TEXAS STATE VITA

I. Academic/Professional Background

A. Name: Dr. Chunmei Wang Title: Program Faculty

B. Educational Background

Degree	*Year*	*University*	*Major*	*Thesis/Dissertation*
PHD	2014	Nanjing Normal University	Computational Mathematics	
MS	2007	Soochow University	Computational Mathematics	
BS	2004	Soochow University	Mathematics, General	

C. University Experience

Position	*University*	*Dates*
Visiting Assistant Professor	Georgia Institute of Technology	August 2014 - May 2016
Assistant Professor	Nanjing Normal University TaiZhou College	July 2007 - July 2014

II. TEACHING

B. Courses Taught:

Texas State University:

MATH 3323 - DIFFEREN EQUAT

MATH 3373 - CALCULUS III

Georgia Institute of Technology :

MATH 1554 - Linear Algebra

MATH 2403 - Differential Equations

MATH 2552 - Differential Equations

Nanjing Normal University TaiZhou College:

Calculus

Computational Methods

Mathematical Modeling

Numerical Analysis

F. Other:

Research Interest, Numerical Partial Differential Equations. (2011 - Present).

Research Interests, Finite Element Methods. (2011 - Present).

Research Interests, High Performance Computing and Domain Decomposition. (2011 - Present).

Research Interests, Inverse and Imaging Problems. (2011 - Present).

Research Interests, Nonlinear Optimization. (2011 - Present).

Research Interests, Weak Galerkin Finite Element Methods. (2011 - Present).

Student Accomplishments:

Grants:

Mentor. "Weak Galerkin finite element methods for fluorescence tomography." Status: In Progress. (October 1, 2017). Computer Science, Texas State University.
Student(s): Michael Scales, Undergraduate.

Scholarships:

Mentor, Weak Galerkin Method. "Weak Galerkin Finite Element Methods for Hyperbolic Equations." Status: Completed. (October 1, 2016). Mathematics, Computer Science, Texas State University.
Student(s): Gabriel Hanson Hurtado, Undergraduate.

III. SCHOLARLY/CREATIVE

A. Works in Print (including works accepted, forthcoming, in press):

1. Books:

2. Articles:

a. Refereed Journal Articles:

Wang, C., Zhou, H. (2017). A Weak Galerkin Finite Element Method for A Type of Fourth Order Problem Arising From Fluorescence Tomography. *Journal of Scientific Computing, 71(3)*, 897–918.

Wang, C., Lai, M. (2017). A bivariate spline method for second order elliptic equations in non-divergence form. *Journal of Scientific Computing*. https://www.springerprofessional.de/a-bivariate-spline-method-for-second-order-elliptic-equations-in/15076918

Wang, C., Wang, J. (2017). A primal-dual weak Galerkin finite element method for second order elliptic equations in non-divergence form. *Mathematics of Computation*. http://www.ams.org/journals/mcom/0000-000-00/S0025-5718-2017-03220-8/home.html

Wang, C., Wang, J., Wang, R., Zhang, R. (2016). A Locking-Free Weak Galerkin Finite Element Method for Elasticity Problems in the Primal Formulation. *Journal of Computational and Applied Mathematics, 307*, 346-366.

Wang, C., Wang, J. (2016). Discretization of div-curl systems by weak Galerkin finite element methods on polyhedral partitions,. *Journal of Scientific Computing, 68*(3), 1144–1171.

Wang, C., Wang, J. (2015). A hybridized formulation for weak Galerkin finite element methods for biharmonic equation on polygonal or polyhedral meshes. *International Journal of Numerical Analysis and Modeling, 12*, 302-317.

Wang, C., Zhang, S., Chen, J. (2015). A mass-preserving interpolation operator and an interpolated mortar condition for nonconforming elements on non-matching grids. *Journal of Scientific Computing, 62*, 179-197.

Wang, J., Wang, C. (2015). Weak Galerkin finite element methods for elliptic PDEs. *Science China, 45*, 1061-1092.

Wang, C. (2014). A preconditioner for the FETI-DP method for mortar-type Crouzeix-Raviart element discretization. *Applications of Mathematics, 59*, 653-672.

Wang, C., Yan, S. (2014). A two-level additive Schwarz preconditioner with WOPSIP methods for non- self-adjoint and indefinite problems. *Journal of Natural Science of Heilongjiang University, 31*, 296-301.

Wang, C., Wang, J. (2014). An efficient numerical scheme for the biharmonic equation by weak Galerkin finite element methods on polygonal or polyhedral meshes. *Journal of Computers and Mathematics with Applications, 68*, 2314-2330.

Wang, C. (2013). A preconditioner for FETI-DP method for mortar-type bicubic element discretization of a plate problem. *Journal of Computational Intelligence and Electronic Systems, 2*.

Wang, C. (2013). A preconditioner for FETI-DP method of a 4th order elliptic problem with mortar Morley element discretization. *Wulfenia Journal, 20*.

