Dr. Yué Zhang
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A. EDUCATION AND EMPLOYMENT INFORMATION

Education

Ph.D. in Applied Mathematics, North Carolina State University, 1997

B.S. in Physics, University of Tennessee at Knoxville , 1992

B.S. in Mathematics, University of Tennessee at Knoxville , 1992

Employment

2019 - present	Associate Professor School of Electrical Engineering and Computer Science Oregon State University
2017 - 2019	Associate Professor Sr. Res. School of Electrical Engineering and Computer Science School of Civil Engineering and Construction Engineering Oregon State University
2014 - 2016	Assistant Professor Sr. Res School of Electrical Engineering and Computer Science Oregon State University
2012 - 2013	Research Scientist Institute of Structural Analysis Technical University of Dresden, Germany
1997 - 2011	Tire Performance and Processing Modeling Scientist Michelin Americas Research Company

B. TEACHING, ADVISING, AND OTHER ASSIGNMENTS

1. Instructional Summary

- Credit Courses Taught

  Table 1 lists the courses that I have taught and will be teaching, with enrollment figures for those courses.

- Non-Credit Courses and Workshops

  Since January 2014, I have been co-organizing a weekly seminar on computer graphics and visualization.

- Curriculum Development

  (a) CS419/519 (Numerical Modeling and Simulation) is a slash course for fourth-year undergraduate students and graduate students that covers a wide range of topics in numerical modeling and simulation that are essential in today's scientific computing. I have developed course material as this is a course that I introduced. This course helps the students to gain exposure to both numerical issues and techniques that are critical to their future career.

Course (all 4 credit hours)	**Term**		**Enrollment**
CS 419/519 - Speical Topics: Numerical Modeling	Fall	2015	9
CS 419/519 - Speical Topics: Numerical Modeling	Fall	2016	23
CS 419/519 - Speical Topics: Numerical Modeling	Winter	2018	7
CS 419/519 - Speical Topics: Numerical Modeling	Winter	2020	10
CS 458/519 - Information Visualization	Spring	2020	63
CS 419/519 - Speical Topics: Numerical Modeling	Fall	2020	6
CS 419/552 - Computer Animation	Winter	2021	46
CS 458/519 - Information Visualization	Spring	2021	88
CS 499/551 - Computer Graphics	Fall	2021	30
CS 499/552 - Computer Graphics	Winter	2022	37

Table 1: Credit Courses Taught.

(b) CS458/519 (Information Visualization) is a slash course for fourth-year undergraduate students and graduate students that target advanced topics in information visualization. I have developed all the course materials from scratch to make it applicable to both undergraduate and graduate students learning remotely. The students in the class learn theory on visual perception and apply to problems that are of interest to them, e.g., visualization of social network clustering. Cutting-edge visualization techniques and concepts are taught.

2. Advising

- Graduate Advisees-Completed

Student	**Degree**	**Thesis**	**Graduated**
Yeajin Kim	M.S.	*Visualization of Potential Factors Affecting COVID-19 Spread on Parallel Coordinates*	2021
Ayush Choudhary	M.Eng.		2021
Kyle Hiebel	M.Eng.		2021
Josiah Blaisdell	M.S.	*Dynamic Stress-Scapes as a New Method for Evaluating the Potential Biological and Socio-Economic Effects of Multiple Environmental Stressors on the Gulf of Alaska Pacific Cod fishery*	2020
Paris Kalathas	M.S.	*Dynamic Analysis and Comparison of High-Rise Building Made of Mass-Timber and Traditional Materials Using Finite Element Analysis*	2019
Nirvik Das	M.Eng.		2019
Yifan Shen	M.S.	*Using Glyph Designs to Visualize Displacement Vectors Calculated in Finite Element Simulation for 2D Cases*	2018
Alex Way	M.S.	*Fluid-Structure Interaction-Based Forearm Animation*	2018
Xiaofei Gao (co-advising)	M.S.	*Applying 2D Tensor Field Topology to Solid Mechanics Simulations*	2018
Chen Hang	M.Eng.		2019
Alexander Clucas	M.S.	*Rendering and Simulation of Tires Rolling on Snow*	2016
Haoxiang Wang	M.Eng.		2019

Table 2: Graduate Students Supervised as Major Professor.

