四十六份博士论文致谢辞中的导师

46. LIN Yanna 2024

Yanna Lin

First and foremost, I would like to express my deep gratitude to Prof. Huamin Qu. Being under his supervision was indeed a very fortunate and joyful experience. When I applied for HKUST, many friends recommended Prof. Qu and praised him as an excellent supervisor. His webpage stood out among the CSE faculty, filled with vibrant photos of student activities that radiated happiness and camaraderie. These photos convinced me of his excellence as a supervisor, and I couldn't wait to join this loving academic family. After joining, Prof. Qu exceeded my already high expectations. He consistently empathized with students, often saying that while some decisions might seem minor for the group, they could significantly alter an individual's path. Thus, he always prioritized our best options over his own preferences. I am incredibly fortunate to have had such a student-centered, wise mentor. Throughout my PhD journey, whatever challenges I encountered, I was undaunted and moved forward because I knew that Prof. Qu would always be there to support us. Whenever I encountered overwhelming confusion, I would send him a message and he would promptly arrange one-on-one meetings to discuss solutions from my perspective, even taking the blame to resolve issues, and reassuring me with his constant encouragement that "it doesn't matter". Despite his busy schedule, he never neglected mentoring us. He maintained weekly office hours and actively shared his readings, experiences, and thoughts in our WeChat group. His actions and words opened my eyes to new perspectives and taught me valuable life lessons. His principles of "thinking big", "aiming high", and "rejecting defaults" have left a lasting impact on me. He is incredibly dedicated, seemingly operating round-the-

clock, always active in our WeChat group. However, he is "strict with oneself and lenient towards others", encouraging us to "work hard, play harder". He motivated us to travel and gain experience, which led me to attend conferences and engage in exchanges across 7 countries and 10+ cities during my PhD. Thanks to Prof. Qu, I had numerous opportunities to discuss with diverse scholars and gain unique life experiences that I would not have had otherwise. These memories are cherished treasures that will support me for many years to come. Reflecting on the profound impact Prof. Qu had on me, I once shared with him my concerns about my ability to be a supervisor, fearing that I might not be capable enough and could potentially mislead my future students. Prof. Qu replied thoughtfully, "Think of those who may be less capable but are teaching. By taking up this role, won't you save some students from such a fate?" This led to a sudden realization and strengthened my decision to pursue an academic career. Although I am not able to reach the exemplary heights of Prof. Qu, I aspire to draw on even a small portion of his wisdom and become a valuable mentor to others on their learning journey.

45. JIN Zhihua 2024

Zhihua Jin

First and foremost, I would like to express my deepest gratitude to my supervisor, Prof. Huamin Qu, for his unwavering support and encouragement throughout my Ph.D. studies. Under Prof. Qu's guidance, I have not only acquired a comprehensive understanding of research methodologies in the field of visualization but also cultivated critical and creative thinking skills necessary for conducting research. Additionally, his mentorship has afforded me the opportunity to explore diverse research topics, thereby expanding my horizons. Furthermore, it is crucial to emphasize that Prof. Qu is not only an incredibly knowledgeable and accomplished professor but also a compassionate individual who genuinely cares about my ups and downs in life, my long-term career development, and the cultivation of skills with competitive advantages. During the challenging period of the pandemic, Prof. Qu demonstrated his encouragement by sharing invaluable life philosophies and organizing group activities that motivated my pursuit of a Ph.D. degree. I am truly grateful for Prof. Qu's continuous support and encouragement throughout my Ph.D. journey.
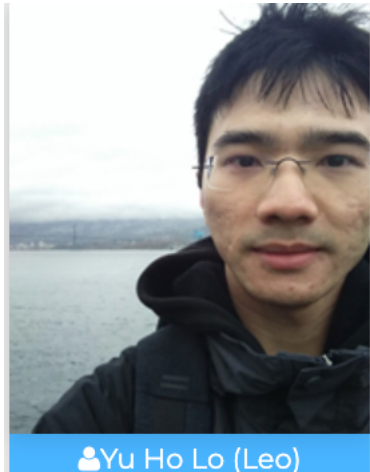
44. YUAN Linping 2024

