Wei Zeng, Ph.D.

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Research Statement

Research Areas	Visualization, Visual Analytics, AR/VR, Human-Computer Interaction, AIGC.
Personality	Hardworking, creative, and well-motivated for high-quality research.
Career Objective	To develop interactive visualizations that promote the interplay between humans, machines, and big data.

Education

2011 – 2015   **Ph.D., Computer Engineering** in Nanyang Technological University, Singapore
Thesis title: *Visual Analytics for Massive Urban Public Transport Data*
Supervisors: *Prof. Chi-Wing (Philip) Fu*, and *Dr. Stefan Müller Arisona*

2007 – 2011   **B.E., Computer Engineering** in Nanyang Technological University, Singapore
Second Upper Class Honor.

Work Experience

2021.11 – ····   **Assistant Professor,** Thrust of Computational Media & Arts, and Thrust of Data Science & Analytics, The Hong Kong University of Science and Technology (Guangzhou).

Affiliated Assistant Professor, Department of Computer Science and Technology, The Hong Kong University of Science and Technology.

2018.03 – 2021.10   **Associate Professor,** Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences.

Spring term, 2020 & 2021   **Adjunct Associate Professor,** BNU-HKBU United International College (UIC).

2017.06 – 2018.02   **Senior Researcher,** Future Cities Laboratory, Singapore-ETH Centre, ETH Zurich.

2015.03 – 2017.05   **PostDoc Researcher,** Future Cities Laboratory, Singapore-ETH Centre, ETH Zurich.

2013.06 – 2013.08   **Visiting Scientist,** Chair of Information Architecture, ETH Zurich.

Research Publications

I publish mainly in visualization journals and conferences, among which *IEEE TVCG (Proc. IEEE VIS)*, *ACM CHI*, and *CGF (Proc. EuroVis)* are the premiere venues.
Summary: CCF A/B (38), IEEE/ACM Transactions (26), Best Papers (4)

Journal Articles

1. Y. Ye, S. Xiao, X. Zeng, and **W. Zeng**, "ModalChorus: Visual probing and alignment of multi-modal embeddings via modal fusion map," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'24)*, vol. 31, no. 1, pp. 294–304, 2025. 🔗 DOI: 10.1109/TVCG.2024.3456387.

2 X. Zeng, H. Lin, Y. Ye, and **W. Zeng**, "Advancing multimodal large language models in chart question answering with visualization-referenced instruction tuning," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'24)*, vol. 31, no. 1, pp. 525–535, 2025. 🔗 DOI: 10.1109/TVCG.2024.3456159.

3 Y. Zhang, J. Li, and **W. Zeng**, "Latent space map for visual utilization of generated data," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE PacificVis'25)*, 2025.

4 Y. Cao, Q. Shi, L. Shen, K. Chen, Y. Wang, **W. Zeng**, and H. Qu, "NFTracer: Tracing nft impact dynamics in transaction-flow substitutive systems with visual analytics," *IEEE Transactions on Visualization and Computer Graphics*, no. 01, pp. 1–18, 2024. 🔗 DOI: 10.1109/tvcg.2024.3402834.

5 Z. Feng, F. Zhu, H. Wang, J. Hao, S.-H. Yang, **W. Zeng**, and H. Qu, "HoLens: A visual analytics design for higher-order movement modeling and visualization," *Computational Visual Media*, vol. 10, pp. 1079–1100, 2024. 🔗 DOI: 10.1007/s41095-023-0392-y.

6 J. Hao, Q. Shi, Y. Ye, and **W. Zeng**, "TimeTuner: Diagnosing time representations for time-series forecasting with counterfactual explanations," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'23)*, vol. 30, no. 1, pp. 1183–1193, 2024. 🔗 DOI: 10.1109/TVCG.2023.3327389.

7 Q. Shen, C. Zhang, X. Yan, C. Yang, D. Zeng, **W. Zeng**, and B. Tang, "CheetahTraj: Efficient visualization for large trajectory dataset with quality guarantee," *IEEE Transactions on Knowledge and Data Engineering*, vol. 36, no. 11, pp. 5737–5752, 2024. 🔗 DOI: 10.1109/TKDE.2024.3387480.

**8** L. Wang, Z. Wang, X. Zhao, F. Tsung, and **W. Zeng**, "Antarctica storytelling: Creating interactive story maps for polar regions with graphic-based approach," *The Visual Computer*, 2024. 🔗 DOI: 10.1007/s00371-024-03489-x.

9 S. Xiao, S. Huang, Y. LIN, Y. Ye, and **W. Zeng**, "Let the chart spark: Embedding semantic context into chart with generative model," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'23)*, vol. 30, no. 1, pp. 284–294, 2024. 🔗 DOI: 10.1109/TVCG.2023.3326913.