- Graduate Advisees-Current

  Table 2. lists my current advisees.

Student	Degree	Expected Graduation
Jinta Zheng	Ph.D.	2022
Josiah Blaisdell	Ph.D.	2023
Shih-Hsuan Hung	Ph.D.	2023
William Yin	Ph.D.	2024
Anton Nikitin	M.S.	2022
Tianle Yuan	M.S.	2022

Table 3: Graduate Students Currently Supervised as Major Professor.

- Other Advising

  I have sponsored and mentored 14 REU students. In addition, I have mentored six Computer Science senior capstone projects, one of which led to a New Invention Record.

  Since 2016, I have co-mentored 15 high school summer interns through the Apprentice in Science and Engineering (ASE) program. Four of the students are females, including Sheena Huang, who is currently studying Electrical and Computing Engineering at Cornell University.

C. SCHOLARSHIP AND CREATIVE ACTIVITY

1. Publications

Peer-Reviewed Journal Articles

1. S.H. Hung, Y. Zhang, H. Yeh, and E. Zhang, "Feature Curves and Surfaces of 3D Asymmetric Tensor Fields", *IEEE Transactions on Visualization and Computer Graphics*, Vol 28(1), 2022, pp. 33–42.

2. B. Qu, E. Zhang, and Y. Zhang, "Automatic Polygon Layout for Primal-Dual Visualization of Hypergraphs", *IEEE Transactions on Visualization and Computer Graphics*, Vol 28(1), 2022, pp. 633–642.

3. R.T. O'Malley, A. Choudhury and Y. Zhang, "Remote Triggering of High Magnitude Earthquakes along Plate Boundaries", *Scientific Reports (Nature)*, Vol 1138, 2022.

4. J. Blaisdell, H. L. Thalmann, W. Klajbor, Y. Zhang, J. A. Miller, B. Laurel, and M. T. Kavanaugh, "A Dynamic Stress-Scape Framework to Evaluate Potential Effects of Multiple Environmental Stressors on Gulf of Alaska Juvenile Pacific Cod", *Frontiers in Marine Science*, Vol 8, 2021, pp. 497–512.

5. J. Zheng, S.H. Hung, K. Hiebel, and Y. Zhang, "Real-Time Rendering of Decorative Sound Textures for Soundscapes", *ACM Transactions on Graphics*, Vol 39(6), 2020, Article 271.

6. B. Qu, L. Roy, Y. Zhang, and E. Zhang, "Mode Surface of Symmetric Tensor Fields: Topological Analysis and Seamless Extraction", *IEEE Transactions on Visualization and Computer Graphics*, Vol 27(2), 2021, to appear.

7. F. Khan, L. Roy, E. Zhang, B. Qu, S.H. Hung, H. Yeh, R.S. Laramee, and Y. Zhang, "Multi-Scale Topological Analysis of Asymmetric Tensor Fields on Surfaces", *IEEE Transactions on Visualization and Computer Graphics*, Vol 26(1), 2020, pp. 270–279.

8. L. Roy, P. Kumar, Y. Zhang, and E. Zhang, "Robust and Fast Extraction of 3D Symmetric Tensor Field Topology", *IEEE Transactions on Visualization and Computer Graphics*, Vol 25(1), 2019, pp. 1102–1111.

9. P. Kalathas, D. Hurwitz, D. Parrish, K. Glover and Y. Zhang, "A Survey on Road Noise Prediction for Milled Shoulder Rumble Strip Designs", International Journal of Vehicle Noise and Vibration, Vol 14(3), pp. 251–269.

10. L. Roy, P. Kumar, S. Golbabaei, Y. Zhang, and E. Zhang, "Interactive Design and Visualization of Branched Covering Spaces", *IEEE Transactions on Visualization and Computer Graphics*, Vol 24(1), 2018, pp. 843–852.

11. J. Palacios, H. Yeh, W. Wang, Y. Zhang, R.S. Laramee, R. Sharma, T. Schultz, and E. Zhang, "Feature Surfaces in Symmetric Tensor Fields Based on Eigenvalue Manifold", *IEEE Transactions on Visualization and Computer Graphics*, Vol 22(3), 2016, pp. 1248–1260.

