

Changfeng Gui

CONTACT INFORMATION	Department of Mathematics Avenida da Universidade University of Macau Macau, China	<i>Phone:</i> (853) 8822-9944 <i>Location:</i> E11-3073 <i>E-mail:</i> changfenggui@um.edu.mo https://www.fst.um.edu.mo/people/changfenggui/
RESEARCH INTERESTS	Nonlinear Partial Differential Equations and Applied Mathematics, Image Analysis and Processing	
APPOINTMENTS	2023-present , Chair Professor and Department Head, Mathematics Department, University of Macau , China 2015-2024 , <i>Dan Parman Endowed Distinguished Chair, Professor</i> , University of Texas at San Antonio , USA 2013-2015 , <i>Program Director</i> , National Science Foundation , Arlington, Virginia, USA 2002-2016 , <i>Professor</i> , University of Connecticut , Storrs, USA 2002 , <i>Professor (Promotion)</i> , University of British Columbia , Vancouver, Canada 1999-2002 , <i>Associate Professor</i> , University of Connecticut , Storrs, USA 1998-2002 , <i>Associate Professor</i> , University of British Columbia , Vancouver, Canada 1995-1998 , <i>Assistant Professor</i> , University of British Columbia , Vancouver, Canada 1993-1995 , <i>Postdoctoral Fellow</i> , McMaster University , Hamilton, Canada 1991-1993 , <i>Courant Instructor</i> , New York University , New York, USA	
EDUCATION	1991 , <i>Ph.D., Mathematics</i> , University of Minnesota , Minneapolis, MN, USA 1987 , <i>M.S., Mathematics</i> , Peking University , Beijing, China 1984 , <i>B.S., Mathematics</i> , Peking University , Beijing, China	
HONORS AND AWARDS	<i>AAAS Fellow</i> , American Association for the Advancement of Science, 2024 <i>Simons Fellow</i> , Simons Foundation, 2019 <i>Best Paper Award</i> , IEEE Signal Processing Society , 2015 <i>Fellow of AMS</i> , 2012 <i>Provost's Research Excellence Award</i> , University of Connecticut, Storrs, USA, 2007 <i>Plenary Speaker</i> , AMS sectional meeting, Storrs, USA, Oct. 28, 2006 <i>PIMS Research Prize</i> , Pacific Institute of Mathematical Sciences, Canada, 2002	

Andre Aisensdadt Prize, Centre de Recherches Mathematiques, Canada, 1999

Excellent Thesis Award, University of Minnesota, 1991

MEMBERSHIPS

American Association for the Advancement of Science, 2016-present

American Mathematical Society, 2010-present

Society of Industrial and Applied Mathematics, 2017-present

GRANTS

National Natural Science Foundation of China, Key Program, 2026-2031

The Science and Technology Development Fund, Macao S.A.R. (FDCT), Agreement of 0003/2023/RIA1, 2023-2027, MOP 2,227,000

The Science and Technology Development Fund, Macao S.A.R. (FDCT), Agreement of 0024/2023/RIB1, 2023-2027, MOP 2,000,000

Association for Promotion of Science and Technology of Macau (MAPST), Macao Young Scholars Program (MYSP), AM2023001, 2024-2026

University of Macau, UMDP Professorial Fellowship, 2023-present

University of Macau, Studies of some nonlinear partial differential equations, 2024-2026

University of Macau, Optimal Beckner's Inequalities in Higher Dimensions, 2023-2023

University of Macau, Nonlinear PDEs and Applications, 2023-2025

NSF Grant, PI, Studies of the Mean Field and Allen-Cahn Equation, 2022-2025

NSF Grant, PI, Qualitative Study of the Mean Field Equation and Allen-Cahn Equation, 2019-2022

Simons Foundation, PI, Uniqueness and symmetry of solutions to some nonlinear PDEs, 2019-2020

NSF Grant, PI, Qualitative Studies of Some Partial Differential Equations and Systems, 2016-2019

NSF IPA, 2013-2015

NSF Conference Grant, Conference in Analysis and Partial Differential Equations, 2013

NSF Subgrant via IMA, Infinite Dimensional Dynamical Systems and Parabolical Equation, 2012

Simons Foundation, Collaboration Grant, PI, Solutions of Scalar and Vector Valued Allen-Cahn Equations, 2011-2016

NSFC Overseas Cooperative Grant, PI, Partial Differential Equations, 2006-2009;

NSF Grant, PI, Qualitative Study of Some Partial Differential Equations and Systems, 2005-2008;

NSF Grant, PI, Qualitative Study of Some Partial Differential Equations and Systems, 2002-2005;

University of Connecticut Large Grant, PI, Condensation Phenomenon in the Gierer-Meinhardt

System, 2000-2001

NSERC Grant, PI, Study on Some Nonlinear Partial Differential Equations and Systems, 2000-2003

NSERC Grant, PI, Existence and Qualitative Properties of Solutions to Certain Differential Equations, 1996-2000

MITCS Grant, Co-PI, Modeling, Trading and Risk in the Market, 1999-2003

International University Scholar Grant, BC Ministry of Education, 1998

BC Ministry of Education Grant, BC Scholars to China, 1995

UBC Equipment Fund, 1995

INVITED LECTURES Nov. 2, 2025, International Conference on Analysis and Applications – Commemoration of the 115th Anniversary of Hua Luogeng’s Birth, Macau University of Science and Technology

Oct. 31, 2025, 2025 Symposium on Partial Differential Equations in Mathematical Physics and Geometry, Zhejiang Normal University, Jinhua, Zhejiang, China

Oct. 21, 2025, “Mathematics+AI” Forum, School of Mathematical Sciences, Shanghai Jiao Tong University, Shanghai, China

Sept. 16, 2025, Distinguished Lecture In Applied Mathematics, PolyU Hong Kong, Hong Kong

Sept. 3, 2025, Applied Math Seminar, Oxford University, Oxford, UK

Aug. 26, 2026, UK Spectral Theory Workshop at Reading, Reading, UK

Aug. 8, 2025, Workshop On Recent Advances In Singularities, Yunnan Normal University, Kunming, China

July 22, 2025, Longshangxing Journey of Mathematics and Cultures, Lanzhou, Gansu, China (Online)

July 16, 2025, 2025 Conference on Partial Differential Equations, Hexi University, Zhang Ye, Gansu, China

July 13, 2025, Lanzhou University, Lanzhou, Gansu, China

June 11, 2025, Workshop at the University of Athens, Athens, Greece

June 9, 2025, Beijing Institute of Technology, Beijing, China

June, 7, 2025, The Fourth Conference on Variational Methods and Nonlinear Partial Differential Equations, Chinese Academy of Sciences, Beijing

May 28, 2025, Beihang University, Beijing, China

May 26, 2025, SooChou University, Suzhou, China

May 24, 2025, 2025 年非线性分析国际会议暨第 23 届全国非线性泛函分析会议, 常州, China

May 22, 2025, 2025 年京港澳应用数学学科发展与人才培养合作交流学术会议, Beijing

May 21, 2025, AMMS, Chinese Academy of Sciences, Beijing

May 20, 2025, PDE conference in Hong Kong, Hong Kong University of Science and Technology, Hong Kong

May 17, 2025, Nonlinear Analysis and Its Applications in Geometry, 2025, Chinese Academy of Sciences, Beijing

April 22, 2025, Yunnan University, Kunming, China

April 21, 2025, Yunnan Normal University, Kunming, China

April 5, 2025, 2025 年分析与非线性偏微分方程前沿进展系列报告会, Zhenjiang, China

Jan. 11, 2025, SouthEast University, Nanjing, China

Dec. 12, 2024, Hunan University of Science and Technology, Xiang Tang (Online)

Nov. 28, 2024, Shannxi Normal University, XiAn, China

Nov. 28, XiDian University, XiAn, China

Nov. 26, 2024, Northwestern Polytechnical University, Xi An

Nov. 25, 2024, Beijing Technology and Business University

Nov. 22, 2024, International Conference on Stochastic Analysis and Differential Equation, Zhuhai, China

Nov. 11, 2024, Longfeng Forum, Chinese University of Hong Kong, Shenzhen, China

Sept. 26, 2024, PDE Seminar, Beihang University, Beijing, China

Sept. 17, 2024, PDE Seminar, Rutgers University, New Brunswick, New Jersey, USA

Aug. 25, 2024, International Conference on Nonlinear PDEs at SUSTech, Shenzhen, China