First and foremost, I am deeply grateful to my supervisor, Prof. Huamin Qu, for his invaluable guidance and support. His influence has shaped me in ways I never imagined. I am becoming an independent researcher, a courageous heart-follower, a better person wishing to empower others, and an aspiring leader. Each of these roles has played a significant part in my personal and professional growth, intertwined in ways that have led to an incredible transformation. Firstly, Prof. Qu has taught me many valuable principles, methodologies, and tactics, which have shaped me into a critical thinker and a skilled researcher. I am amazed by how wise and well-organized he is in distilling these principles, methodologies, and tactics. I am even more impressed by how faithfully, consistently, and systematically he has applied and embedded them in our group's training system. As a result, principles such as "it doesn't matter" and radical transparency, methodologies such as agile development and six thinking hats, and many detailed tactics have become a part of me, making huge differences in my mindsets and skills through decomposable and measurable practices. Secondly, Prof. Qu encourages us to follow our hearts, a guidance that is especially meaningful to me. It is a common struggle to understand what we truly want in life. Through the supportive and open environment he fosters in VisLab, I fortunately had the freedom and courage to explore my passions. This journey of self-discovery helped me know myself better, allowed my inner vitality to flourish, and enabled me to hear the call of my dreams awakening. Thirdly, Prof. Qu always shows immense compassion and empathy, setting a role model for me to become a better person. I was deeply moved many times when speaking with him, realizing that he remembered my experiences, both pleasant and tough, even when I had forgotten. He kept feeling pride or sorrow for me, always ready to offer help with great kindness. More remarkably, he extends this compassion to all young individuals and scholars, regardless of whether they are his students. He approaches

everyone with a heart full of empathy and patience, along with a genuine wish to help and empower younger generations. I find these qualities very challenging to achieve in my practice though I am regarded as a patient and kind person, which further heightens my reverence for him. Lastly, Prof. Qu has planted a seed in my mind that makes me aspire to become a great leader. He has set high standards and expectations for us. When I was a junior Ph.D. student, I often struggled, feeling that he wanted to cultivate each of us to be a general, while I saw myself as merely a soldier. However, he often shared the mission and vision of VisLab with great enthusiasm in our group, inspiring us to aim high and dream big. He also quoted, "A sword that can defeat one person is not worth learning; learn to defeat ten thousand" to teach us to focus on significant matters. He used the poem "The leek flowers like rice tiny, rush to bloom like the peony" to help me build confidence. Day by day, year by year, this continued for five years. Gradually, I become a soldier aspiring to be a general. Maybe one day I will become an excellent leader, brave and wise enough to lean in at any moment. In summary, Prof. Qu's teachings, both academic and life lessons, have prepared me not just for a career, but for a life of continuous growth and contribution. For this, I am eternally grateful.

43. LO Yu Ho 2024

Yu Ho Lo (Leo)

First and foremost, I express my deepest gratitude to my advisor, Prof. Huamin Qu, who has become a mentor and someone I look up to. Before joining VISLAB, I was disoriented, with little understanding of or goals for my life and future career. Joining VISLAB was a pivotal moment, gradually filling this gap in my life. Prof. Qu's unique teaching approach of blending praise and constructive critique profoundly impacted both my peers and me. He cared deeply about our mental well-being and built up our mental strength and resilience by challenging us greatly and critiquing us toughly. He has been careful not crushing us, however, sometimes, we failed his expectations and fell short of the standards he set for us. As someone who preferred observing from the sidelines, being singled out for criticism was the most uncomfortable, but these lessons were invaluable and necessary for my growth. For the poor reactions that I had to his critiques, I owe him both gratitude and apologies. Among the practical lessons on data visualizations, computer science, research methods, project management, interpersonal skills, presentation skills, leadership, and much more, he also taught us about career, family, and life. He gave all he had learned in his life to his students, I will treasure these lessons for the rest of my life. When facing difficulties, I now often ask myself what Prof. Qu would do if he were in my situation. I am so grateful for his teaching and the better person I had become. These are unachievable without his care and support. For all of these, I extend my greatest gratitude to my advisor, Prof Huamin Qu.