10 S. Xiao, Q. Shi, L. Shao, B. Du, Y. Wang, Q. Shen, and **W. Zeng**, "MetroBUX: A topology-based visual analytics for bus operational uncertainty exploration," *IEEE Transactions on Intelligent Transportation Systems*, vol. 25, no. 6, pp. 5525–5538, 2024. 🔗 DOI: 10.1109/TITS.2023.3338700.

11 Y. Ye, J. Hao, Y. Hou, Z. Wang, S. Xiao, Y. Luo, and **W. Zeng**, "Generative AI for visualization: State of the art and future directions," *Visual Informatics*, vol. 8, no. 2, pp. 43–66, 2024. 🔗 DOI: 10.1016/j.visinf.2024.04.003.

12 Y. Ye, R. Huang, and **W. Zeng**, "VISAtlas: An image-based exploration and query system for large visualization collections via neural image embedding," *IEEE Transactions on Visualization and Computer Graphics*, vol. 30, no. 7, pp. 3224–3240, 2024. 🔗 DOI: 10.1109/tvcg.2022.3229023.

13 Y. Ye, Q. Zhu, S. Xiao, K. Zhang, and **W. Zeng**, "The contemporary art of image search: Iterative user intent expansion via vision-language model," *Proc. ACM Hum.-Comput. Interact.*, vol. 8, no. CSCW1, Article No.: 180, Pages 1–31, 2024. 🔗 DOI: 10.1145/3641019.

14 J. Yu, Z. Wang, Y. Cao, H. Cui, and **W. Zeng**, "Centennial drama reimagined: An immersive experience of intangible cultural heritage through contextual storytelling in virtual reality," *ACM Journal on Computing and Cultural Heritage*, 2024. 🔗 DOI: 10.1145/3705613.

15 **W. Zeng**, X. Chen, Y. Hou, L. Shao, Z. Chu, and R. Chang, "Semi-automatic layout adaptation for responsive multiple-view visualization design," *IEEE Transactions on Visualization and Computer Graphics*, vol. 30, no. 7, pp. 3798–3812, 2024. 🔗 DOI: 10.1109/TVCG.2023.3240356.

16 S. Guo, Y. Shi, P. Xiao, Y. Fu, J. Lin, **W. Zeng**, and T.-Y. Lee, "Creative and progressive interior color design with eye-tracked user preference," *ACM Transactions on Computer-Human Interaction*, vol. 30, no. 1, Article No.: 5, Pages 1–31, 2023. 🔗 DOI: 10.1145/3542922.

17 S. Wang, **W. Zeng**, X. Chen, Y. Ye, Y. Qiao, and C.-W. Fu, "ActFloor-GAN: Activity-guided adversarial networks for human-centric floorplan design," *IEEE Transactions on Visualization and Computer Graphics*, vol. 29, no. 3, pp. 1610–1624, 2023. 🔗 DOI: `10.1109/TVCG.2021.3126478`.

18 Z. Wen, **W. Zeng**, L. Weng, Y. Liu, M. Xu, and W. Chen, "Effects of view layout on situated analytics for multiple representations in immersive visualization," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'22)*, vol. 29, no. 1, pp. 440–450, 2023. 🔗 DOI: `10.1109/TVCG.2022.3209475`.

19 S. Xiao, Y. Hou, C. Jin, and **W. Zeng**, "WYTIWYR: A user intent-aware framework with multi-modal inputs for visualization retrieval," *Computer Graphics Forum (Proc. EuroVis'23)*, vol. 42, no. 3, pp. 311–322, 2023. 🔗 DOI: `10.1111/cgf.14832`.

20 **W. Zeng**, C. Lin, K. Liu, J. Lin, and A. K. H. Tung, "Modeling spatial nonstationarity via deformable convolutions for deep traffic flow prediction," *IEEE Transactions on Knowledge and Data Engineering*, vol. 35, no. 3, pp. 2796–2808, 2023. 🔗 DOI: `10.1109/TKDE.2021.3112977`.

21 J. Jiang, W. Tu, H. Kong, **W. Zeng**, R. Zhang, and M. Konecny, "Large-scale urban multiple-modal transport evacuation model for mass gathering events considering pedestrian and public transit system," *IEEE Transactions on Intelligent Transportation Systems*, vol. 23, no. 12, pp. 23 059–23 069, 2022. 🔗 DOI: `10.1109/TITS.2022.3198178`.

22 Y. Lin, **W. Zeng**, Y. Ye, and H. Qu, "Saliency-aware color harmony models for outdoor signboard," *Computers & Graphics*, vol. 105, pp. 25–35, 2022. 🔗 DOI: `10.1016/j.cag.2022.04.012`.