July 25, 2024, Special Session: Functional inequalities, shape optimization, and elliptic PDEs, The 2nd UMI-AMS Joint Meeting, Palermo, Italy. (Online)

July 16, 2024, Mathematics From Personal Experience, Fourth Hong Kong-Macau-Mainland China Joint Summer School in Mathematics, Lan Zhou University, Online

July 3, 2024, The 4th Symposium in Geometry and Differential Equations, University of Science and Technology of China Hefei, China

June 22, 2024, Chengdu Conference on PDE and Dynamical System, Chengdu, China

May 27, 2024, BIRS Workshop: Propagation and Stability in Evolution Equations, UBCO, BIRS, Canada

May 21, 2024, Colloquium, Dalian University of Technology, Dalian, China

May 11, 2024, 2024 Conference on Differential Equations and Dynamical System, Central South University, Changsha, China

May 9, 2024, Colloquium, Nanjing University of Information Engineering, Nanjing, China

May 8, 2024, Colloquium, Nanjing University of Science and Technology, Nanjing, China

May 7, 2024, Seminar, Beihang University, Beijing, China

April 17, 2024, Colloquium, Research Center for Mathematics United International College and Beijing Normal University (Zhuhai), China

March 27, 2024, East Asia Workshop on Nonlinear Evolution Equations, University of Tokyo, Tokyo, Japan

March 19, 2024, Mathematics From Personal Perspective, Shenzhen College of International Exchange

Jan. 26, 2024, International Conference on New Trends in Nonlinear PDEs, Physics and Geometry, IMAG, University of Granada, Granada, Spain

Dec. 21, 2023, Colloquium, Southern University of Science and Technology, Shenzhen, China

Dec. 17, 2024, NCTS 2023 Conference on Differential Geometry and Geometric Analysis, On the occasion of Professor Jih-Hsin Cheng' s research career/service of 40 years, National Tsing Hua University, Xingzhu, Taiwan, China

Nov. 23, 2023, Seminar, South China University of Technology, Guangzhou, China

Nov. 17, 2024, Colloquium, Sun Yat-sen University at Zhuhai, Zhuhai, China

Nov. 11, 2024, International Conference on Theory and Computation of Nonlinear PDEs and China-ASEAN Mathematics Forum, Guangxi University, Nanning, China

Nov. 10, 2024, Colloquium, Guangxi Minzu University, Nanning, China

Oct. 23, 2023, Seminar, Academy of Mathematics and Systems Science, Chinese Academy of Sciences, Beijing, China

Oct. 19, 2023, Distinguished Lecture, Renmin University, Beijing, China

Oct. 10, 2023, PDE Seminar, Wuhan Institute of Physics and Mathematics, Innovation Academy for Precision Measurement Science and Technology, Chinese Academy of Sciences, Wuhan, China

Oct. 8, 2023, PDE Seminar, Huazhong University of Science and Technology, Wuhan, China

Sept. 18, 2023, Distinguished Seminar, Henan Normal University, Xingxiang, China

Sept.11, 2023, Distinguished Lecture, Nanjing University & Jiangsu National Center of Applied Math, Nanjing, China

Sept. 7, 2023, Distinguished Seminar, Jiangsu University, Zhenjiang, China

Aug. 2, 2023, Workshop on Applied and Computational Differential Geometry and Geometric PDEs,

BIRS, Banff, Canada

July 30, 2023, Plenary Speaker, The ninth PDE Conference of West China, Chengdu University of Science and Technology, Chengdu, China

July, 11, 2023, Public Lecture, Third Hong Kong-Macau-Mainland China Joint Summer School in Mathematics, Lan Zhou University, Online

June 12, 2023, PDE Seminar, Beihang University, Beijing, China

June 12, 2023, PDE Seminar, Beijing Technology and Business University, Beijing, China

April 25, 2023, Mathematics and Its Applications: Fun and Challenges, University of Macau Development Foundation Professorial Fellowship Lecture, Macao

April 19, 2023, Distinguished Lecture, City University of Hong Kong, Online

April 12., 2023, ZhiYuan College Lecture, Shanghai Jiao Tong University, Shanghai, China

Dec. 26, 2022, Colloquium, Southern University of Science and Technology, Shenzhen, China, Online

Dec. 19, 2022, PDE Seminar, Hunan University, Changsha, China, Online

Dec. 12, 2022, Wuhan Institute of Physics and Mathematics, Wuhan, China, Online

Dec. 8, 2022, Colloquium, IMS, Chinese University of Hong Kong, Hong Kong, China

Nov. 23, 2022, International Conference on Nonlinear PDEs & a celebration of Professor Yihong Du's 60th birthday, Sydney, Australia

Nov. 17, 2022, Colloquium, Sydney Institute of Mathematical Sciences, Sydney, Australia

Nov. 14, 2022, Mini-Workshop on Geometric PDEs at Wollongong, Australia

Oct. 24, 2022, Workshop on Analysis and Partial Differential Equations, Shanghai JiaoTong University, Shanghai, China, Online

Oct. 2, 2022, Texas Differential Equations Conference & AuchmutyFest, Texas A&M, College Station, Texas, USA

Sept. 24, 2022, Partial Differential Equations: Interactions of Analysis, Geometry and Topology, Hong Kong Chinese University (Shenzhen), Shenzhen, China, Online

Sept. 17, 2022, Special Session on Geometry of Submanifolds, 2022 Fall Central Sectional Meeting, University of Texas at El Paso, Texas, USA

Aug. 15, 2022, The 20th Nonlinear PDE Conference of China, Changsha, Online

Aug. 4, 2022, Interfacial Phenomena in Reaction-Diffusion Systems, BIRS workshop, Banff, Canada

July 8, 2022, Colloquium, Yunnan Normal University, Kunming, China, Online

July 7, 2022, Colloquium, South China University of Technology, Guangzhou, China, Online

June, 29, 2022, International Conference on Theories and Applications of Nonlinear PDEs, Huang Huai College, China, Online

June 25, 2022, International Workshop on Nonlinear Partial Differential Equations and Geometric Analysis, Shaanxi Normal University, China, Online

June 21, 2022, International Conference on PDEs and Geometric Analysis, Shanghai Jiao Tong University, Shanghai, China, Online

June 10, 2022, Colloquium, Jiang Su University, Zhenjiang, China, Online

March 31, 2022, Virtual Colloquium, Zhejiang Normal University, Jinhua, China

March, 10, 2022, The Virtual Analysis and PDE Seminar, Columbia University, NYC

Dec. 4, 2021, Workshop on Nonlinear PDEs and their Applications (Online), Nanjing University of Forestry and Nanjing University, Nanjing, China

Nov. 15, 2021, Toulouse Analysis Seminar, University of Toulouse, Toulouse, France

Nov. 10, 2021, Nonlinear Analysis Seminar (Online), Rutgers University, New Brunswick, NJ

Oct. 28, 2021, International Conference on Nonlinear Elliptic and Parabolic Equations with Applications—Dedicated to Professor Yihong Du on the Occasion of His 60th Birthday, Online, Jiangsu Normal University, Xuzhou, China

Oct. 19, 2021, Seminaire Analyse et Probabilites, University of Paris at Dauphine, Paris, France

Sept. 11, 2021, Conference on Geometric Analysis and Nonlinear PDEs (online) , Northwestern Polytechnical University, Xi An, China

Aug. 15, 2021, Wutong Forum (online) , Hong Kong Chinese University (Shenzhen), Shenzhen, China

July 28, 2021, Conference on Partial Differential Equations and Applications at Harbin Institute of Technology, Harbin, China

July 16, 2021, Colloquium, Shanghai Jiao Tong University, Shanghai, China

July 15, 2021, Colloquium, Nanjing University, Nanjing, China

July 10, 2021, Colloquium, Hunan University of Science and Technology, Xiangtang, China

June 28, 2021, International Conference on Reaction Diffusion Equation at Lanzhou University, Online

June 25, 2021, Colloquium (online), Yunnan University, Kunming, China

June 25, 2021, Colloquium, Kunming College, Kunming, China

June 24, 2021, Colloquium, Yunnan Normal University, Kunming, China

June 4, 2021, Colloquium, East China Normal University, Shanghai, China

April 23, 2021, Colloquium, Jiangsu University, Online

April 16, 2021, Colloquium, Beijing Technology and Business University, Beijing, China