42. FUNG Ka Yan 2024

FUNG Ka Yan, Gabby

First and foremost, I am incredibly grateful to my supervisors, Prof. SONG Shenghui and Prof. QU Huamin. During the most difficult times, they believed in and supported me in completing my work. I thank Prof. SONG for his guidance and encouragement in my academic and personal development. Additionally, I thank Prof. QU for providing a supportive environment in which to pursue my research without worries. I am grateful for their patience, understanding, and flexibility in allowing me to run startup projects alongside my research.
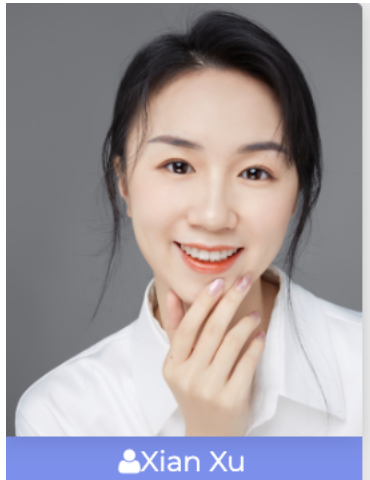
41. LI Haotian 2024

First of all, I would like to extend my deepest gratitude to my thesis supervisor, Prof. Huamin Qu. Prof. Qu was the one who gave me the chance to enter the world of research and taught me the "first principles" of surviving and establishing myself in the research community. First, he has always asked us to be unique and not to follow a similar path as others. I benefited greatly from the philosophy when I made many decisions, such as my research direction, my visit to Berkeley, and my future career. I am also grateful that Prof. Qu had always supported my decision and provided every help when needed. Second, I am always motivated by his spirit of "just doing it". As a PhD student, there were lots of "the first times", such as the first time to attend a conference, the first time to participate in proposal writing, and the first time to apply for awards. The spirit of "just doing it" has encouraged and will always encourage me not to be afraid of the challenges brought by these new challenges. Besides, there were so many cases of his insightful ideas on educating researchers, such as systematic skill training and project management methods. All of his sayings and ideas have shaped part of me and will benefit me for the rest of my life as a researcher. Sometimes, I really hoped to extend my PhD journey with Prof. Qu for an unlimited time to learn more from him.

40. LI Wenchao 2023

Foremost, I express my profound gratitude to my mentor, Professor Qu. It was indeed him who sparked the flame of ambition within me and provided me the opportunity to undertake my PhD at the Hong Kong University of Science and Technology. Throughout my academic pursuit, he opened doors to countless opportunities that have been instrumental to my growth. His insightful comments have provided me with a fresh perspective on my own abilities. I remember our enlightening seminars, meetings, and discussions that left me with endless inspiration. Professor Qu's encouragement and support made every step of my PhD journey a memorable experience. His discerning eye and patience towards my errors and flaws, coupled with his celebration of my achievements, have been a driving force in my journey. Each triumph and setback encountered during my research has only enhanced my resilience and optimism, for which I owe much to Professor Qu.