23 L. Yuan, **W. Zeng**, S. Fu, Z. Zeng, H. Li, C.-W. Fu, and H. Qu, "Deep colormap extraction from visualizations," *IEEE Transactions on Visualization and Computer Graphics*, vol. 28, no. 12, pp. 4048–4060, 2022. 🔗 DOI: `10.1109/TVCG.2021.3070876`.

24 X. Chen, **W. Zeng**, Y. Lin, H. M. Al-maneea, J. Roberts, and R. Chang, "Composition and configuration patterns in multiple-view visualizations," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'20)*, vol. 27, no. 2, pp. 1514–1524, 2021. 🔗 DOI: `10.1109/TVCG.2020.3030338`.

25 Z. Feng, H. Li, **W. Zeng**, S.-H. Yang, and H. Qu, "Topology density map for urban data visualization and analysis," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'20)*, vol. 27, no. 2, pp. 828–838, 2021. 🔗 DOI: `10.1109/TVCG.2020.3030469`.

26 J. Pan, W. Chen, X. Zhao, S. Zhou, **W. Zeng**, M. Zhu, J. Chen, S. Fu, and Y. Wu, "Exemplar-based layout fine-tuning for node-link diagrams," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'20)*, vol. 27, no. 2, pp. 1655–1665, 2021. 🔗 DOI: `10.1109/TVCG.2020.3030393`.

27 L. Shao, Z. Chu, X. Chen, Y. Lin, and **W. Zeng**, "Modeling layout design for multiple-view visualization via bayesian inference," *Journal of Visualization (Proc. ChinaVis'21)*, vol. 24, no. 6, pp. 1237–1252, 2021, **ChinaVis'21 Best Paper Honorable Mention Award**. 🔗 DOI: `10.1007/s12650-021-00781-z`.

28 M. Wu, **W. Zeng**, and C.-W. Fu, "FloorLevel-Net: Recognizing floor-level lines with height-attention-guided multi-task learning," *IEEE Transactions on Image Processing*, vol. 30, pp. 6686–6699, 2021. 🔗 DOI: `10.1109/TIP.2021.3096090`.

29 **W. Zeng**, A. Dong, X. Chen, and Z.-l. Cheng, "VIStory: Interactive storyboard for exploring visual information in scientific publications," *Journal of Visualization*, vol. 24, no. 1, pp. 69–84, 2021. 🔗 DOI: `10.1007/s12650-020-00688-1`.

30 **W. Zeng**, C. Lin, J. Lin, J. Jiang, J. Xia, C. Turkay, and W. Chen, "Revisiting the modifiable areal unit problem in deep traffic prediction with visual analytics," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'20)*, vol. 27, no. 2, pp. 839–848, 2021. 🔗 DOI: `10.1109/TVCG.2020.3030410`.

31 C. Zhang, **W. Zeng**, and L. Liu, "UrbanVR: An immersive analytics system for context-aware urban design," *Computers & Graphics*, vol. 99, pp. 128–138, 2021. 🔗 DOI: `10.1016/j.cag.2021.07.006`.

32 Z. Chen, **W. Zeng**, Z. Yang, L. Yu, C.-W. Fu, and H. Qu, "LassoNet: Deep lasso-selection of 3d point clouds," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'19)*, vol. 26, no. 1, pp. 195–204, 2020. 🔗 DOI: 10.1109/TVCG.2019.2934332.

33 Z. Zeng, M. Wu, **W. Zeng**, and C.-W. Fu, "Deep recognition of vanishing-point-constrained building planes in urban street views," *IEEE Transactions on Image Processing*, vol. 29, pp. 5912–5923, 2020. 🔗 DOI: 10.1109/TIP.2020.2986894.

34 Y. Ye, D. Richards, Y. Lu, X. Song, Y. Zhuang, **W. Zeng**, and T. Zhong, "Measuring daily accessed street greenery: A human-scale approach for informing better urban planning practices," *Landscape and Urban Planning*, vol. 191, p. 103 434, 2019. 🔗 DOI: 10.1016/j.landurbplan.2018.08.028.

35 Y. Ye, **W. Zeng**, Q. Shen, X. Zhang, and Y. Lu, "The visual quality of streets: A human-centred continuous measurement based on machine learning algorithms and street view images," *Environment and Planning B: Urban Analytics and City Science*, vol. 46, no. 8, pp. 1439–1457, 2019. 🔗 DOI: 10.1177/2399808319828734.

36 **W. Zeng**, Q. Shen, Y. Jiang, and A. Telea, "Route-aware edge bundling for visualizing origin-destination trails in urban traffic," *Computer Graphics Forum (Proc. EuroVis'19)*, vol. 38, no. 3, pp. 581–593, 2019. 🔗 DOI: 10.1111/cgf.13712.