March 20, 2021, Colloquium, Henan University, Kaifeng, China, Online;

Feb. 18, 2021, Applied Math Seminar, MacMaster University, Hamilton, Ontario, Canada, Online;

Nov. 13, 2020, PDE Seminar, East China Normal University, Shanghai, China, Online

Oct. 17, 2020, Topics in qualitative and quantitative properties of partial differential equations, 3rd Annual Meeting of the SIAM Texas-Louisiana Section, Online

Aug. 9, 2020, Colloquium(Online), Wuhan Institute of Technology, Wuhan, China

Aug. 7, 2020, Banff workshop on ÓInterfacial phenomena in reaction-diffusion systemsÓ, Online

June 1, 2020, Asia-Pacific Analysis and PDE Seminar (online)

March 7, 2020, Texas DE Conference, Austin, TX

Feb. 19, 2020, Colloquium, University of California, Riverside, CA

Feb. 4, 2020, PDE Seminar, University of California, Irvine, CA

Jan.8, & 10, 2020, PDE Seminar, Hong Kong University of Science and Technology. Hong Kong

Dec. 23, 2019, PDE Seminar, Hong Kong University of Science and Technology. Hong Kong

Dec. 16, 2019, PDE Symposium, Central China Normal University, Wuhan, China

Nov. 28, 2019, Qualitative Theory on Nonlinear Partial Differential Equations, Kyoto University, Kyoto, Japan

Nov. 16, 2019, Workshop on Elliptic Partial Differential Equations and Applications, Shanghai Jiaotong University, Shanghai, China

Nov. 14, 2019, Workshop on Nonlinear Partial Differential Equations and Applications, NYU-ECNU Institute of Mathematical Sciences, NYU-Shanghai, China

Nov. 2, 2019, Calculus of Variations:
A Celebration of Paul Rabinowitz's 80th Birthday, Jeju, South Korea

Oct. 15, 2019, Analysis Seminar, Rutgers University, New Brunswick, New Jersey

Oct. 4, 2019, Geometric Analysis Seminar, Princeton University, Princeton, NJ

Sept. 26, 2019, Colloquium, Baylor University, Waco, TX

Sept. 23, 2019, PDE Seminar, Indiana University, Bloomington, IN

July, 3, 2019, International Conference on Partial Differential Equations and Applications, In Honor of 75th Birthday of Professor Haim Brezis, Beijing Normal University, Beijing, China

June 27, 2019, Recent Progress in Nonlinear Partial Differential Equations, Beihang University, Beijing, China

June 22, 2019, International Conference on Dynamical Systems and Applications, Lanzhou University, Lanzhou, China

June 1, 2019, The 6th International Workshop on Bio-mathematical Modeling and Its Applications, Huaiyin Normal University, Huai An, China

May 12, 2019, Workshop on Differential Equations in Life and Physical Sciences and Applications, Chongqing University, Chongqing, China

March 4, 2019, Applied Math Seminar, Brown University, Providence, RI

Dec. 14, 2018, Workshop on Recent advances in nonlinear PDEs, Wuhan University, Wuhan, China

Dec. 7, 2018, Geometric Analysis Seminar, Princeton University, Princeton, New Jersey

Dec. 4, 2018, PDE seminar, Rutgers University, New Brunswick, New Jersey

Dec. 3, 2018, Analysis Seminar, Courant Institute, New York University, New York

Nov. 7, 16, 2018, Recent Trends on Nonlinear PDEs of Elliptic and Parabolic Type, MATRIX, Mathematical Research Institute, Creswick, Australia

Nov. 1, 2018, MATRIX Satellite Conference on Recent Trends in nonlinear PDEs, University of Sydney, Sydney, Australia

Aug. 10, 2018, Seminar, Shanghai Jiao Tong University, Shanghai, China

Aug. 7, 2018, Seminar, Henan University, Kaifeng, China

July 5, 2018, Seminar, The Central South University, Changsha, China

June 23, 2018, The International Conference on Nonlocal Dynamical System and Applications, Lanzhou University, Lanzhou, China

June 14, 2018, Recent Advances in Turbulence Research: Experiments, Theory, and Computations, AAAS Pacific Division Annual Meeting, Pomona, CA

June 2, 2018, International workshop on nonlinear partial differential equations and applications in geometry and biology, Shannxi Normal University, Xi An, China

May 18, 2018, International Conference on Variational Methods (ICVAM-4), Chern Institute, Nankai University, Tianjing, China

May 7, 2018, Colloquium, Tsinghua University, Beijing, China

April 22, 2018, AMS Spring Eastern Sectional Meeting, Northeastern University, Boston, MA

Jan. 8, 2018, Seminar, Institute of Mathematical Sciences, Hong Kong Chinese University, Hong Kong, China

Dec. 19, 2017, PDE Seminar, Central South University, Changsha, China

Dec. 8, 2017, International Workshop on Reaction-Diffusion Equations, South University of Science and Technology, Shenzhen, China

Nov. 4, 2017, Special Session on Nonlinear Elliptic Differential and Integral Equations, Fall Western Sectional Meeting University of California, Riverside, Riverside, CA

Oct. 13, 2017, Colloquium, University of Central Florida, Orlando, FL

Oct. 5, 2017, Applied Math Seminar, Purdue University, West Lafayette, IN

Sep. 20, 2017, Applied Math Seminar, Louisiana State University, Baton Rouge, LA

Aug. 10, 2017, Applied Math Seminar, Chinese Academy of Sciences, Beijing, China

July 9, 2017, Colloquium, Changsha University of Sciences and Technology, Changsha, China

July 5, 2017, The 6th BNU-PDE Workshop and Mini-courses, Beijing Normal University, Beijing, China

June 26, 2017, Colloquium, East China University of Science and Technology, Nanchang, China

June 22, 2017, International Workshop on Nonlinear Elliptic and Parabolic PDEs, NYU-Shanghai, Shanghai, China

June, 20, 2017, PDE Seminar, Nanjing University, Nanjing, China

June 14, 2017, The Eleventh East China Partial Differential Equations Conference, East China Normal University, Shanghai, China

June 13, 2017, PDE Seminar, Chinese University of Sciences and Technology, Hefei, China

June 12, 2017, PDE Seminar, Central China University of Sciences and Technology, Wuhan, China

June 9, 2017, PDE Seminar, Central China Normal University, Wuhan, China

June 8, 2017, Applied Math Seminar, Wuhan Institute of Physics and Mathematics, Wuhan, China

June 7, 2017, PDE Seminar, Wuhan University, Wuhan, China

June 3, 2017, University Distinguished Lushan Colloquium, Hunan University of Commerce, Changsha, China

May 7, 2017, Special Session on Common Threads to Nonlinear Elliptic Equations and Systems, Spring Eastern Sectional Meeting Hunter College, City University of New York, New York, NY

May 6, 2017, Special Session on Qualitative and Quantitative Properties of Solutions to Partial Differential Equations, Spring Eastern Sectional Meeting Hunter College, City University of New York, New York, NY

March 15, 2017, Differential Geometry Seminar, University of California at San Diego, San Diego, CA

March 14, 2017, Analysis Seminar, University of California at Irvine, Irvine, CA

Jan. 5, 2017, Colloquium, Central South University, Changsha, China

Dec. 9, 2016, Graduate Student Recruitment Fair, Department of Math, UTSA, San Antonio, Texas

Nov. 22, 2016, International Conference on Nonlinear Partial Differential Equations, University of New England, Armidale, Australia

Oct. 24, 2016, Math Seminar, South West Research Institute, San Antonio, Texas

Oct. 7, 2016, PDE Seminar, University of Houston, Houston, Texas

Sept. 28, 2016, Asymptotic Patterns in Variational Problems: PDE and Geometric Aspects, CMO-BIRS, Oaxaca, Mexico

Sept. 14, 2016, Analysis Seminar, University of Texas at Austin, Texas

July 26, 2016, PDE Seminar, University of Rome, Tor Vergata, Italy

July 6, 2016, International Conference on Perspectives in Geometric Analysis, Xi An, China

May 27, 2016, Colloquium, South University of Science and Technology of China, Shenzhen, China