39. XU Xian 2023

Firstly, I would like to express my deepest gratitude to the most influential figure in my academic career, my supervisor Prof. Huamin Qu. I profoundly appreciate his unconditional trust and encouragement, which led me into academia and welcomed me into the CMA and HKUST Vislab families. His first words to me, "You are the student we are looking for," initiated my doctoral journey and propelled me through countless moments of despair over a thousand days and nights. Prof. Qu is a passionate and dedicated scholar and an exceptional educator. He has taught me how to learn, conduct research, and be a valuable member of society. Throughout my doctoral studies, during countless moments of darkness and faced numerous challenges, Prof. Qu has always been there, illuminating my path with guidance and immense support. As a perfectionist, I have always strived to excel in everything I do, ever reluctant to disappoint those around me. However, Prof. Qu constantly reminded me not to be too harsh on myself and to value steady progress. He consistently considered each student's needs, tailoring his guidance accordingly. Prof. Qu afforded me the greatest degree of freedom, allowing me to pursue the research topics I am genuinely interested in and helping me discover the intersection of cinematic arts and data visualization. His encouragement to engage with scholars outside our institution allowed me to visit Oxford University and Cambridge University during the final stages of my doctoral studies.
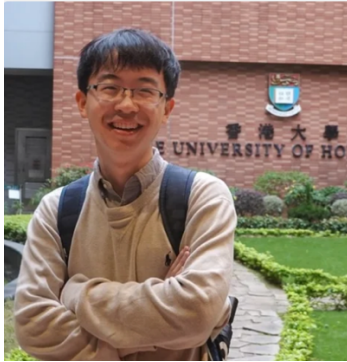
38. Wai Tong 2023

Wai Tong (Jackie)

To begin with, I want to convey my deepest gratitude to my supervisor, Prof. Huamin Qu, for his invaluable guidance and mentorship over the past five years. His innovative and open-minded approach to research, systematic training, and unwavering support has been a beacon of light in my academic journey, guiding me toward becoming a skilled scholar and making meaningful contributions to the visualization field. For example, "diverge and then converge" is one of the most inspiring philosophies I learned from Prof. Qu. He always encouraged us to brainstorm as many ideas as possible, then evaluate the optimal one, but it must not be the other way around. It has totally transformed my mindset from making incremental contributions to thinking novel yet justified ideas, also confirming the decision made and not panicking and hesitating. Moreover, "80% of success is just showing up." The systematic training from reading to writing to presentation, as well as conducting single research work to writing proposals involving multiple works, allows me to be trained continuously during the PhD journey. "Solid work, steadily applied, gets you surprisingly far." Solid training and guidelines from Prof. Qu have kept me on the right track despite the unpredictable nature of research. Lastly, "it doesn't matter" is the warmest message from Prof. Qu. Experiencing failure is a common occurrence in research. However, he has consistently provided us with ample support and encouragement to manage our emotions when faced with failure and uncertainty.

37. FENG Zezheng 2023

Zezheng Feng

First and foremost, I would like to express my sincere gratitude to my supervisor, Prof. Huamin Qu, for the guidance on my academics, the edifying of life's lessons, the love for my life, and the influence on my career. He is a knowledgeable and creative researcher as well as a kind preacher to visualization. I am very grateful to Prof. Qu for accepting me as one of his students. Prof. Qu led me to the door of visualization for the first time. I am deeply attracted by this field, which combines beauty and efficient algorithms. I gained enormous valuable comments. He taught me to think more deeply about research problems rather than stay on the surface of engineering problems. Moreover, he also suggests me keep the big picture in mind. These valuable and constructive suggestions benefit me in my research. Prof. Qu loves reading. He usually shares his comments when reading some inspired parts. He likes the book of Don Quixote best. He once used the examples in the book to teach me that doing scientific research should be like Don Quixote and Sancho, one unconstrained and one down-to-earth. Heroes can't compete with four hands. As an individual, improving communication ability and keeping reading and chatting with others are all spiritual practices. I learned a lot about life philosophy from him. He told me to be sincere to others, never break the promise to others, be generous to friends, and never be stingy with the current gains and losses. Beyond the research, I am grateful for Prof. Qu's care and love for me. He is busy with many academic and administrative affairs and supervises many students, but he still cares about and helps my life and mood. It is unforgettable to receive his blessing on the morning of my birthday. It is warm and touching.