12. I. Aminzahed, Y. Zhang, and M. Jabbari, "Energy Harvesting from a Five-Story Building and Investigation of Frequency Effect on Output Power", International Journal on Interactive Design and Manufacturing, pages 1–8, March 2016.

13. H.T. Banks, B.G. Fitzpatrick, L.K. Potter, and Y. Zhang, "Estimation of Probability Distributions for Individual Parameters Using Aggregate Population Data", in *Stochastic Analysis, Control, Optimization and Applications: a Volume in Honor of W.H. Fleming, Birkhäuser*, Boston, 1998, pp. 353–371.

14. H.T. Banks, N.G. Medhin, and Y. Zhang, "Mathematical Model and Analysis of a Laminated Curved Beam with Shear", *Dynamic Systems and Applications*, Vol 7, 1998, pp. 291–318.

15. H.T. Banks and Y. Zhang, "Computational Methods for a Curved Beam with Piezoceramic Patches", *Journal of Intelligent Material Systems and Structures*, Vol 8(3), Mar. 1997, pp. 260–278.

16. H.T. Banks, R.C. Smith, and Y. Zhang, "Damage Detection as Inverse Problems for Distributed Parameter Systems: Computational Approaches", *International Journal of Applied Electromagnetism and Mechanics*, Vol 8, 1997, pp. 61–76.

17. H.T. Banks, B.G. Fitzpatrick, and Y. Zhang, "Estimation of Distributed Individual Rates from Aggregate Population Data", in *Differential Equations and Applications to Biology and to Industry*, ed. by M. Matell, et al., World Science Press, 1996, pp. 13–22.

18. H.T. Banks, N.G. Medhin and Y. Zhang, "A Mathematical Framework for Curved Active Constrained Layer Structures: Well-Posedness and Approximation", *Numerical Functional Analysis and Optimization*, Vol 17, 1996, pp. 1–22.

Peer-Reviewed Conference and Workshop Papers

1. M. Yavartanoo, S.H. Hung, R. Neshatavar, Y. Zhang, K.M. Leeg, "PolyNet: Polynomial Neural Network for 3D Shape Recognition with PolyShape Representation", *International Conference on 3D Vision 2021*, 2021, to appear.

2. S.H. Hung, Y. Zhang, H. Yeh, and E. Zhang, "Feature Curves and Surfaces of 3D Asymmetric Tensor Fields", *IEEE Visualization Conference 2021*, 2021, pp. 33–42.

3. B. Qu, E. Zhang, and Y. Zhang, "Automatic Polygon Layout for Primal-Dual Visualization of Hypergraphs", *IEEE Visualization Conference 2021*, 2021, pp. 633–642.

4. J. Blaisdell, W. Huang, and Y. Zhang, "DCE-MRI Topology for Early Prediction of Breast Cancer Response to Neoadjuvant Chemotherapy", *Proceedings of International Society for Magnetic Resonance in Medicine*, 2021, Article 29:1438.

5. J. Zheng, S.H. Hung, K. Hiebel, and Y. Zhang, "Real-Time Rendering of Decorative Sound Textures for Soundscapes", *SIGGRAPH ASIA 2020*, 2020, Article 271.

6. B. Qu, L. Roy, Y. Zhang, and E. Zhang, "Mode Surface of Symmetric Tensor Fields: Topological Analysis and Seamless Extraction", *IEEE Visualization Conference 2020*, 2020, to appear.

7. F. Khan, L. Roy, E. Zhang, B. Qu, S.H. Hung, H. Yeh, R.S. Laramee, and Y. Zhang, "Multi-Scale Topological Analysis of Asymmetric Tensor Fields on Surfaces", *IEEE Visualization Conference 2019*, 2019, pp. 270–279.

8. L. Roy, P. Kumar, Y. Zhang, and E. Zhang, "Robust and Fast Extraction of 3D Symmetric Tensor Field Topology", *IEEE Visualization Conference 2018*, 2018, pp. 1102–1111.

9. B. Qu, Y. Zhang, and E. Zhang, "Interactive Multi-Style Pen-and-Ink Stylization of Images", *SIGGRAPH ASIA 2017 Technical Briefs*, 2017, Article 2.