May 25, 2016, Colloquium, Hunan Normal University, Changsha, China

April 10, 2016, Geometry Seminar, Stony Brook University, NY

April 6, 2016 Nonlinear Analysis Seminar, Rutgers University, NJ

April 5, 2016, Joint Rutgers-Princeton Geometric PDE Seminar, New Brunswick, NJ

April 1., 2016, Colloquium, Wright State University, Dayton, OH

Dec. 10, 2015, SIAM PDE Conference, Scottsdale, AZ

Dec. 1, 2015, PDE Seminar, UBC, Vancouver, Canada

July 2, 2015, Beijing International Center of Mathematics Research, Beijing, China

May 22, 2015, Colloquium, University of Texas at San Antonio, TX

March 27, 2015, Colloquium, Howard University, DC

Oct. 10, 2014, Colloquium, George Town University, DC

Sept. 16, 2014, Colloquium, American University, DC

May 27, 2014, Geometric Aspects of Semilinear Elliptic and Parabolic Equations: Recent Advances and Future Perspectives, Banff, Canada

May 23, 2014, International Conference on PDEs and Calculus of Variations, Wuhan, China

April 16, 2014, Colloquium, University of California, Riverside, CA

April 12, 2014, Special Session on Qualitative Theory for Non-linear Parabolic and Elliptic Equations

tions, AMS Sectional meeting, Lubbock, Texas

March 21, 2014, Colloquium, George Washington University, DC

Nov. 26, 2014, Recent developments of nonlinear PDEs, Australian National University, Canberra, Australia

Nov. 11, 2013, PDE seminar, Penn State University, College Station, PA

Sept. 16, 2013, PDE seminar, John Hopkins University, Baltimore, Maryland

June 20, 2013, International conference on Analysis and Geometry, Wuyishan, China

June 18, 2013, Nanjing Conference on Geometric Analysis, Nanjing University, China

April 11, 2013, Nonlinear Science Seminar, CUNY Graduate Center, New York

April 10, 2013, Colloquium, Yeshiva University, New York

April 9, 2013, PDE seminar, Rutgers University, New Brunswick, New Jersey

April 2, 2013, Geometry and Topology Seminar, Stony Brook University, New York

Nov. 26-30, 2012, Singular limit problems in nonlinear PDEs, CIRM Luminy, Marseille, France

Nov.1, 2012, Dynamical Systems Seminar, IMA, Minneapolis, USA

Aug. 6-10, 2012, Recent trends in geometric and nonlinear analysis, Banff International Research Station, Canada

May 21-25, 2012, International Conference on Variational Methods (ICVAM-3), Chern Institute of Mathematics (CIM), Nankai University, Tianjin, China

May 8-11, 2012, International workshop on topics in nonlinear PDE, Postech, South Korea

April 3, 2012, Colloquium, University of California, Riverside

March 28, 2012, PDE seminar, University of Minnesota, Minneapolis

February 27, 2012, Nonlocal PDEs, Variational Problems and their Applications, IPAM, UCLA, Los Angeles,

Sept. 22, 2011, Mini-Symposium on the topic "Recent trends in nonlinear PDE", Graduate Center, CUNY, New York

July 11-14, 2011, The 8th East China Partial Differential Equations Conference & The 2th International Workshop on Reaction-Diffusion Models and Mathematical Biology, Xi An, China

June 27, 2011, PDE seminar, Cologne University, Cologne, Germany

June 17, 2011, PDE seminar, University of Athens, Athens, Greece

June 17, 2011, Analysis seminar, University of Athens, Athens, Greece

April 28, 2011, Applied PDE seminar, University of California, San Diego

April 22, 2011, Geometry Seminar, University of California, Santa Barbara

November 23, 2010, Analysis Seminar, University of California, Irvine

October 9-10, 2010, Invited Speaker, The Second Oklahoma PDE Workshop University of Oklahoma, Norman

August 8-13, 2010, Invited Speaker, Workshop on Recent Advances on de Giorgi's Conjecture and the Study of Entire Solutions of Nonlinear Scalar Equations, BIRS, Banff, Canada

August 1-4, 2010, Invited Speaker, Workshop on PDEs, Northwest University, Xi An, China

July 30-Aug.4, 2010, Invited Speaker, Workshop on Geometric Analysis 2010, Lan Zhou, China

July 19, 2010, PDE seminar, Capital Normal University, Beijing

July 16-18, 2010, Invited Speaker, International conference of PDEs in honor of Xinmou Wu, Beijing

May 18, 2010, Invited Speaker, NSF/CBMS Regional Conference in the Mathematical Sciences: The Mathematics of Diffusions, Tulane University, New Orleans

April 22, 2010, PDE seminar, George Washington University, DC

March 21-26, 2010, Workshop on Deterministic and stochastic front propagation, BIRS, Banff, Canada

March 11, 2010, Analysis Seminar, Columbia University, New York

March 9, 2010, PDE Seminar, Rutgers University, New Jersey

Dec. 28, 2009, Second Workshop on Nonlinear and Applied Analysis, Wu Town, China

July 10, 2009, Workshop on Asymptotic analysis in the calculus of variations and PDEs, PIMS, Vancouver, Canada

May 18, 2009, Topological and Variational Methods for Partial Differential Equations, Oberwolfach, Germany

March 10, 2009, IAS Geometric PDE Seminar, Princeton, NJ, USA

Jan. 17, 2009, 8th Pacific Northwest PDE meeting, Vancouver, Canada

Dec. 21, 2008, Special Session on Elliptic and Parabolic Equations, Joint AMS-CMS meeting, Shanghai, China

Dec. 1-3, 2008, Workshop "Singularities arising in nonlinear problems" (SNP2008), Kyoto, Japan

Oct. 8-10, Variational Methods for Elliptic PDE's and Hamiltonian Systems, Pohang University of Science and Technology (POSTECH), Pohang, Republic of Korea;

July 17- July 26, 2008, Invited Lectures (18 hours), The sixth Summer School on PDEs, Xiang Tan, China

July 10-16, 2008, Invited Lectures (10 hours), Summer School, East China Normal University, Shanghai, China

June 18, 2008, PDE seminar, University of Rome, Tor Vergata, Italy;

June 16, 2008, PDE seminar, Universita' Politecnica delle Marche, Ancona, Italy;

June 12, 2008, PDE seminar, SISSA, Trieste, Italy;

June 2-6, 2008, Invited Lectures (10 hours), School and Conference on Differential Geometry, International Center for Theoretic Physics(ICTP), Trieste, Italy;

May 24 - 28, 2008, International Conference on Image Process and Nonlinear Partial Differential Equations, Nanjing, China

Oct. 9, 2007, Workshop on Recent progress on nonlinear elliptic and parabolic problems and related abstract methods, BIRS, Banff, Canada

June 18-22, 2007, 10 hours Lectures, Summer school on PDEs, Universitat Politenica de Catalunya, Barcellona, Spain

June 12, 2007, Colloquium, Central Southern University of China, Changsha, China

June 6, 2007, Institute of Mathematical Sciences, Chinese University of Hong Kong, Hong Kong

May 22, 2007, Invited Speaker, International Conference on Variational Methods, Chern Institute of Mathematics, Nankai University, Tianjing, PRC;

Nov. 21, , 2006, Special Analysis Seminar, Courant Institute, New York University, NYC, USA;

Nov. 17, 2006, PDE Seminar, Rutgers University, New Brunswick, USA;

Oct. 28, 2006, Plenary Speaker, AMS sectional meeting, Storrs, USA;

July 3-7, 2006, 8 Hours Lectures on PDEs in Images Analysis, Summer School, East China Normal University, Shanghai, China

March 29, 2006, Exploring the Frontiers of Dynamic Nuclear Medicine Imaging for Medical and Molecular Applications, Banff International Research Station, Banff, Canada;

Mar. 20, 2006, Reaction-Diffusion and Free Boundary Problems, Banff International Research Station, Banff, Canada;

Feb. 21, 2006, PDE seminar, Kentucky University, Lexington, Kentucky;

Feb. 7,, 2006, Colloquium, Iowa State University, Ames, Iowa;

Feb. 6, 2006, Applied Math Seminar, Iowa State University, Ames, Iowa;

Jan. 25, 2006, PDE and Applied Math Seminar, University of Wisconsin, Madison, Wisconsin;

Dec. 15, 2005, PDE seminar, University of Iowa, Iowa City, Iowa;

Nov. 28, 2005, Variational/ PDE based Image Reconstruction and Processing Seminar, IMA, Uni-

versity of Minnesota, Minneapolis, Minnesota;