36. Xu Zhenhua 2023

I would like to thank my supervisor Prof. Huamin Qu, who led me to HKUST and provided me with an excellent environment for research. He was always enthusiastic, considerate, and willing to share his ideas with me. Without his help and sincere support, I cannot receive the HKPF and reach the place where I am.

35. CHENG Furui 2022

Furui Cheng

First and foremost, I would like to express my sincere appreciation and thankfulness to my advisor Prof. Huamin Qu. It's a wonderful experience to work with him and learn from him. He is a knowledgeable, determined, and creative researcher. I gained enormous insightful comments, guidance, and sometimes criticism from him during the last four years. He taught me to be patient with details while also keeping the big picture in mind. "You should never forget moving between tree view and forest view." These thinking habits benefit me a lot during my research. He loves reading. When I came to his office for the first time, I was impressed by the number of books on the shelf, desk, and ground. Later, I knew they were only a small part of his book collections. And he never grudged sharing the insights gained from the books and his thinking with us. His insightful opinions motivated me to have different views on research, the world, and myself. Prof. Huamin Qu is an excellent mentor. Perhaps, the most important lesson I learned from him can be summarized by his slogan, "It doesn't matter," which reminds me always to be fearless of failures and not blame them on anyone, even myself. "Just keep moving forward." It's my great honor to gain advice from him for such a long time. This thesis can never be done without his support.

34. WANG Xingbo 2022

First, to my supervisor Prof. Huamin Qu, I would like to thank you for leading me into visualization research and helping me survive and even thrive in my Ph.D. To me, you are such an exemplary researcher and fantastic mentor. At the time when I joined the CS Ph.D. program at HKUST, I had limited knowledge about computer science, let alone research. However, you welcomed me to join your group with open arms and believed in my potential. You patiently and kindly taught me the research methodology and philosophy, as well as the research mindset. I still remember when I took my first shot at my paper submission, you offered so many invaluable suggestions and warm-hearted encouragement. Your creative ideas and insightful critics, which I believe con- tribute a lot to the success of my first submission and help build confidence and independence in future research. Moreover, seeing you burnt the late-night oil with us at every paper submission gave me a lot of mental power and motivation. Besides helping me learn how to do research, you also showed me how to do "good" and "important" research with your wisdom, knowledge, and some hard lessons you learned from your Ph.D. and career. Words cannot express how much positive influence you had on me in my research and life. For example, the "it does not matter", "just do", and "always show up" attitudes made me stronger and braver when facing great difficulties. Meanwhile, "it is OK to be not perfect," and it is important to find my own "safe mode". Last but not least, I thank you for creating VisLab, such a loving and sweet research family that I will forever remember. In this group, we care for each other and support each other, making the Ph.D. less hard and more fun.

33. YANG Leni 2022

Leni Yang

First of all, I would like to express my deepest gratitude to my supervisor Prof. Huamin Qu. I remember that in our first meeting, he proudly and enthusiastically introduced the research projects, the research training he designed for students, and the states of cur- rent and past members of the VisLab. His enthusiasm and passion for helping students thrive as independent researchers are consistently presented in all the valuable materials he wrote about doing research in visualizations, in every insight and advice he gives and patiently explains in our WeChat group, in every office hour that he never skips, and in every meeting with him. No matter how busy he is, he always reserves time for communicating with his students. He is the one who opened the door of research for me, guided me through the philosophy, knowledge, and skills of doing research, and provided resourceful support and proper freedom for me to try, to fail, to grow, and finally to enjoy in the research world. For me, he is not only a research supervisor but also a life mentor. He cares more about if we could have a fulfilled and enjoyable life than if we could get a degree. He selflessly shares the ups and downs of his life adventures, his observations, and his philosophy about living in the world. He encourages us to embrace the uncertainty and change of life and never stop pursuing bigger goals. I have gained much more than what I expected from a PhD study and I will always remember and use the wisdom he has taught us even after when I am not in VisLab.