10. B. Qu, P. Kumar, E. Zhang, P. Jaiswal, L. Cooper, J. Elser, Y. Zhang, "Interactive Design and Visualization of N-ary Relationship", *SIGGRAPH ASIA Symposium on Visualization 2017*, 2017, Article 15.

11. Y. Zhang, L. Roy, R. Sharma, and E. Zhang, "Maximum Number of Transition Points in 3D Linear Symmetry Tensor Fields", *Topology-Based Methods in Visualization Conference Proceeding 2017*, 2017.

12. L. Roy, P. Kumar, S. Golbabaei, Y. Zhang, and E. Zhang, "Interactive Design and Visualization of Branched Covering Spaces", *IEEE Visualization Conference 2017*, 2017, pp. 843-852.

13. Y. Shen, N. Das, Y. Zhang, and W. Laub, "Registration Guided Simulation of Prostate Movement for Radiation Therapy", *The 2016 International Conference on Computational Science and Computational Intelligence*, Dec 2016.

14. E. Zhang, V. Jadye, C. Escher, P. Wonka, Y. Zhang, and X. Gao, "Horizon Measures: A Novel View-Independent Shape Descriptor", *SIGGRAPH ASIA Technical Briefs*, 2016, Article 20.

15. T. Pham, C. Hoyle, Y. Zhang and T. Nguyen, "Topology Optimization of Hyperelastic Continua", *Proceedings of the ASME 2016 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference (ASME)*, 2016, pp. 1–8.

16. J. Waterman, A. Clucas, T. Costa, Y. Zhang, and J. Zhang, "Numerical Modeling of 3D Printed Electric Machines", *IEEE International Electric Machines and Drives Conference (IEMDC 2015)*, 2015, pp. 1286–1291.

17. A. Clucas, P. Sannecy, E. Zhang, and Y. Zhang, "Modeling of Tire Rolling on Roads in Wintry Weather with Material Point Method", *National Agency for Finite Element Methods and Standards (NAFEMS) World Congress 2015*, 2015.

18. Y. Zhang, Yu-J. Tzeng and E. Zhang, "Maximum Number of Degenerate Curves in 3D Linear Tensor Fields", *Topology-Based Methods in Visualization Conference Proceeding 2015*, 2015.

19. Y. Zhang, "Modeling Hysteretic Stress-Strain Relationships with Graphical User Interface", *2001 Design Engineering Technical Conferences and Computers and Information in Engineering Conference*, Pittsburgh, PA, Sep 9 - 12, 2001.

20. H.T. Banks, L.K. Potter, and Y. Zhang, "Use of Aggregate Size-Structured Population Data to Estimate Distribution of Growth Rates", *in Proceedings of 8th International Congress on Biomathematics*, Panama, Aug., 1997, pp. 3–12.

21. H.T. Banks, L.K. Potter, and Y. Zhang, "Stress-strain Laws for Carbon Black and Silicon Filled Elastomers", *in Proceedings of 1997 IEEE Conference on Decision and Control*, vol. 4, San Diego, CA, Dec., 1997, pp. 3727–3732.

22. H.T. Banks, N.G. Medhin, and Y. Zhang, "Mathematical Model for a Laminated Curved Beam", *in Proceedings of 1997 IEEE Conference on Decision and Control*, vol. 4, San Diego, CA, Dec., 1997, pp. 3739–3748.

Peer-Reviewed Books

1. Y. Zhang, H. Nie, and E. Zhang, "Degenerate Curve Bifurcations in 3D Linear Symmetric Tensor Fields", *Anisotropy Across Fields and Scales*, 2020, to appear.

2. Y. Zhang, L. Roy, R. Sharma, and E. Zhang, "Maximum Number of Transition Points in 3D Linear Symmetry Tensor Fields", *Topological Methods in Data Analysis and Visualization V*, 2020, pp. 237–250.

3. Y. Zhang, X. Gao, and E. Zhang, "Applying 2D Tensor Field Topology to Solid Mechanics Simulation", *Modeling, Analysis, and Visualization of Anisotropy*, 2017, pp. 29–42.

4. Y. Zhang, Yu-J. Tzeng and E. Zhang, "Maximum Number of Degenerate Curves in 3D Linear Tensor Fields", *Topological Methods in Data Analysis and Visualization IV*, 2017, pp. 221–234, Springer International Publishing.