Nov. 15, 2005, Conference on Partial Differential Equations and Applications, University of Florida, Gainesville, Florida;

Nov. 18, 2005, PDE seminar, Vanderbilt University, Nashville, Tennessee;

Oct. 4, 2005, Postdoc Seminar, IMA, University of Minnesota, Minneapolis, Minnesota;

July 26, 2005, Asymptotic Analysis and Singularity, Mathematical Society of Japan, Sendai, Japan;

June 28, 2005, Workshop on Ginzburg-Landau Equation and Related Topics, Institute of Mathematics, Academic Sinica, Beijing, China

June 22, 2005, International Conference on Calculus of Variations and Nonlinear Partial Differential Equations, Zhejiang University, Hangzhou, China;

June 14, 2005, International Conference on Geometry and Analysis, Nanjing University, Nanjing, China;

June 6, 2005, PDE Seminar, Singapore National University, Singapore

March 29, 2005, Poster session, New Paradigms in Computation, IMA, Minneapolis

July 20, 2004 Research lecture, The Center for Mathematical Science, Zhejiang University, Hangzhou, PRC

July 12 & 13, 2004, PDE seminars, The Science and Technology University of China, Hefei, China

July 7, 2004, Eastern China PDE Conference, Nanjing University, Nanjing, China

July 4, 2004, PDE seminar, Yangzhou University, Yangzhou, China

June 29, 2004, PDE seminar, Tsinghua University, Beijing, China

June 17, 2004, The third international conference on variational methods in China, Nankai University, Tianjing, China

June 11, 2004, International Conference on PDEs and Several Complex Variables, Wuhan University, Wuhan, China

Feb. 26, 2004, Colloquium of Applied Mathematics, University of Colorado, Boulder, CO;

Feb. 14, 2004, Variational Methods and the Nonlinear Schrodinger Equation, Centre Bernoulli, EPFL, Lausanne, Switzerland

Nov. 6, 2003, Applied Math Seminar, Worcester Polytechnic Institute, Worcester, MA

August 9-15, 2003, Defects and their dynamics, BIRS workshop, Banff, Canada

June 19, 2003, PDE Symposium, PIMS, Vancouver, Canada

Nov. 7, Karcher Colloquium, University of Oklahoma, Norman, USA

Aug. 12-18, 2002, Nonlinear Functional Analysis, Satellite Meeting of ICM, Tai Yuan, China

Aug. 6, 2002, Summer School on Mathematics, Peking University, Beijing, China

Aug. 9, 2002, PDE seminar, Institute of Mathematics, Academic Sinica, Beijing, China

July 12, 2002, Applied Math Seminar, Hong Kong University of Science and Technology, Hong Kong

July 11, 2002, PDE Seminar, Institute of Mathematical Sciences, Chinese University of Hong Kong, Hong Kong

April 18-20, 2002, Variational and viscosity methods in partial differential equations, The University of Texas at Austin, Austin, Texas

Jan. 28-Feb. 1, 2002, Singularities and concentration phenomena in nonlinear elliptic and parabolic PDE's, Oberwolfach, Germany

Jan. 6-9, 2002, Special Session on Analysis and Application of PDEs, AMS Annual Meeting, San Diego, CA

Nov. 6, 2001, PDE seminar, Rutgers University, New Brunswick, NJ

Oct. 26, 2001, Geometric Analysis Seminar, University of Tennessee, Knoxville

Aug. 20-25, 2001, The Second Canada-China Math Congress, Vancouver, Canada

July 30-Aug. 07, 2001, Variational Methods in Partial Differential Equations, Pacific Institute of Mathematical Science, Vancouver, Canada

July 23-July 29, 2001, Concentration phenomena and vortex dynamics, Pacific Institute of Mathematical Science, Vancouver, Canada

July 11-July 20, 2001, Phase Transition, Pacific Institute of Mathematical Science, Vancouver, Canada

July 2-6, 2001, EuroConference on Nonlinear Elliptic Equations and Transition Phenomena, Newton Institute, Cambridge, UK

June 14, 2001, PDE seminar, Newton Institute, Cambridge, UK

Apr. 28-29, 2001, AMS regional meeting, PDE session, Hoboken, NJ

Mar. 21, 2001, University of Minnesota, PDE Seminar, Minneapolis

Mar. 2, 2001, Princeton University, Princeton, Geometric Analysis Seminar

Feb. 12, 2001, Boston University, Boston, Dynamical System Seminar

Jan. 25, 2001, Tulane University, New Orleans, Colloquium

Dec. 15, 2000 Joint AMS-Hong Kong Mathematical Society meeting,

Dec. 9, 2000, CMS Winter Meeting, Special session on PDEs

Nov. 2000 Brown University, Providence, PDE Seminar

Nov., 2000, AMS Meeting in New York City, New York

Oct., 2000, University of Wisconsin, Madison, PDE/Applied Math Seminar

Aug., 2000, National Center for Theoretic Sciences, Taiwan, Special Lecture

June, 2000, University of Paris at Dauphine, France, PDE seminar

April, 2000, ETHZ, Zurich, Switzerland, PDE Seminar

Mar. 20, 2000, PDE seminar, Indiana University, Bloomington

Mar. 2, 2000, Aisensdadt Prize Lecture, Centre de Recherches Mathematiques, Montreal, Canada

Oct. 9, 1999, AMS meeting in Austin, Texas

Oct. 3, 1999, AMS meeting in Providence, Rhode Islands

Aug. 23, 1999, The First Canada-China Math Congress, Beijing, China

July 21, 1999, Geometric Analysis Seminar, Academia Sinica, Beijing, China

July 17-27, 1999, Invited lecturers, Summer School on Partial Differential Equation, Peking University, Beijing, China

June 5, 1999, Conference of Partial Differential Equations in Mechanics, Hong Kong

Feb. 26, 1999, Invited Speaker, The Second International Conference on Topological and Variational Methods in Nonlinear Analysis, Cuernavaca, Mexico

Multi-peak solutions for some singularly perturbed nonlinear problems

Feb. 15, 1999, Colloquium, University of Connecticut, Storrs, USA

Multi-peak solutions for some singularly perturbed nonlinear problems

Feb. 12, 1999, CRM Colloquium, CRM, Montreal

On a conjecture of de Giorgi and related problems

Feb. 12, 1999, Analysis Seminar, McGill University, Montreal

Multi-peak solutions for some singularly perturbed nonlinear problems

June 19, 1998, Conference on Phase Transitions and Free Boundary Problems, Zhejiang University, Hangzhou, China

Multi-peak solutions for some singularly perturbed nonlinear problems

May 20, 1998, Pure Math Seminar, Hong Kong University of Science and Technology, Hong Kong

On a conjecture of de Giorgi and related problems

May 3, 1998, Conference on Mathematics, Centennial Anniversary of Peking University, Beijing, China

Multi-peak solutions for some singularly perturbed nonlinear problems

Dec. 16, 1997, Joint PIMS-CMS PDE meeting, University of Victoria, Victoria, Canada

Multi-peak solutions for singularly perturbed Neumann problems

Apr. 28, 1997, PDE seminar, Hong Kong University of Science and Technology, Hong Kong

Three layered solutions and other related problems in multi-phase transition

Apr. 24, 1997, Analysis Seminar, The Chinese University of Hong Kong, Hong Kong

On multiple peak solutions for some nonlinear problems

Mar. 30, 1997, Calderon-Zygmund seminar, University of Chicago, Chicago, USA

On multiple peak solutions for some nonlinear problems

Feb. 24, 1997, PDE/Analysis Seminar, University of Toronto, Toronto, Canada

On multiple peak solutions for some nonlinear problems

Feb. 21, 1997, Colloquium, McMaster University, Hamilton, Canada

On multiple peak solutions for some nonlinear problems

Jun. 28, 1996, Invited Talk, US-Chinese Conference on DE, Zhejiang University, Hangzhou, PRC

Three layered solutions and other related problems in multi-phase transition

Jun. 10, 1996, Analysis Seminar, Peking University, Beijing, PRC

Three layered solutions and other related problems in multi-phase transition

Jun. 6, 1996, f Analysis Seminar, Institute of Mathematics, Academia Sinica, Beijing, PRC