32. WU Aoyu 2022

Aoyu Wu

An immense thank you to my PhD supervisor, Prof. Huamin Qu. Except for my parents, he is arguably the most impactful person to my life. First, he gives me more criticisms and suggestions than anyone else, which is uniquely important for persons like me who do not normally receive criticisms. I was self-defensive at the beginning, but later learned to become open, start self-reflections, and make changes. I am deeply grateful to his radical transparency and sometimes negative comments that have shaped me in a rather positive direction. Second, he ignites my determination to pursue academic career. I am deeply moved by his spirit and enthusiasm of education. During my 5-year studies under his supervision, he has written more than 30,000 messages with over six million characters to his students, an amazing number that demonstrates his tireless efforts. He has treated education as his routine work and is such a role model that makes one want to continue the mission, there and farther afield. Finally, he offered me the comprehensive training for being an independent researcher, ranging from conducting research and writing proposals to hosting academic activities and developing research tastes. More importantly, he taught me the philosophy of conducts and mindsets that would last and benefit all my life. It is my honour to have met him at my best age of possibilities for changes.

31. WANG Yifan 2022

First of all, I'd like to express my sincere gratitude to my supervisor, Prof. Huamin Qu. I got to know Prof. Qu when I was in my sophomore year as an undergraduate student in Zhejiang University. At that time, I was anxious about finding research labs. I was clear I wanted to to something that combines computer science and humanities and arts, but found it hard to get a direction. Suddenly I came across one of his papers. I was and am still impressed by his idea of three aesthetic elements in data visualization: faithfulness, expressiveness, and elegance. It immediately hit my heart. Two years later, when I first met Prof. Qu in a workshop at Tongji University, his unique viewpoints and personal charisma strengthened my choice to become a researcher in data visualization, and I'm so lucky that I can join the VisLab to continue my study. During my PhD, Prof. Qu is a strict advisor. He would provide high-level suggestions for my research direction, project management, and career development, trying to train my sense of being an independent researcher. On the other hand, he would also look into many detailed research practices, such as presentations, PQE, and paper submissions. I still clearly remember when I was conducting my first paper submission, we worked together to think about the visual designs and go through my writing. He was like my reliable "comrade" in this submission "fight". Prof. Qu is also a loving "father" and is always the most powerful backing in my research and life. Although sometimes he seemed to be worried about the research topics I chose, he still encouraged me to go on. Even if I failed and ran back to him crying like a helpless child, he would comforted me and encouraged me to persist. He enjoys reading and always suggests interesting books to me, hoping me become knowledgeable, kind, and strong. He himself proves that research life could be exciting, colorful, and poetic. I would never meet a teacher and friend like him, who become strict and kind just all for my good.

30. SUN Dong 2021

I thank Prof. Huamin Qu for leading me into the research field of data visualization. He is very excellent and friendly. He has established a perfect doctoral student training system, which provides infinite help for me to develop research ideas, code, and write scientific papers. Under his guidance, scientific research becomes no longer difficult. Prof. Huamin Qu is more like a father than a mentor. He helps me get acquainted with the life in the Hong Kong University of Science and Technology (HKUST). He cares about my growth and helps me out of trouble in both research and life. He invites me to his house for the New Year, which makes me feel that I have family in Hong Kong. When I am slack and lazy, he criticizes me when appropriate, which makes me positive and diligent. He builds a bridge for the collaboration between Huawei Noah's Ark Lab and me. All the work in this thesis originates from the collaboration. I respect and love Prof. Huamin Qu. Words cannot express how thankful I am.