37 Q. Shen, **W. Zeng**, Y. Ye, S. Mueller Arisona, S. Schubiger, R. Burkhard, and H. Qu, "StreetVizor: Visual exploration of human-scale urban forms based on street views," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'17)*, vol. 24, no. 1, pp. 1004–1013, 2018. 🔗 DOI: 10.1109/TVCG.2017.2744159.

38 **W. Zeng** and Y. Ye, "VitalVizor: A visual analytics system for studying urban vitality," *IEEE Computer Graphics and Applications*, vol. 38, no. 5, pp. 38–53, 2018. 🔗 DOI: 10.1109/MCG.2018.053491730.

39 **W. Zeng**, C.-W. Fu, S. Müller Arisona, S. Schubiger, R. Burkhard, and K.-L. Ma, "A visual analytics design for studying rhythm patterns from human daily movement data," *Visual Informatics*, vol. 1, no. 2, pp. 81–91, 2017. 🔗 DOI: 10.1016/j.visinf.2017.07.001.

40 **W. Zeng**, C.-W. Fu, S. Müller Arisona, S. Schubiger, R. Burkhard, and K.-L. Ma, "Visualizing the relationship between human mobility and points-of-interest," *IEEE Transactions on Intelligent Transportation Systems*, vol. 18, no. 8, pp. 2271–2284, 2017. 🔗 DOI: 10.1109/TITS.2016.2639320.

41 **W. Zeng**, C. W. Fu, S. Müller Arisona, A. Erath, and H. Qu, "Visualizing waypoints-constrained origin-destination patterns for massive transportation data," *Computer Graphics Forum*, vol. 35, no. 8, pp. 95–107, 2016. 🔗 DOI: 10.1111/cgf.12778.

42 A. Anwar, **W. Zeng**, and S. Müller Arisona, "The time space diagram revisited," *Transportation Research Record: Journal of the Transportation Research Board*, vol. 14, no. 1046, 2014. 🔗 DOI: 10.3141/2442-01.

43 **W. Zeng**, C.-W. Fu, S. Müller Arisona, A. Erath, and H. Qu, "Visualizing mobility of public transportation system," *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VIS'14)*, vol. 20, no. 12, pp. 1833–1842, 2014. 🔗 DOI: 10.1109/TVCG.2014.2346893.

44 **W. Zeng**, X. Huang, S. Müller Arisona, and I. V. McLoughlin, "Classifying watermelon ripeness by analysing acoustic signals using mobile devices," *Personal and Ubiquitous Computing*, vol. 18, no. 7, pp. 1753–1762, 2014. 🔗 DOI: 10.1007/s00779-013-0706-7.

45 **W. Zeng**, C.-W. Fu, S. Müller Arisona, and H. Qu, "Visualizing interchange patterns in massive movement data," *Computer Graphics Forum (Proc. EuroVis'13)*, vol. 32, no. 3pt3, pp. 271–280, 2013. 🔗 DOI: 10.1111/cgf.12114.

46 I. V. McLoughlin, I. K. Narendra, L. H. Koh, Q. H. Nguyen, B. Seshadri, **W. Zeng**, and C. Yao, "Campus mobility for the future: The electric bicycle," *Journal of Transportation Technologies*, vol. 2, no. 1, pp. 1–12, 2012. 🔗 DOI: 10.4236/jtts.2012.21001.

Conference Proceedings

1 Z. Gao, Y. Zhang, L. Li, T. Papatheodorou, and **W. Zeng**, "AI-rays: Exploring bias in the gaze of ai through a multimodal interactive installation," in *Proceedings of SIGGRAPH Asia 2024 Art Papers*, 2024, Article No.: 1, Pages 1 –7. 🔗 DOI: `10.1145/3680530.3695433`.

2 Y. Hou, H. Cui, R. Chen, and **W. Zeng**, "Understanding the impact of referent design on scale perception in immersive data visualization," in *Proceedings of ACM CHI Conference on Human Factors in Computing Systems (Proc. ACM CHI LBW'24)*, 2024, Article No.: 354, Pages 1–7. 🔗 DOI: `10.1145/3613905.3650783`.

3 Y. Hou, M. Yang, H. Cui, L. Wang, J. Xu, and **W. Zeng**, "C2Ideas: Supporting creative interior color design ideation with a large language model," in *Proceedings of ACM CHI Conference on Human Factors in Computing Systems (Proc. ACM CHI'24)*, 2024, Article No.: 172, Pages 1–18. 🔗 DOI: `10.1145/3613904.3642224`.

4 R. Huang, H. Lin, C. Chen, K. Zhang, and **W. Zeng**, "PlantoGraphy: Incoporating iterative design process into generative artificial intelligence for landscape rendering," in *Proceedings of ACM CHI Conference on Human Factors in Computing Systems (Proc. ACM CHI'24)*, 2024, Article No.: 168, Pages 1–19. 🔗 DOI: `10.1145/3613904.3642824`.