Wang, C. (2013). A preconditioner for FETI-DP method of Stokes problem with mortar-type discretization. *Mathematical Problems in Engineering*. doi: 10. 1155/2013/485628

Wang, C. (2010). A new filter algorithm for nonlinear optimization problems. *Journal of Petroleum Education Institute of Xinjiang, 3*.

Wang, C. (2010). Applications of Matlab in the teaching of numerical analysis. *Journal of China Education Innovation Herald, 1*.

Wang, C. (2010). Nonmonotone adaptive methods for nonlinear equations. *Journal of Changchun University of Science and Technology, 1*.

Wang, C. (2010). Nonmonotone trust region methods with line search for problems with no constraints. *Journal of Leshan Normal College, 11*.

Wang, C. (2008). A trust region method for problems with no constraints. *Journal of Mathematics Study and Research, 8*.

Wang, C. (2008). Nonmonotone trust region methods for nonsmooth equations with constraints of simple boundary. *Journal of Soochow University (Philosophy and Social Science), 24*(1).

B. Works Not in Print:

2. Invited Talks, Lectures, and Presentations:

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," SIAM conference on Analysis of Partial Differential Equations, United States. (December 10, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Texas State University, TX, United States. (December 1, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," University of Nebraska-Lincoln, Lincoln, NE, United States. (January 22, 2016).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Colorado State University, CO, United States. (October 6, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," PKU Summer Activities on Numerical Methods for PDEs, China. (July 25, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Nanjing Normal University, China. (May 29, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Nanjing University, China. (May 28, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Jiangsu University. (May 18, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Nanjing University of Posts and Telecommunications, China. (May 17, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Pennsylvania State University, State College, PA, United States. (February 24, 2017).

Wang, C., Recent numerical methods for PDEs and variational inequalities, "Weak Galerkin Finite Element Methods," Beijing Computational Science Research Center, Beijing, China. (January 4, 2017).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Texas State University, San Marcos, TX, United States. (October 21, 2016).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Peking University, Beijing, China. (August 9, 2016).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Beijing Computational Science Research Center, Beijing, China. (July 7, 2016).

Wang, C., Mathematics in Action (MiA2016): Modeling and analysis in molecular biology and electrophysiology, "Weak Galerkin Finite Element Methods for PDEs," Soochow University, Suzhou, China. (June 2016).

Wang, C., The Second Yangzhou International Symposium on Dynamic Systems and Numerical Analysis, "Weak Galerkin Finite Element Methods for PDEs," Yangzhou University, Yangzhou, China. (May 2016).

Wang, C., The 40th SIAM Southeastern Atlantic Section Conference (SIAM-SEAS), "Primal-Dual Weak Galerkin Finite Element Methods for Second Order Problem in Nondivergence Form," University of Georgia, Athens, GA, United States. (March 2016).

Wang, C., Joint Mathematics Meeting, "Weak Galerkin Finite Element Methods for PDEs," Seattle, WA, United States. (January 2016).

Wang, C., University of Georgia, "Weak Galerkin Finite Element Methods for PDEs," Athens, GA, United States. (November 30, 2015).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," North Carolina State University, Raleigh, NC, United States. (November 10, 2015).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Georgia Institute of Technology, Atlanta, GA, United States. (November 4, 2015).

Wang, C., Polytopal Element Methods in Mathematics and Engineering, "Primal-Dual Weak Galerkin Finite Element Methods for Second Order Problem in Nondivergence

Form," Georgia Institute of Technology, Atlanta, GA, United States. (October 26, 2015).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Michigan State University, East Lansing, MI, United States. (October 9, 2015).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," University of Delaware, Newark, DE, United States. (October 1, 2015).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," University of North Carolina at Charlotte, Charlotte, NC, United States. (September 16, 2015).

Wang, C., International Congress on Industrial and Applied Mathematics (ICIAM), "Weak Galerkin Finite Element Methods for Fluorescence Molecular Tomography," Beijing, China. (August 2015).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Academy of Mathematics and Systems Sciences, Chinese Academy of Sciences, Beijing, China. (August 13, 2015).

Wang, C., SIAM Conference on Computational Science and Engineering, "Discretization of div-curl Systems by Weak Galerkin Finite Element Methods on Polyhedral Partitions," Salt Lake City, UT, United States. (March 2015).

Wang, C., "Weak Galerkin Finite Element Methods for PDEs," Shanghai Jiaotong University, Shanghai, China. (December 29, 2014).

Wang, C., "Weak Galerkin finite element methods for PDEs," Fudan University, Shanghai, China. (December 26, 2014).

Wang, C., "Weak Galerkin finite element methods for PDEs," Georgia Institute of Technology, Atlanta, GA, United States. (September 22, 2014).

Wang, C., The 2nd International Conference on Engineering and Computational Mathematics, "Weak Galerkin finite element methods for the biharmonic equations," University of Science and Technology, Hong Kong, China. (December 2013).