29. SHU Xinhuan 2021
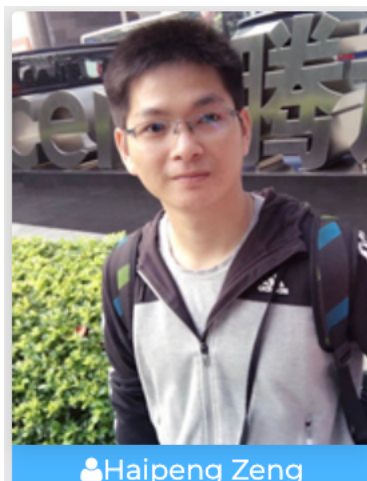
Xinhuan Shu

First and foremost, I would like to express my greatest appreciation and thanks to my advisor Prof. Huamin Qu for mentoring and inspiring me throughout the Ph.D. study. To me, he is not only the supervisor who offers me the chance to grow as an independent researcher and pursue what I am interested in, but also like a parent who gives me the care and concern like his own child, tolerant of my problems and willing to give opportunities for my improvement. When I first joined VisLab, I remembered Prof. Qu shared with us the valuable materials he recorded about visualization research and his academic experience. These documents really opened up an academic world to me, sometimes treasurable and cheerful but most times competitive and cruel. I read it many times during my Ph.D. study and gained different insights at various stages. Besides, he selflessly shares his sincere thoughts about both academic research and his personal attitude and experience. I am impressed by his advice like "research is an endless game. Anything is possible in ten or twenty years", which encourages me to be more persistent and patient. His commitment to students, including every late-night wechat message and email, weekly tea parties, and individual meetings has also inspired me a lot. Every time I asked if he was available for a meeting, no matter how busy he was, he would try to squeeze time for students. I am much grateful for each lesson learned in the past 4 years and the priceless advice from Prof. Qu on both research and my life.

28. XIA Meng 2020

Prof. Qu is like my father, who guides me towards the advanced research direction, encourages me all the time, provides me with various opportunities, and creates a wonderful research platform (BBS), as well as a strong academic-atmosphere group (VisLab) for us. Apart from these, three effective weapons I learn from him. The first one is a bundle of guidelines, which was summarized from his years of experience in instructing graduate students. For example, "The leek flowers like rice tiny, Rush to bloom like the peony", "Swallowing the hitting of the tooth with blood", "Don't cover up strategic laziness with tactical diligence", "Do not miss the deadline", etc. These practical guidelines are repeated been applied and verified during my research path. The second weapon is the habit of reading. He reads a lot of books and sometimes recommends nice books for us. I never thought I would be a person who likes reading while he makes this come true. The third weapon is all his broad mind and high thinking realm. He is so selfless to share his thoughts as a field leader in the visualization domain, which inspires me to think like a pioneer instead of a follower.

27. ZENG Haipeng 2020

First and foremost, I would like to thank my supervisor, Professor Huamin Qu, for his invaluable support, guidance, and encouragement in my graduate study. He is a knowledgeable, creative, open-minded, hardworking and dedicated researcher. He has been a great mentor for both my research and life. For research, he led me into the field of visualization research and patiently and tirelessly trained me on how to do research. His critical evaluation made me clearly aware of my strengths and weaknesses. At the same time, his continuous and warm support motivated me to keep improving myself. Under his instructive guidance, I gradually developed a researcher's mindset and cultivated critical thinking in research, which will benefit me for my whole lifetime. For life, he made me a better person. His philosophy about life, such as "It does not matter" and "Can do attitude", influenced me a lot. I have been very impressed by his unbelievable diligence and open-mindedness to new things, as well as always being willing to embrace new challenges and never setting limits for himself. I have become more proactive and have learned how to better handle difficulties and uncertainties in life from him. To me, he is not just a supervisor, and more like a father of a family. I will always be grateful for his great guidance, warm support and selfless love.
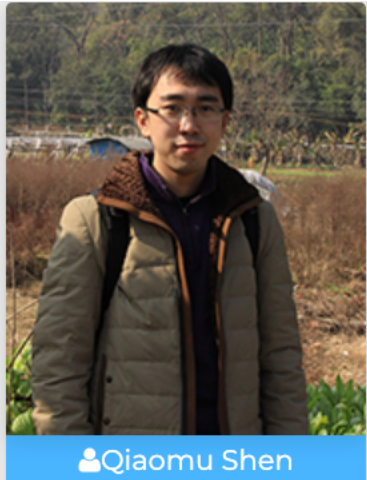
26. WANG Qianwen 2019