5 L. Li, Y. Ye, B. Jiang, and **W. Zeng**, "GeoReasoner: Geo-localization with reasoning in street views using a large vision-language model," in *Proceedings of The International Conference on Machine Learning (Proc. ICML'24)*, 2024.

6 K. Nie, H. Shao, Y. Luo, M. Tian, H. Wu, **W. Zeng**, X. Fu, and X. Yuan, "A-map: Interactive visual exploration of intercity accessibility dynamics based on railway network data," in *Proceedings of 17th IEEE Pacific Visualization Conference (Proc. IEEE PacificVis'17)*, 2024, pp. 289–294. 🔗 DOI: `10.1109/PacificVis60374.2024.00040`.

7 Z. Wang, L. Yuan, L. Wang, B. Jiang, and **W. Zeng**, "VirtuWander: Enhancing multi-modal interaction for virtual tour guidance through large language models," in *Proceedings of ACM CHI Conference on Human Factors in Computing Systems (Proc. ACM CHI'24)*, 2024, Article No.: 612, Pages 1–20. 🔗 DOI: `10.1145/3613904.3642235`.

8 S. Xiao, L. Wang, X. Ma, and **W. Zeng**, "TypeDance: Creating semantic typographic logos from image through personalized generation," in *Proceedings of ACM CHI Conference on Human Factors in Computing Systems (Proc. ACM CHI'24)*, 2024, Article No.: 175, Pages 1–18. 🔗 DOI: `10.1145/3613904.3642185`.

9 L. Yuan, B. Li, J. Wang, H. Qu, and **W. Zeng**, "Generating virtual reality stroke gesture data from out-of-distribution desktop stroke gesture data," in *Proceedings of IEEE Conference on Virtual Reality and 3D User Interfaces (Proc. IEEE VR'24)*, 2024, pp. 732–742. 🔗 DOI: `10.1109/VR58804.2024.00093`.

10 X. Zeng, Z. Gao, Y. Ye, and **W. Zeng**, "IntentTuner: An interactive framework for integrating human intentions in fine-tuning text-to-image generative models," in *Proceedings of ACM CHI Conference on Human Factors in Computing Systems (Proc. ACM CHI'24)*, 2024, Article No.: 182, Pages 1–18. 🔗 DOI: `10.1145/3613904.3642165`.

11 Q. Zhu, Z. Wang, **W. Zeng**, W. Tong, W. Lin, and X. Ma, ""Make interaction situated": Designing user acceptable interaction for situated visualization in public environments," in *Proceedings of ACM CHI Conference on Human Factors in Computing Systems (Proc. ACM CHI'24)*, 2024, Article No.: 196, Pages 1–21. 🔗 DOI: `10.1145/3613904.3642049`.

12 Y. Cao, M. Xia, K. Shigyo, F. Cheng, Q. Yu, X. Yang, Y. Wang, **W. Zeng**, and H. Qu, "NFTeller: Dual-centric visual analytics for assessing market performance of nft collectibles," in *Proceedings of The 16th International Symposium on Visual Information Communication and Interaction (Proc. VINCI'23)*, 2023, Article No.: 20, Pages 1 –8. 🔗 DOI: `10.1145/3615522.3615578`.

13 Y. Chen, Y. Ye, and **W. Zeng**, "The rich, the poor, and the ugly: An aesthetic-perspective assessment of nft values," in *Proceedings of The 16th International Symposium on Visual Information Communication and Interaction (Proc. VINCI'23)*, 2023, Article No.: 23, Pages 1 –8. 🔗 DOI: 10.1145/3615522.3615545.

14 S. Fu, L. Qiang, and **W. Zeng**, "Loop meditation: Enhancing novice's vr meditation experience with physical movement," in *Proceedings of The 16th International Symposium on Visual Information Communication and Interaction (Proc. VINCI'23)*, 2023, Article No.: 16, Pages 1 –5. 🔗 DOI: 10.1145/3615522.3615538.

15 J. Hao, X. Jiang, Q. Shi, and **W. Zeng**, "Does where you are matter? a visual analytics system for covid-19 transmission based on social hierarchical perspective," in *Proceedings of The 16th International Symposium on Visual Information Communication and Interaction (Proc. VINCI'23)*, 2023, Article No.: 6, Pages 1–5. 🔗 DOI: 10.1145/3615522.3615528.

16 L. Wang, Z. Wang, X. Zhao, and **W. Zeng**, "Storytelling in frozen frontier: Exploring graphic-based approach for creating interactive story maps in antarctica," in *Proceedings of The 16th International Symposium on Visual Information Communication and Interaction (Proc. VINCI'23)*, **Best Paper Award**, 2023, Article No.: 2, Pages 1–8. 🔗 DOI: 10.1145/3615522.3615524.