5. Y. Zhang, J. Palacios, and E. Zhang, "Topology of 3D Linear Symmetric Tensor Fields", *Visualization and Processing of Higher Order Descriptors for Multi-Valued Data*, 2015, pp. 73–91, Springer International Publishing.

6. E. Zhang and Y. Zhang, "3D Symmetric Tensor Fields: What We Know and Where to Go Next", *Topological and Statistical Methods for Complex Data*, 2015, pp. 111–124, Springer Berlin Heidelberg.

Other Publications

1. Y. Zhang, "Demolding: ABAQUS", *Technical Report TR-Zhang-2010-02*, Michelin Americas Research Company, 2010.

2. Y. Zhang, "Demolding: Modeling", *Technical Report TR-Zhang-2010-01*, Michelin Americas Research Company, 2010.

3. Y. Zhang, "Porosity Modeling", *Technical Report TR-Zhang-2009-02*, Michelin Americas Research Company, 2009.

4. Y. Zhang, "Piezo Patches in Tires", *Technical Report TR-Zhang-2009-01*, Michelin Americas Research Company, 2009.

5. Y. Zhang, "Retread Modeling", *Technical Report TR-Zhang-2008-02*, Michelin Americas Research Company, 2008.

6. Y. Zhang, "Sidewall Deformation in Curing Press", *Technical Report TR-Zhang-2008-01*, Michelin Americas Research Company, 2008.

7. Y. Zhang, "Folds on Tire Interior Surface", *Technical Report TR-Zhang-2007-02*, Michelin Americas Research Company, 2007.

8. Y. Zhang, "Lack of Molding on Bead Surface", *Technical Report TR-Zhang-2007-01*, Michelin Americas Research Company, 2007.

9. Y. Zhang, "Flashing at Tire Shoulder in Conventional and Non-Conventional Molds", *Technical Report TR-Zhang-2006-01*, Michelin Americas Research Company, 2006.

10. Y. Zhang, "Flashing and Loss of Rubber at Toe Tip", *Technical Report TR-Zhang-2005-01*, Michelin Americas Research Company, 2005.

11. Y. Zhang, "Thermocouple Measurements versus Simulation Results on PAX Tire", *Technical Report TR-Zhang-2004-02*, Michelin Americas Research Company, 2004.

12. Y. Zhang, "Smearing Lettering in Logo", *Technical Report TR-Zhang-2004-01*, Michelin Americas Research Company, 2004.

13. Y. Zhang, "Tension in Thermo-Sensitive Plies", *Technical Report TR-Zhang-2003-02*, Michelin Americas Research Company, 2003.

14. Y. Zhang, "Loss of Rubber next to Thermo-Sensitive Plies", *Technical Report TR-Zhang-2003-01*, Michelin Americas Research Company, 2003.

15. Y. Zhang, "Air Pockets in between Products", *Technical Report TR-Zhang-2002-01*, Michelin Americas Research Company, 2002.

Papers in Review

2.   Professional meetings, symposia, and conferences

Participation at Invitational Workshops

- Schloss Dagstuhl Seminar: Topology, Computation, and Data Analysis, "Second-Order Symmetric Tensor Field Topology and Visualization", presenter.
- Schloss Dagstuhl Seminar: Visualization and Processing of Anisotropy in Imaging, Geometry, and Astronomy, "Topological Features in Stress Tensor Fields over Hex Mesh Distribution", presenter.
- World Congress in Computational Mechanics (WCCM) 2018, Minisymposium on Geometry Processing and Field-Aligned Mesh Generation for Computational Science and Engineering Applications, "Topological Features in Stress Tensor Fields over Hex Mesh Distribution", presenter.
- Schloss Dagstuhl Seminar: Visualization and Processing of Higher Order Descriptors of Multi-Valued Data, "Upper and Lower Bounds on the Number of Transition Points in a Linear Tensor Field", presenter.