On multiple peak solutions for some nonlinear problems

Apr. 12, 1996, Analysis Seminar, Rutgers University, New Brunswick, USA

Three layered solutions and other related problems in multi-phase transition

Feb. 15, 1996, CECM Colloquium, Simon Fraser University, Vancouver, Canada

Three layered solutions and other related problems in multi-phase transition

Oct. 26, 1995, Colloquium Talk, Notre Dame University, Southband, USA

Multiple-peak solutions for nonlinear Schrödinger equations

Mar. 20, 1995, Colloquium Talk, McMaster University, Hamilton, Canada

Symmetry of solutions to some differential equations

Jan. 20, 1995, Colloquium Talk, University of Miami, Coral Gables, USA

On a three layered minimizer in R^2

Jan. 16, 1995, IAM Colloquium Talk, University of British Columbia, Vancouver

On a three layered minimizer in R^2

May 10, 1994, Analysis Seminar, New York University, New York, USA

A three layered solution in R^2 for a variational problem with a symmetric three well potential

Mar. 18, 1994, Applied Math Seminar, Michigan State University, East Lansing, USA

Symmetry of the blow up set of a porous medium type equation

Mar. 16, 1994, Analysis Seminar, University of Rochester, Rochester, USA

Symmetry of the blow up set of a porous medium type equation

Nov. 16, 1993, Dynamical System Seminar, Georgia Institute of Technology, Atlanta, USA

Symmetry of the blow up set of a porous medium type equation

Oct. 12, 1993, Applied Math Seminar, SUNY/Buffalo, Buffalo, USA

On the Lotka-Volterra competition system

Feb. 11, 1993, Colloquium Talk, University of Tennessee, Knoxville, USA

On the stability and instability of a nonlinear heat equation

Jan. 28, 1993, Colloquium Talk, Michigan State University, East Lansing, USA

On the stability and instability of a nonlinear heat equation

Sept., 1992, Analysis Seminar, Courant Institute, New York University, New York, USA

On the stability and instability of a nonlinear heat equation

VISITING AND
ADJUNCT
POSITIONS

Oct. 5-Dec. 5, 2022, Sydney Mathematical Research Institute, Australia

Oct. 19 -Nov. 21, 2021, University of Paris at Dauphine, France

June 1 -June 30, 2020, University of Paris at Dauphine, France (Cancelled due to Pandemic)

April 1-May 31, 2020, University of Sydney Mathematical Research Institute, Australia (Cancelled due to Pandemic)

Feb. 1-March 31, 2021, Visiting Scholar, University of California, Irvine

Dec. 18, 2019- Jan. 18 2020, Hong Kong University of Science and Technology, Hong Kong

Sept. 1-Oct. 30, 2019, Princeton University, Princeton, NJ

Sept. 2017-May 31 2024, *Adjunct Professor, School of Engineering, UTSA*

2018-2024 *Visiting Adjunct Professor, Central South University, Changsha, China*

2016-2018 *Visiting Adjunct Professor, Hunan University, Changsha, China*

January 23, 2013-Aug.26, 2013, *Visiting Scholar, University of California, Irvine*

Sept. 10, 2012-Dec. 10, 2012, Long term visitor, IMA, University of Minnesota, Minneapolis, USA

2011- 2013 *Visiting Adjunct Professor, Hunan University, Changsha, PRC*

May 29-June 29, 2011, *Visiting Scholar, University of Paris at Dauphine, France*

January 15, 2011-May, 31 2011, *Visiting Scholar, University of California, Irvine*

July 1-Aug. 1, 2009, *Visiting Scholar, Pacific Institute of Mathematical Sciences, Vancouver, Canada*

2006-2009, *Changjiang Visiting Professor, Hunan University, Changsha, PRC*

Sept. 15, 2005- June 30, 2006, *New Direction Professor, IMA, University of Minnesota, Minneapolis, USA*

Aug. 15, 2005-Sept. 15, 2005, *Visiting Member, MSRI, University of California, Berkeley, USA*

June 01 -July 01, 2003, *PIMS, Vancouver, Canada*

Nov. 20-Dec. 20, 2002, *Borel Center, IHP, Paris, France*

May 1 -June 15 , 2001, *Newton Institute, Cambridge University, UK*

July 15, 2000- Aug. 19, 2000, *National Center of Theoretic Sciences, Xingzhu, Taiwan*

June 1, 2000- July 1, 2000, *Universite Paris-Dauphine, Paris, France*

April 1, 2000-June 1, 2000, *Visiting Scholar, FIM-Research Institute for Mathematics, ETHZ, Zurich, Switzerland*

June 15, 1999- July 15, 1999, *Visiting Professor, IMS, Chinese University of Hong Kong, Hong Kong*

April 1, 1999- May 31, 1999, *Visiting Professor, Hong Kong University of Science and Technology, Hong Kong*

July 1, 1997- August 30, 1997, *Visiting Scholar, Massachusetts Institute of Technology, Cambridge, USA*

Conferences Organized

- BIRS Workshop: New Trends in Elliptic and Parabolic Equations (25w5328), Banff, Canada, November 16-21, 2025;
- Special Session on The recent progress on Allen-Cahn equation, Liouville equation and critical exponent equation, 14th AIMS Conference on Dynamical Systems, Differential Equations and Applications, Abu Dhabi, UAE, December 16 -20, 2024;
- Theory and Application of Differential Equations, Nov. 15-18, 2024, Yongzhou, Hunan, China;
- 2024 Central South University Nonlinear PDE Conference, April 4-7, 2024, Changsha, China;
- Workshop on Analysis and PDEs, Nov. 27-30, 2023, Jishou, Hunan, China;
- International Conference on Geometric Analysis and PDEs, April 12-16, 2023, Central South University, Changsha, China;
- Virtual workshop on Geometric Analysis and Partial Differential equations, Central South University, May 17-21, 2021;
- Workshop on Fractional Partial Differential Equations, Central South University, Changsha, China, Dec. 7-13, 2019;
- Workshop on Nonlinear Partial Differential Equations, Central South University, Changsha, China, July 19-19, 2019;
- Special Session on " Modeling and Qualitative Study of PDEs from Materials Science and Geometry" at the AMS Sectional Meeting, University of Connecticut Hartford Campus , Hartford, CT April 13-14, 2019;
- International Workshop on Mean Field Equations, Central South University, Changsha, China, June 25-29, 2018;
- Special Session on "Topics in qualitative properties of partial differential equations" at the AMS Sectional Meeting at Northeastern University, Boston, MA, April 21-22, 2018.
- Workshop on Physical, Geometrical and Analytical Aspects of Mean Field Systems of Liouville Type, Banff, Canada, April 1-6 , 2018;
- Texas DE conference, San Antonio, March 17-18, 2018;
- Scientific Committee, Conference on Nonlinear Analysis and PDE, Vancouver, Canada, July 8-12, 2013;
- Workshop on Recent Advances on de Giorgi's Conjecture and the Study of Entire Solutions of Nonlinear Scalar Equations: Interaction of PDEs and Differential Geometry, Banff, Canada, Aug. 8-13, 2010;
- Special session on " Elliptic and parabolic equations", Joint AMS-CMS meeting, Shanghai, China, Dec. 17-21, 2008;
- Special session on " Nonlinear elliptic and parabolic equations", American Mathematical Society Sectional Meeting, Storrs, Oct. 28-29, 2006;
- International Conference on Mathematical Methods in Image Reconstruction and Analysis, Shanghai, China, June 21-23, 2006;
- New Developments on Variational Methods and Their Applications, BIRS workshop, Banff, Canada, 2004
- Defects and their dynamics, BIRS workshop, Banff, Canada, 2003
- Thematic Programs on PDEs, Summer, Pacific Institute, Vancouver, 2001
- AMS special session, April, Hoboken, New Jersey, 2001

- The First Canada-China Math Congress, Beijing, China, August, 1999
- Joint PIMS-CMS PDE meeting, University of Victoria, Victoria, Canada, December, 1997

Editorial Board Member

Communications on Pure and Applied Analysis

Advanced Nonlinear Studies

Mathematical Theory and Applications

Advances in Nonlinear Analysis

Review Service

- Panel Member, Division of Mathematical Sciences, NSF, Several Panels, recently two in 2018, 2019, 2020
- Grant Reviewer: NSERC; NSFC; Israel Research Foundation; South African National Research Foundation; Research Council of Hong Kong, etc
- Program Reviewer: Banff International Research Station
- Journal Reviewer: Acta, CPAM, Transactions AMS, Proceedings AMS, AIHP-Nonlinear Analysis, Mathematics Research Letters, Canadian Journal of Mathematics, Duke University Journal, Indiana University Math Journal, Calculus of Variations, JDE, Communications of PDE, etc
- Promotion and Tenure Reviewer: University of Ohio, Central Florida State University, University of Georgia, King Abdulaziz University, Columbia University, University of Sydney, Hong Kong University of Science and Technology, Southern University of Science and Technology, Shanghai Jiao Tong University, etc