17 Z. Gong, B. Du, Z. Liu, **W. Zeng**, P. Perez, and K. Wu, "SD-seq2seq: A deep learning model for bus bunching prediction based on smart card data," in *Proceedings of International Conference on Computer Communications and Networks (Proc. ICCCN'20)*, 2020, pp. 1–9. 🔗 DOI: 10.1109/ICCCN49398.2020.9209686.

18 Q. Shen, Y. Wu, Y. Jiang, **W. Zeng**, A. K. H. LAU, A. Vianova, and H. Qu, "Visual interpretation of recurrent neural network on multi-dimensional time-series forecast," in *Proceedings of IEEE PacificVis*, 2020, pp. 61–70. 🔗 DOI: 10.1109/PacificVis48177.2020.2785.

19 A. Dong, **W. Zeng**, X. Chen, and Z. Cheng, "VIStory: Interactive storyboard for exploring visual information in scientific publications," in *Proceedings of the 12th International Symposium on Visual Information Communication and Interaction (Proc. VINCI'19)*, **Best Paper Award**, 2019, Article No.: 12, Pages 1–8. 🔗 DOI: 10.1145/3356422.3356430.

20 J. Perhac, **W. Zeng**, S. Asada, R. Burkhard, S. Mueller Arisona, S. Schubiger, and B. Klein, "Urban fusion: Visualizing urban data fused with social feeds via a game engine," in *Proceedings of 21st International Conference on Information Visualisation*, **Best Paper Award**, 2017, pp. 312–317. 🔗 DOI: 10.1109/iV.2017.33.

21 A. von Richthofen, **W. Zeng**, S. Asada, R. Burkhard, F. Heisel, S. Mueller Arisona, and S. Schubiger, "Urban mining: Visualizing the availability of construction materials for re-use in future cities," in *Proceedings of 21st International Conference on Information Visualisation*, 2017, pp. 306–311. 🔗 DOI: 10.1109/iV.2017.34.

22 **W. Zeng**, C.-W. Fu, S. Müller Arisona, S. Schubiger, R. Burkhard, and K.-L. Ma, "A visual analytics design for studying crowd movement rhythms from public transportation data," in *Proceedings of ACM SIGGRAPH ASIA 2016 Symposium on Visualization*, 2016, Article No.: 4, Pages 1–8. 🔗 DOI: 10.1145/3002151.3002152.

23 **W. Zeng**, C. Zhong, A. Anwar, S. Müller Arisona, and I. V. McLoughlin, "MetroBuzz: Interactive 3D visualization of spatiotemporal data," in *Proceedings of the 1st International Conference on Computer & Information Science*, 2012, pp. 143–147. 🔗 DOI: 10.1109/ICCISci.2012.6297228.

Books and Chapters

1 Y. Ye, D. Qiang, and **W. Zeng**, "Form syntax 1.0: An analytical tool assisting urban design via the measuring of urban vitality," in *The Routledge Handbook of Urban Design Research Methods*, Routledge, 2023, pp. 524–534.

2 **W. Zeng**, J. Perhac, S. Asada, S. Schubiger, S. Mueller Arisona, and R. Burkhard, "Singapore views: A collaborative interactive visualisation and analysis framework for urban planning and design," in *FCL Indicia II*, S. Cairns and D. Tunas, Eds., Lars Müller Publishers, 2018.

3 S. Schubiger, S. Müller Arisona, C. Zhong, **W. Zeng**, and R. Burkhard, "Advanced tools and workflows for urban designers," in *FCL Indicia I*, S. Cairns and D. Tunas, Eds., Lars Müller Publishers, 2017, pp. 151–158, ISBN: 9783037785454.

4 **W. Zeng** and S. Müller Arisona, "Visual analytics for urban public transport: Using visualizations to reveal the underlying movement patterns of urban public transport in singapore," in *FCL Magazine*, vol. 3, 2015, pp. 52–59.

5 C. Zhong, T. Wang, **W. Zeng**, and S. Müller Arisona, "Spatiotemporal visualisation: A survey and outlook," in *Digital Urban Modeling and Simulation*, 1st ed., vol. 242, Springer, 2012, pp. 299–317. 🔗 DOI: 10.1007/978-3-642-29758-8_16.