Presentations to Professional Groups

- IEEE Visualization Conference 2021, "Automatic Polygon Layout for Primal-Dual Visualization of Hypergraphs", New Orleans, LA (virtual), October 29, 2021 (Contributed Talk).
- University of Konstanz, "Visualization of N-ary Relationships", Konstanz, Germany, July 15, 2019 (Invited Talk).
- Institute of Science and Technology of Austria, "Interactive Visualization of Planar Kaleidoscopic Orbifolds", Vienna, Austia, July 9, 2019 (Invited Talk).
- Technical University of Munich, "Interactive Visualization of Planar Kaleidoscopic Orbifolds", Munich, Germany, July 5, 2019 (Invited Talk).
- University of Leipzig, "Interactive Visualization of Planar Kaleidoscopic Orbifolds", Leipzig, Germany, July 2, 2019 (Invited Talk).
- Schloss Dagstuhl Seminar: Topology, Computation, and Data Analysis, "Second-Order Symmetric Tensor Field Topology and Visualization", Saarbrcken, Germany, May 23, 2019 (Contributed Talk).
- Schloss Dagstuhl Seminar: Visualization and Processing of Anisotropy in Imaging, Geometry, and Astronomy, "Topological Features in Stress Tensor Fields over Hex Mesh Distribution", Saarbrcken, Germany, October 29, 2018 (Contributed Talk).
- IEEE Visualization Conference 2018, "Robust and Fast Extraction of 3D Symmetric Tensor Field Topology", Berlin, Germany, October 25, 2018 (Contributed Talk).
- Max Planck Institute for Informatics, "Interactive Multi-style Pen-and-Ink Drawings from Images", Saarbrcken, Germany, October 19, 2018 (Invited Talk).

- University of Polytechnique of Catalunya (Barcelona Tech), "3D Tensor Field Topology", Barcelona, Spain, Jun 20, 2017 (Invited Talk).
- University of Zaragoza, "Tensor-field based Pen-and-Ink Rendering", Zaragoza, Spain, June 19, 2017 (Invited Talk).
- Keio University, "Physical Meaning of Topology of Stress Tensor Fields", Tokyo, Japan, March 1, 2017 (Invited Talk).
- Workshop on Topology-Based Methods in Visualization (TopoInVis 2017), "Maximum Number of Transition Points in 3D Linear Symmetric Tensor Fields", Tokyo, Japan, February 28, 2017 (Contributed Talk).
- Department of Mathematics, Oregon State University, "Linear Tensor Field Analysis", Corvallis, OR, April 29, 2016 (Invited Talk).
- Wood Science Engineering, Oregon State University, "Numerical Simulations and Applications", Corvallis, OR, April 27, 2016 (Invited Talk).
- Scholoss Dagstuhl Seminar: Visualization and Processing of Higher Order Descriptors for Multi-Valued Data, "Maximum Number of Transition Points in 3D Linear Symmetric Tensor Fields", Saarbrčken, Germany, April 7, 2016 (Contributed Talk).
- Workshop on Topology-Based Methods in Visualization (TopoInVis 2015), "Maximum Number of Degenerate Curves in 3D Linear Tensor Fields", Annweiler, Germany, May 21, 2015 (Contributed Talk).
- Oberseminar Polymer, University of Saarland, "Material Modeling of Tire Rubber", Saarbrčken, Germany, February 5, 2012 (Invited Talk).
- Oberseminar Nonlinear Dynamics, Weierstrass Institute Berlin, "Mathematical Modeling and Numerical Simulations on Some Tire-Related Problems", Berlin, Germany, November 24, 2011 (Invited Talk).
- Department of Mathematics, Oregon State University, "Challenges in Simulating Tire Fabrication Process", Berlin, Germany, December 5, 2008 (Invited Talk).
- Michelin Americas Curing Conference 2004, "Process Simulation", Greenville, SC, May, 2004 (Contributed Talk).
- Michelin Americas Curing Conference 2002, "Loss of Rubber Next to Thermo-Sensitive Plies", Greenville, SC, October 13, 2002 (Contributed Talk).
- 2001 Design Engineering Technical Conferences and Computers and Information in Engineering Conference, "Stress-Strain Laws for Carbon Black and Silicon Filled Elastomers", Pittsburgh, PA, September 9, 2001 (Contributed Talk).
- Computation and Control V, "Computational methods for Curved Beams with Piezoceramic Patches", August 1, 1996 (Contributed Talk).
- AMS-IMS-SIAM Joint Summer Research Conferences, "A Parallel Algorithm for Rate Distributed Inverse Problems in a Size-Structured Population Model", June 18, 1996 (Contributed Talk).
- Annual Meeting of the Southeastern Atlantic Section of SIAM, "Approximation Theory and Computational Methods for Applied Vibrations of Curved Beams with Viscoelastic Layers and Piezoceramic Controllers", March 29, 1996 (Contributed Talk).

