Rundong Zhao

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https://rdzhao.github.io/
https://github.com/rdzhao/

Summary

- **Highlight Skills**, *Professional in C++ programming language. Familiar with professional geometric data processing and rendering techniques. Familiar with adequate mathematical and physical knowledge required in advanced computer graphics projects, including differential geometry and continuum mechanics.*
- **Research Interests**, *Computer Graphics, Geometric Processing and Geometric Data Analysis.*

Education

2014 – now **Ph.D., Computer Science**, *Michigan State University*, East Lansing, MI.
Advisor: Dr. Yiying Tong
GPA: 3.95/4.0

2010 – 2014 **BS, Information and Computing Science**, *Zhejiang University*, Hangzhou, Zhejiang, P.R. China.
GPA: 3.52/4.0

Research Experience

2014 – now **Research Assistant**, *Michigan Statu University*, East Lansing, MI.
Advisor: Yiying Tong
Involve in geometric processing research and its application in geometric and topological analysis in biomolecule, including Laplacian spectral analysis, Hodge decomposition, protein pocket detection and De-Rahm cohomology applications in biomolecule.

2016 spring **Visiting Researcher**, *California Institute of Technology*, Pasadena, CA.
Advisor: Mathieu Desbrun and Yiying Tong

2019 summer **Visiting Researcher**, *Zhejiang University*, Hangzhou, Zhejiang, China.
Advisor: Jin Huang

Publication

2019 **3D Hodge Decompositions of Edge- and Face-based Vector Fields**.
Rundong Zhao, Mathieu Desbrun, Guo-Wei Wei, Yiying Tong.
ACM Transactions on Graphics. (**SIGGRAPH Asia 2019**)

2019 **Evolutionary de Rham-Hodge Method**.
Jiahui Chen, **Rundong Zhao** , Yiying Tong, Guo-Wei Wei.
arXiv preprint.

2019 **The de Rham-Hodge Analysis and Modeling of Biomolecules**.
Rundong Zhao, Menglun Wang, Yiying Tong, Guo-Wei Wei.
arXiv preprint.

2018 **Protein Pocket Detection via Convex Hull Surface Evolution and Associated Reeb Graph**.
Rundong Zhao, Zixuan Cang, Yiying Tong, Guo-Wei Wei.
Bioinformatics. (**European Conference on Computitional Biology 2018**)

2018 **Divide-and-Conquer Strategy for Large-Scale Eulerian Solvent Excluded Surface**.
Rundong Zhao, Menglun Wang, Yiying Tong, Guo-Wei Wei,
Communications in Information and Systems

2017 **ESES : Software for Eulerian Solvent Excluded Surface**.
Beibei Liu, Bao Wang, **Rundong Zhao**, Yiying Tong, Guo-Wei Wei,
Journal of Computational Chemistry

2015 **Isogeometric Analysis of Integral Equations using Subdivision**.
Jie Li, Daniel Dault, **Rundong Zhao**, Beibei Liu, Yiying Tong, Balasubramanianm, Shanker,
IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, 2015

2015 **Subdivision Surfaces for Electromagnetic Integral Equations**.
Daniel Dault, Jie Li, Beibei Liu, **Rundong Zhao**, Yiying Tong, Balasubramanianm, Shanker,
IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, 2015

Talk

2018.09 **European Conference on Computitional Biology 2018**.
Protein Pocket Detection via Convex Hull Surface Evolution and Associated Reeb Graph, *Athens, Greece*

2019.11 **SIGGRAPH Asia 2019**.
3D Hodge Decompositions of Edge- and Face-based Vector Fields, *Brisbane, Australia*

Technical Experience

Languages	C, C++, Matlab, Python (check github repository)
Packages	CGAL, OpenVDB, OpenMP, TBB, Qt
Software	Blender
Capabilities	Geometric processing, modeling.