Key Departmental and College Committees

- Developer and Organizer of Applied Math Seminar, 2015-2018
- CFRAC, 2015-2017
- College Policy Committee, 2016-2018
- Chair Search Committee, 2017, 2018
- Hiring Committee Chair: 2003, 2004, 2008, 2010, 2015, 2016
- Hiring Priority Committee Chair: 2008
- Advisory Committee: 2006-2008, 2020
- PTR (Promotion, Tenure, Reappointment) Committee: 2006-2008, 2010, 2015-2021

Postdoctoral Fellows Supervised

Shanfa Lai (2024-), Jing Wu, Hao Liu

Hongwei Yuan, Sicheng Li, Weijian Bo, Huan Xu (at UM)

Jeanheang Bang, Huan Xu, (2021-23, at UTSA)

Yeyao Hu, Qinfeng Li

Pengwen Chen, Dmitry Glotov, Chen-Yun Lin, Dan Wu

Haoyuan Xu, Weidong Yin, Zhengbu Zhang, Meijun Zhu, Ze Cheng

PhD students Supervised

Xiaofan Wang, Ruoyu Gao, Ziyang Yi, Jiaxin Zou, Zhangtong Xie, Ziyang Zhou (Current at UM)

Xi Zhang, Qiang Fei, Weiran Mei (Current, CSU)

Jiang Wang, Zhenping Feng, Lihui Tong, Yuan Li, Jiaming Jin

Ramsey Shadfan, School of Engineering, UTSA

Weihong Xie, Central South University, Visiting UTSA for 2019-2020.

Guangze Gu, Central South University, Visiting UTSA for 2018-2020.

Zhuoran Du, Hunan University, China

Zheng Zhou, Xiamen Institute of Technology, China

Xiang Huang, Vanderbilt University

Fang Zhang, Industry

Mingfeng Zhao, Tianjing University

Tingting Huan, Industry

Yan Hu, Guangdong University of Foreign Studies

Hui Guo, Hunan University of Science and Technology

De Tang, Zhongshan University

Lihua Min, Nanjing Normal University

Xue Luo, Beihang University

Xiaosong Kang (with Nassif Ghoussoub at UBC), Wuhan University, China

Chunming Li (as associate advisor, with Martin Fox at the School of Engineering, Univ. of Connecticut), University of Pennsylvania

Master students Supervised (with current affiliation)

Xiaofan Wang, Zhantong Xie

Huijun Tian, Industry

Tingting Yan, Industry

Lu Lu (as associate advisor, with Martin Fox at the School of Engineering, Univ. of Connecticut), Industry

Liang Zhu (as associate advisor, with Martin Fox at the School of Engineering, Univ. of Connecticut), Industry

Kevin Hernandez, Industry

Josean Albelo-Cortes, PhD candidate

Bryan Dimler, PhD candidate

Ramsey Shadfan, PhD candidate

PUBLICATIONS

PDEs

1. Changfeng Gui, Positive entire solutions of the equation $\Delta u + f(x, u) = 0$, *Journal of Differential Equations*, **99**, pp 245-280 (1992)
2. Changfeng Gui, Wei-Ming Ni and Xuefeng Wang, On the stability and instability of positive steady states of a semilinear heat equation in R^n , *Communications on Pure and Applied Mathematics*, **45**, pp 1153-1181 (1992)
3. Changfeng Gui and Xuefeng Wang, Life span of solutions of the Cauchy problem for a semilinear heat equation, *Journal of Differential Equations*, **115**, pp 166-172 (1995)
4. Changfeng Gui and Fanghua Lin, Regularity of an elliptic problem with a singular nonlinearity, *Proceedings of Royal Society of Edinburgh (Section A)*, **123A**, pp 1021-1029 (1993)
5. Changfeng Gui and Yuan Lou, Uniqueness and nonuniqueness of coexistence states in the Lotka-Volterra competition model, *Communications on Pure and Applied Mathematics*, **47**, pp 1571-1594(1994)
6. Changfeng Gui, On the Lotka-Volterra competition model in symmetric domains, *Differential and Integral Equations*, **8**, pp 2079-2096 (1995)
7. Changfeng Gui, On positive entire solutions of the elliptic equation $\Delta u + K(x)u^p = 0$ and its applications to Riemannian geometry, *Proceedings of Royal Society of Edinburgh (Section A)*, **126A**,

pp 225-237 (1996).

8. Changfeng Gui and Xuefeng Wang, The critical asymptotics of scalar curvature of the conformal complete metrics with negative curvature, *Duke Mathematical Journal*, **76**, pp 293-302 (1994)

9. Changfeng Gui, Symmetry of the blow up set of a porous medium type equation, *Communications on Pure and Applied Mathematics*, **48**, pp 471-500 (1995).

10. Lia Bronsard, Changfeng Gui and Michelle Schatzman, A three layered solution in R^2 for a variational problem with a symmetric three well potential, *Communications on Pure and Applied Mathematics*, **49**, pp 677-715 (1996).

11. Changfeng Gui, Existence of multi-bump solutions for nonlinear Schrödinger equations via variational method, *Communications in Partial Differential Equations*, **21**, pp 787-820 (1996).

12. Changfeng Gui, Multi-bump solutions for nonlinear Schrödinger equations, *C.R. Acad. Sc. Paris*, **322**, Serie I, pp 133-138 (1996).

13. Changfeng Gui, Multi-peak solutions for a semilinear Neumann problem, *Duke Mathematical Journal*, **84**, pp 739-769 (1996)

14. Nassif Ghoussoub and Changfeng Gui, New variational principles and multi-peak solutions for Neumann problems involving the critical Sobolev exponent, **Canadian Mathematical Society. 1945-1995, Vol. 3**, pp 125-152 (1996),

15. Changfeng Gui, Three layered solutions and other related problems in multiple phase transition, **Differential equations and applications (Hangzhou, 1996), Internat. Press, Cambridge, MA.,** pp101-107, (1997)

16. Stanley Alama, Lia Bronsard and Changfeng Gui, Stationary layered solutions in R^2 for an Allen-Cahn systems with multiple-well potentials, *Calculus of Variation and PDE*, **5**, 359-390 (1997)

17. Joel Feldman, Richard Froese, Nassif Ghoussoub and Changfeng Gui, An improved Moser-Aubin-Onofri inequality for radially symmetric functions on S^2 , *Calculus of Variation and PDE*, **6**, pp 95-104 (1998)

18. Changfeng Gui and Nassif Ghoussoub, Multi-peak solutions for a semilinear Neumann problem involving Sobolev critical exponent , *Math. Zeit.*, **229**, pp443-474 (1998)

19. Changfeng Gui, Juncheng Wei and Matthew Winter, Multiple boundary peak solutions for some singularly perturbed Neumann problems , *Ann. Inst. H. Poincare, Analyse Nonlinéaire.* **17**, pp 47-82 (2000)

20. Changfeng Gui and Juncheng Wei, Multiple interior peak solutions for some singularly perturbed Neumann problems, *J. Diff. Eqns.*, **158**, 1-27 (1999)

21. Nassif Ghoussoub and Changfeng Gui, On a conjecture of De Giorgi and related problems , *Math. Ann.*, **311**, 481-491(1998)

22. Changfeng Gui and Juncheng Wei, On a sharp Moser-Aubin-Onofri inequality on for functions on S^2 with symmetry, *Pacific Journal of Mathematics*, **194**, pp 349-358 (2000)

23. Changfeng Gui and Juncheng Wei, Multiple mixed boundary and interior peak solutions for some singularly perturbed Neumann problems, *Canadian Journal of Mathematics*, **52**, pp 522-538

(2000)