3. Grant and contract support (Total: \$624,554, Yué Zhang's share: \$599,554)

Past and Current Funding

- Oregon Department of Transportation, *Rumble Stripe-Like Device for Rural Roads with Narrow Shoulders*, (role: PI), 12/2018 - 12/2021, Award Amount: \$315,000 (\$295,000)

- Joint Grant between Oregon Health and Science University and Oregon State University, *Team Building: Visualization for MRI Improvement*, (role: co-PI) 06/2006-06/2007, Award Amount: $10,000 ($5,000)
- Oregon Department of Transportation, *Rumble Stripe*, (role: PI), 09/2016 - 08/2017, Award Amount: $92,577 ($92,577)
- National Science Foundation, *REU supplement* for the Grant "CRII: III: Topology-Driven, Multi-Scale Tensor Field Visualization ", 06/2017-05/2018, Award Amount: $16,000 ($16,000)
- National Science Foundation, *REU supplement* for the Grant "CRII: III: Topology-Driven, Multi-Scale Tensor Field Visualization ", 06/2016-05/2017, Award Amount: $16,000 ($16,000)
- National Science Foundation, *CRII: III: Topology-Driven, Multi-Scale Tensor Field Visualization*, (role: PI), 04/2016 - 03/2018, Award Amount: $174,977 ($174,977)

Proposals Under Review

- National Science Foundation, *SCH:CHS:Medium: Algorithmic Approach to Mesh Geometry with Knowledge of Associated Physical Fields*, (role: co-PI), 05/2022 - 04/2026, Budget: $600,000

4. Patent awards and inventions

- Michelin R&D internal invention records IR-zhang-2009-02, Textile Curing Bladder
- Michelin R&D internal invention records IR-zhang-2009-01, Outer Tire Coating to Improve Molding
- United States Patent US20120067484A1, Sacrificial Layer to Prevent Flashing
- OSU internal invention records OSU-18-39P, Provisional patent application 62/681,208, 2018, Topology-driven, Multi-scale Tensor Field Visualization
- OSU internal invention records OSU-17-42P, Provisional patent application 62/552,243, 2017, Sawtooth-shaped Low Noise Rumble Strip Device
- OSU internal invention records OSU-16-20, 2016, Piezoelectric Vibration Energy Harvester (from bike vibration)

D. SERVICE

1. University Service

- 2020–present: Undergraduate Curriculum Committee (School of Electrical Engineering and Computer Science)
- 2014–present: Graduate Admission Committee (School of Electrical Engineering and Computer Science)
- 2017–2019: Graduate Admission Committee (School of Civil and Construction Engineering)
- 2014–present: Graduate Council Representative (Oregon State University)

2. Service to the Profession

Conference Organization

- *Workshop Co-Organizer*, Workshop on Novel Approaches to Visualizing Big Data Sets, August, 2018, Corvallis, OR.
- *Workshop Co-Organizer*, Workshop on Novel Approaches to Visualizing Big Data Sets, August, 2016, Corvallis, OR.

Panelist

- *Panelist*, NSF Panel, 2015, 2016, 2017, 2018, 2019, 2020, 2021

Program Committee Membership

- PacificVis 2021, 2022
- International Conference on Information Visualization Theory and Applications, 2018, 2019, 2020, 2021, 2022
- EuroVis Short Paper Committee, 2018, 2022
- Geometry Modeling and Processing, 2018

Reviewing

- SIGGRAPH
- SIGGRAPH Asia
- ACM Transactions on Graphics
- IEEE Vis Conference
- IEEE Transactions on Visualization and Computer Graphics,
- EuroGraphics
- EuroVis
- Computer Graphics Forum
- Pacific Graphics
- PacificVis
- Computer and Graphics
- Journal of Graphical Models

Service to the Public
2015-present Society of Women Engineers (SWE) merits of certificate co-chair

E.   AWARDS

IEEE VIS Best Paper Award 2021