Teaching

Year 2024 – 2025	🔖 DSAA 5024 Data Visualization and Exploration, HKUST(GZ), Fall 2024
Year 2023 – 2024	🔖 HKUST(GZ) – CAA Joint Course, Summer 2023
	🔖 CMAA 5023 Programming for VR/AR , HKUST(GZ), Fall 2023
	🔖 DSAA 5024 Data Visualization and Exploration, HKUST(GZ), Fall 2024
Year 2022 – 2023	🔖 CMAA 5023 Programming for VR/AR, HKUST(GZ), Spring 2023
	🔖 DSAA 5024 Data Visualization and Exploration, HKUST(GZ), Fall 2022
Year 2021 – 2022	🔖 DSAA 5024 Data Visualization and Exploration, HKUST(GZ), Spring 2022
	🔖 MSBD 5005 Data Visualization, BDT Program, HKUST, Spring 2022
Year 2020 – 2021	🔖 DS 4073 Introduction to Data Visualization (Undergraduate), UIC, Spring 2021
Year 2019 – 2020	🔖 DS 4073 Introduction to Data Visualization (Undergraduate), UIC, Spring 2020
	🔖 DS 7063 Advanced Data Visualization (Graduate), UIC, Spring 2020

Awards and Scholarships

Best Paper, 2023	🔖 The 16th International Symposium on Visual Information Communication and Interaction (VINCI'23)
Best Poster Honorable Mention, 2022	🔖 The 9th China Visualization and Visual Analytics Conference (ChinaVis'22)
Best Paper Honorable Mention, 2021	🔖 The 8th China Visualization and Visual Analytics Conference (ChinaVis'21)
Best Paper, 2019	🔖 The 12th International Symposium on Visual Information Communication and Interaction (VINCI'19)
Best Paper Award, 2017	🔖 The 21st International Conference on Information Visualization 2017 (IV'17)

Professional Experiences

Journal Editorial Board

Associate Editor	🔖 The Visual Computer, 2024 - present.
Editorial Board	🔖 Visual Informatics, 2024 - present.

Professional Experiences (continued)

Associate Editor	Journal of Big Data, 2023 - 2024.
Guest Editor	IEEE Computer Graphics & Applications, SI: Human-AI Interaction for Graphics and Visualization, 2025.
	IEEE Transactions on Computational Social Systems, SI: Augmenting Urban Brain with Visual and Social Intelligence, 2018.

Conference Organizing Chair

Program Co-Chair	The 16th International Symposium on Visual Information Communication and Interaction (VINCI'23)
Art Paper Co-Chair	The 17th International Symposium on Visual Information Communication and Interaction (VINCI'24)
Publicity Co-Chair	The 15th International Symposium on Visual Information Communication and Interaction (VINCI'22)
Forum Co-Chair	ChinaVis International Forum, 2020 - 2023
Poster Co-Chair	The 11th China Visualization and Visual Analytics Conference (ChinaVis'24)
	The 12th IEEE Pacific Visualization Symposium (PacificVis'19)

Conference Program Committee

Associate Chairs	ACM CHI conference on Human Factors in Computing Systems (CHI'25), Design Subcommittee
Program Committee	The IEEE Visualization Conference (IEEE VIS), 2021 - 2023
	Eurographics/IEEE-VGTC Symposium on Visualization (EuroVis) STARs, 2021 - 2022
	China Visualization and Visual Analytics Conference (ChinaVis), 2017 - 2023
	International Conference on Computational Visual Media (CVM), 2017 - 2023
	Computer Graphics International Conference (CGI), 2023 - 2024

Journal & Conference Reviewer

Journal	IEEE Transactions on Visualization and Computer Graphics (IEEE TVCG), Computer Graphics Forum (CGF), IEEE Computer Graphics and Applications (IEEE CG&A), IEEE Transactions on Knowledge and Data Engineering (IEEE TKDE), IEEE Transactions on Intelligent Transportation Systems (IEEE TITS), IEEE Transactions on Computational Social Systems, IEEE Transactions on Network Science and Engineering, ACM Transactions on Intelligent Systems and Technology, ACM Transactions on Spatial Algorithms and Systems, Information Visualization, Journal of Visualization, Visual Informatics, Computer Aided Geometric Design, Computers & Graphics, Journal of Computational Social Science, Journal of Computer-Aided Design & Computer Graphics
Conference	IEEE VIS, EuroVis, PacificVis, ChinaVis, SIGGRAPH (Asia), ACM CHI, VINCI, ISMAR, EuroGraphics, CVM, IVAPP

Grant Reviewer

Grant	National Natural Science Foundation of China (General), National Natural Science Foundation of China (Youth), Agencia National Research and Development Agency (ANID)

