,

Flux Globalization Based Well-Balanced Central-Upwind Scheme for One-Dimensional Blood Flow Models,

Calcolo, 60 (2023), Paper No. 2, 35 pp.

[3] A. Chertock, S. Chu, M. Herty, A. Kurganov and M. Lukáčová-Medviďová,

Local Characteristic Decomposition Based Central-Upwind Scheme,

Journal of Computational Physics, 473 (2023), Paper No. 111718, 24 pp.

[2] S. Chu, A. Kurganov and M. Na,

Fifth-Order A-WENO Schemes Based on the Path-Conservative Central-Upwind Method,

Journal of Computational Physics, 469 (2022), Paper No. 111508, 22 pp.

[1] A. Chertock, S. Chu and A. Kurganov,

Hybrid Multifluid Algorithms Based on the Path-Conservative Central-Upwind Scheme,

Journal of Scientific Computing, 89 (2021), Paper No. 48, 24 pp.