Wang, C., The 12th Conference on Computational Mathematics, "Weak Galerkin finite element methods for the biharmonic equations," National University of Defense Technology, Changsha, China. (October 2013).

Wang, C., The 8th Conference on Finite Element Methods, "A mass-preserving interpolation operator and an interpolated mortar condition for nonconforming elements on non-matching grids," Nankai University, Tianjing, China. (September 2012).

Wang, C., The 12th Conference on Computational Mathematics in Jiangsu Provinve, "A preconditioner for the FETI-DP method for mortar-type Crouzeix-Raviart element discretization," Yangzhou University, Yangzhou, China. (June 2012).

4. Workshops:

Wang, C., Polytopal Element Methods in Mathematics and Engineering, NSF Grant #DMS-1542183, Georgia Institute of Technology, Atlanta, GA, United States. (October 2015).

5. Other Works not in Print:

a. Works "submitted" or "under review":

Journal Articles:

Wang, C. New Discretization Schemes for Time-Harmonic Maxwell Equations by Weak Galerkin Finite Element Methods. https://arxiv.org/abs/1610.04310

Wang, C. Superconvergence of Finite Element Approximations for Second Order Elliptic Problems. *Numerical Methods for Partial Differential Equations*. https://arxiv.org/abs/1612.08253

Wang, C., Wang, J. A primal-dual weak Galerkin finite element method for Fokker-Planck type equations. *SIAM Numerical Analysis*. https://arxiv.org/abs/1704.05606

c. Other Works Not in Print:

Demonstrations:

Wang, C., Wang, J., Ye, X., Advanced Numerical Methods in Mathematical Sciences, "Weak Galerkin Finite Element Methods for PDEs," Texas A&M University, College Station, TX, United States. (May 2015).

Posters:

Wang, C., Wang, J., Georgia Scientific Computing Symposium, "Weak Galerkin finite element methods for PDEs," Emory University, Atlanta, GA, United States. (February 20, 2016).

Wang, C., Wang, J., Polytopal Element Methods in Mathematics and Engineering, "Weak Galerkin finite element methods for PDEs," Georgia Institute of Technology, Atlanta, GA, United States. (October 27, 2015).

Wang, C., Wang, J., 2nd Annual GT Postdoc Research Symposium, "Weak Galerkin Finite Element Methods for PDEs," Georgia Institute of Technology, Atlanta, GA, United States. (October 15, 2015).

Wang, C., Wang, J., Advanced Numerical Methods in Mathematical Sciences, "Weak Galerkin Finite Element Methods," Texas A&M University, College Station, TX, United States. (May 2015).

Wang, C., Wang, J., Ye, X., SIAM Conference on Computational Science and Engineering, "Weak Galerkin Finite Element Methods," Salt Lake City, UT, United States. (March 2015).

C. Scholarly / Creative Grants and Contracts:

1. Funded External Grants and Contracts:

Wang, Chunmei. Innovative Weak Galerkin Finite Element Methods with Application in Fluorescence Tomography, $63,998.00. (Funded: 2016 - 2018). Grant.

Wang, Chunmei. Innovative Weak Galerkin Finite Element Methods with Application in Fluorescence Tomography, National Science Foundation, Private / Foundation / Corporate, $98,621.00. (Funded: 2015 - 2016). Grant.

Wang, Chunmei. Polytopal Element Methods in Mathematics and Engineering, National Science Foundation, Private / Foundation / Corporate, $25,000.00. (Funded: 2015 - 2016). Grant.

D. Scholarly / Creative Fellowships, Awards, Honors:

Award / Honor Recipient: Excellent Huangkaibin Scholarship for PhD.
2013

Award / Honor Recipient: Excellent Scholarship for Master.
2006

Award / Honor Recipient: Comprehensive Scholarship for Undergraduate(Rank #1).
2004

Award / Honor Recipient: Zhujingwen Scholarship for Undergraduate.
2004
2003
2002
2001

Award / Honor Recipient: Comprehensive Scholarship for Undergraduate (Rank #1).
2003
2002
2001

IV. SERVICE

A. Institutional

3. Department/School:

Member, Library Committee. (2016 - Present).

B. Professional:

Reviewer / Referee, Journal of Scientific Computing, Numerical Methods for Partial Differential Equations, Journal of Computational and Applied Mathematics, Journal Advances in Computational Mathematics, Journal of Computational Mathematics, Applicable Analysis, Communications in Mathematics and Statistics, Taiwanese Journal of Mathematics, etc. (2015 - Present).

Reviewer / Referee, US National Science Foundation Review Panel in Computational Mathematics. (November 2017).

Reviewer / Referee, US National Science Foundation Review Panel in Computational Mathematics. (March 2016).

D. Organization Memberships:

Society for Industrial and Applied Mathematics (SIAM). (March 1, 2015 - Present).