SUPERVISION AND MANAGEMENT EXPERIENCE

PhD Students

2024.09 - present	▌ Ziyao GAO @ CMA, Co-supervisor: Prof. Theo Papatheodorou
	▌ Haichuan LIN @ CMA, Co-supervisor: Prof. Kang Zhang
2024.01 - present	▌ Ling LI @ CMA, Co-supervisor: Prof. Fugee Tsung
	▌ Yusong WANG @ CMA, Co-supervisor: Prof. Guobiao Hu
2023.09 - present	▌ Zhiyao YANG @ CMA, Co-supervisor: Prof. Haining Liang
	▌ Jian YU @ CMA, Co-supervisor: Prof. Zeyu Wang
	▌ Xingchen ZENG @ DSA, Co-supervisor: Prof. Wei Wang
	▌ Liangwei WANG @ DSA, Primary supervisor: Prof. Fugee Tsung
2022.09 - present	▌ Yihan HOU @ CMA, Co-supervisor: Prof. Huamin Qu
	▌ Zhan WANG @ CMA, Co-supervisor: Prof. Fugee Tsung
	▌ Rong HUANG @ CMA, Co-supervisor: Prof. Kang Zhang
	▌ Jianing HAO @ DSA, Co-supervisor: Prof. Guang Zhang
2021.09 - present	▌ Yilin YE @ CMA, Co-supervisor: Prof. Kang Zhang

Master Students

2024.09 - present	▌ Zian ZHAO @ CMA
2023.09 - present	▌ Manling YANG @ CMA, Co-supervisor: Prof. Luwen Yu
	▌ Yiwen ZHANG @ CMA, Co-supervisor: Prof. David Yip
	▌ Chunting LI @ DSA, Co-supervisor: Prof. Yuyu Luo
2022.09 - 2024	▌ Shishi XIAO @ CMA, Co-supervisor: Prof. Yingcong Chen Next: PhD student @ Brown University
	▌ Yihan Chen @ CMA, Co-supervisor: Prof. Kang Zhang Next: PhD student @ Beijing Institute of Technology
	▌ Hao CUI @ CMA, Co-supervisor: Prof. David Yip Next: China Mobile
	▌ Wenjing FANG @ DSA, Co-supervisor: Prof. Yuekuan Zhou
2020.09 - 2023.06	▌ Lingdan SHAO @ SIAT Next: Huawei
2019.09 - 2022.06	▌ Xi CHEN @ SIAT Next: Meituan

RAs and Interns

2024.09 - present	▌ Xingyi WANG, RA @ HKUST(GZ)
2024.06 - present	▌ Yuanbang LIU, Intern @ HKUST(GZ), undergraduate student from South China University of Technology
	▌ Chenxi RUAN, Intern @ HKUST(GZ), undergraduate student from South China University of Technology
2024.06 - 2024.11	▌ Qiuchen FAN, Intern @ HKUST(GZ), master student from Tianjin University
2024.01 - 2024.09	▌ Zhuowen LIANG, Intern @ HKUST(GZ), undergraduate student from South China University of Technology
2024.06 - 2024.09	▌ Xiaoxue ZHOU, Intern @ HKUST(GZ), undergraduate student from UIC

SUPERVISION AND MANAGEMENT EXPERIENCE (continued)

2023.06 - 2024.09	◼	Ziyao GAO, RA @ HKUST(GZ), master student from Peking University, now PhD student with me
2022.07 - 2023.12	◼	Qing SHI, Intern @ HKUST(GZ), graduated from Zhejiang University of Finance and Economics
2020.01 - 2021.08	◼	Yanna LIN, Intern @ SIAT, PhD student from HKUST
2020.05 - 2021.07	◼	Mengyang WU, remote supervision, PhD student from CUHK
2019.10 - 2020.03	◼	Zezheng FENG, remote supervision, PhD student from HKUST
2019.05 - 2020.02	◼	Zhiliang ZENG, remote supervision, PhD student from CUHK
2020.01 - 2021.05	◼	Chengqiao LIN, Intern @ SIAT, master student from Xiamen University
2019.01 - 2019.05	◼	Linping YUAN, Intern @ SIAT, PhD student from HKUST
2019.09 - 2020.07	◼	Shidong WANG, Intern @ SIAT, master student from Shandong University
2017.10 - 2018.09	◼	Chi ZHANG, Intern @ CIVAL, FCL, PhD student from University of Science and Technology of China
2017.01 - 2017.03	◼	Qiaomu Shen, remote supervision, PhD student from HKUST
2017.01 - 2017.07	◼	Sisi Salia, Intern @ CIVAL, FCL, undergraduate student from NTU
2016.09 - 2018.02	◼	Dr. Jan Perhac, PostDoc @ CIVAL, FCL
	◼	Shiho Asada, Graphics Designer @ CIVAL, FCL
2016.09 - 2017.01	◼	Filip Schramaka, RA @ CIVAL, FCL
2016.05 - 2016.07	◼	Lu Yuhao, Intern @ CIVAL, FCL , undergraduate student from NTU
2015.05 - 2015.08	◼	Er Zheng Hui, Intern @ CIVAL, FCL, undergraduate student from NTU