24. Martin Barlow, Rich Bass and Changfeng Gui, The Liouville property and a conjecture of de Giorgi, *Comm. Pure Appl. Math*, **Vol. 53**, pp1007-1038 (2000)
25. Changfeng Gui, Wei-Ming Ni and Xuefeng Wang, Further study on a nonlinear heat equation, *J. Diff. Eqns*, **Vol 169**, pp588-613 (2001)
26. Nassif Ghoussoub, Changfeng Gui and Meijun Zhu, On a singularly perturbed problem with the critical exponent , *Comm. Partial Differential Equations* 26 (2001), no. 11-12, 1929-1946.
27. Changfeng Gui and Chang-Shou Lin, Estimates for boundary-bubbling solutions to an elliptic Neumann problem, *Journal Reine Angew. Math.* **Vol 546** (2002), pp 201-235
28. Nassif Ghoussoub and Changfeng Gui, On De Giorgi's conjecture in dimensions 4 and 5, *Annals of Mathematics* **157** (2003), pp 313-334
29. Changfeng Gui, On some problems related to De Giorgi's conjecture, *Communications on Pure and Applied Analysis* **2** (2003), pp101-106
30. Changfeng Gui, Recent progress on De Giorgi's conjecture, *Pacific Institute Magazine* **7** (2003), pp26-29
31. Changfeng Gui and Xiaosong Kang, Localization for a porous medium type equation in high dimensions, *Transactions of American Math Society* **356** (2004), pp 4273-4285
32. Changfeng Gui and Zhenbu zhang, Spike solutions to a nonlocal differential equation, *Communications on Pure and Applied Analysis*, **5** (2006), pp. 85-95.
33. Changfeng Gui and Michelle Schatzman, Symmetric quadruple phase transitions, *Indiana University Mathematical Journal*, Vol **57** (2008) 781-836 ;
34. Changfeng Gui, Hamiltonian Identities for elliptic partial differential equations, *J. Funct. Anal.* 254 (2008), no. 4, 904-933.
35. Changfeng Gui, Hamiltonian constants for several new entire solutions, *Front. Math. China* , 2008, 3(2): pp 1-10;
36. Changfeng Gui and Feng Zhou, Asymptotic behavior of radial oscillating solutions to certain nonlinear equations, *Methods Appl. Anal.*, Volume 15, Number 3 (2008), 285-296
37. Changfeng Gui, Xue Luo and Feng Zhou, Asymptotic behavior of radial oscillating solutions to certain nonlinear equations, Part II, *Methods Appl. Anal.*, Volume 16, Number 4 (2009), 459-468;
38. Zhuoran Du and Changfeng Gui, Interior layers for an inhomogeneous Allen-Cahn equation, *Journal of Differential Equations* , 249, 2010, pp 215-239;
39. Changfeng Gui, Huiyu Jian and Hongjie Ju, Properties of translating solutions to mean curvature flow, *Discrete and Continuous Dynamical systems*, Volume 28, 2010, pp 441-453;
40. Changfeng Gui, Andrea Malchiodi and Haoyuan Xu, Axial Symmetry of Some Steady State Solutions to Nonlinear Schrodinger Equations, *Proceedings of AMS*, Volume 139 (2011), pp 1023-1032;

41. Changfeng Gui, Symmetry of Traveling Wave Solutions to the Allen-Cahn Equation in R^2 , *Archive for Rational Mechanics and Analysis*, Volume 203 (2012), Number 3, 1037-1065.
42. Changfeng Gui, Symmetry of Some Entire Solutions to the Allen-Cahn Equation in Two Dimensions, *Journal of Differential Equations*, Volume 252, Issue 11, 1 June 2012, pp 853-874;
43. Min, Lihua; Yang, Xiaoping; Gui, Changfeng, Entropy estimates and large-time behavior of solutions to a fourth-order nonlinear degenerate equation. *Commun. Contemp. Math.* 15 , no. 4, 1250066 (2013) [23 pages] DOI: 10.1142/S0219199712500666;
44. Changfeng Gui and Mingfeng Zhao, Traveling Wave Solutions of Allen-Cahn Equation with a Fractional Laplacian, *Ann I H Poincaré-AN*, Volume 32, Issue 4, (2015), Pages 785-812;
45. Changfeng Gui and Tingting Huan, Traveling wave solutions to some reaction diffusion equations with fractional Laplacians, *Calculus of Variations and PDEs*, **54** (2015), pp. 251-273;
46. Changfeng Gui and Fang Zhang, Symmetry of Entire Solutions to the Allen-Cahn Equation, *Advanced Nonlinear Studies* 15 (2015), 587-612
47. Changfeng Gui and Mingfeng Zhao, Asymptotic formula for the speed of traveling wave solutions to Allen-Cahn equation (in Chinese), *SCIENTIA SINICA Mathematica*, 2016, 46: 549-562, doi: 10.1360/N012015-00361
48. Francesca Alessio, Changfeng Gui and Piero Montecchiari, Saddle solutions to Allen-Cahn equations in doubly periodic media, *Indiana Univ. Math. J.*, 65, No. 1 (2016), 199-221;
49. Changfeng Gui, Yong Liu and Juncheng Wei, On variational characterization of four-end solutions of the Allen-Cahn equation on the plane, *J. Funct. Anal.* 271 (2016), no. 10, 2673-2700.
50. Zhuoran Du, Changfeng Gui, Yannick Sire and Juncheng Wei, Layered solutions for a fractional inhomogeneous Allen-Cahn equation, *Nonlinear Differential Equations and Applications*, 23 (2016), no. 3, Art. 29, 26 pp.
51. Changfeng Gui, Yong Liu and Juncheng Wei, Two-end solutions for Allen-Cahn equations in R^3 , *Adv. Math.* 320 (2017), 926-992.
52. Changfeng Gui, Jie Zhang, Zhuoran Du, Periodic solutions of a semilinear elliptic equation with a fractional Laplacian, *J. Fixed Point Theory Appl.* 19 (2017), no. 1, 363-373.
53. Changfeng Gui, Amir Moradifam, The Sphere Covering Inequality and Its Applications, *Invent. Math.* 214 (2018), no. 3, 1169-1204.
54. Changfeng Gui, Amir Moradifam, Symmetry of solutions of a mean field equation on flat tori, *International Mathematics Research Notices*, Vol. 2019 (2017), No.3, 799-809
55. Changfeng Gui, Amir Moradifam, Uniqueness of solutions of mean field equations in R^2 , *Proc. Amer. Math. Soc.* 146 (2018), no. 3, 1231-1242.
56. Changfeng Gui, Aleks Jevnikar and Amir Moradifam, Symmetry and uniqueness of solutions to some Liouville-type problems: asymmetric Sinh-Gordon equation, cosmic string equation and Toda system, *Comm. Partial Differential Equations* 43 (2018), no. 3, 428-447.
57. Zhuoran Du and Changfeng Gui, Further study on periodic solutions of elliptic equations with a fractional Laplacian, *Nonlinear Anal.* 193 (2020), 111417, 16 pp.

- 58** Ze Cheng, Changfeng Gui and Yeyao Hu, Blow-up solutions for a mean field equation on a flat torus, *Indiana Univ. Math. J.* 69 (2020), no. 2, 453-485.
- 59** Changfeng Gui and Yeyao Hu, Non-axially symmetric solutions of a mean field equation on S^2 , *Adv. Calc. Var.* 14 (2021), no. 3, 419-439.
- 60** Ze Cheng, Changfeng Gui and Yeyao Hu, The existence of solution to a supercritical Hardy-Littlewood-Sobolev system with a fractional Laplacian, *Discrete Contin. Dyn. Syst.* 39 (2019), no. 3, 1345-1358
- 61** Changfeng Gui and Hui Guo, On nodal solutions of a nonlocal Choquard equation in a bounded domain, *Communications in Contemporary Mathematics*, 23 (2021), no. 3, Paper No. 1950067, 33 pp.
- 62** Daniele Bartolucci, Changfeng Gui, Aleks Jevnikar and Amir Moradifam, A singular Sphere Covering Inequality: uniqueness and symmetry of solutions to singular Liouville-type equations, *Math Ann.* 374 (2019), no. 3-4, 1883-1922.
- 63** Hongxia Guo, Changfeng Gui, Ping Lin and Mingfeng Zhao, Multiple solutions and their asymptotics for laminar flows, *IMA J. Appl. Math.* 85 (2020), no. 2, 280-308.
- 64** Changfeng Gui, Kelei Wang and Juncheng Wei, Axially symmetric solutions of Allen-Cahn equation with finite Morse index, *Trans. Amer. Math. Soc.* 373 (2020), no. 5, 3649-3668.
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