First and foremost, I would like to express my immense gratitude to my worthy supervisor Prof. Huamin Qu, for being the greatest supporter and critic, sometimes both at once. He led me to the fascinating world of data visualization, introduce me to excellent collaborators from all over the world, and provide me with continuous guidance over the last four years. He always has faith in me, even at the hardest moments of my PhD study, even when I have lost faith in myself. He shaped my view of research and, more importantly, my view of life and of the world. I will always remember his slogan "it doesn't matter", which gives me courage to take action amid fear and uncertainty. I also want to thank him for building and maintaining VISLab, my warm family in HKUST.

25. MING Yao 2019

First of all, I would like to express my greatest gratitude to my advisor, Prof. Huamin Qu. He is such a knowledgeable, creative, and energetic scholar that I would always be grateful to. At the time I joined his group, I know nothing about visualization and computer science research. He gently introduced me to the world of research, and guided me through the philosophy, the strategies, and the practical tricks of research. With him, I learned both the miseries and pleasure of studying the unknown. He has offered both very insightful views on the high-level direction of my research and invaluable detailed suggestions to my thesis work. This thesis would never be possible without his encouragement, guidance, and support. Prof. Qu is a strict and resourceful mentor, from whom I learned a lot about effective time and progress management, interpersonal skills, presentation skills, leadership, setting wildly important goals, managing negative emotions, and so much more about career, family, and life. He is also a caring friend who is always supportive and considerate. He cares about my long-distance relationship with my wife and offers enormous help to us. I cannot imagine how much harder it would be for us without his support. Thank you so much.

24. SHEN Qiaomu 2019

First, I want to express my gratitude to my supervisor and mentor, Prof. Huamin Qu, who strongly supported my research, career, and personal endeavors. I enjoyed the short discussions with Prof. Qu, which were beneficial during my moments of difficulty. His guidance and support enabled me to fully understand research and my capabilities. In particular, he provided me with numerous opportunities to collaborate with renowned researchers, thereby expanding my horizon in this undertaking. To date, I consider myself fortunate to have had the opportunity to send him my first e-mail expressing my intention to visit VisLab in 2014, when his team was smaller than its current composition. In the succeeding five years, I have witnessed the growth and success of our group. I am deeply appreciate that Prof. Qu bring me to fantastic group. I am really proud to be a member in this big family.

23. CHEN Zhutian 2019

First and foremost, I would like to express my sincere gratitude to my supervisor, Professor Huamin Qu, for the love and hate, for the smiles and tears, and for the 4-years' most unforgettable experiences in my life he shared with me. To me, he is a noble teacher influenced by Confucianism, who believes human beings are teachable and improvable through personal and communal endeavor; a generous friend with a sense of responsibility, who help others silently and sincerely but ask for nothing in return. Among all the things he taught and did for me, two of them are particularly precious and deserve mention here. First, he taught me what the researchers' mindset is. At the beginning of my Ph.D., I used to take the engineering efforts as research contributions, thus spending lots of time in the wrong direction. He identified that I had not developed a researcher's mindset and patiently guided me to tackle this problem. To me, the researchers' mindset is a meta skill and the root of many other research skills he taught me. Second, he built up a paradise, HKUST VisLab, for students who want to study data visualization. The culture of HKUST VisLab includes: 1) friends, who have the same goal with you, to fight together, 2) techniques, like BBS, Wechat, and chat Bot, to nudge you doing research in the right direction, and 3) opportunities, financially supported by Prof. Qu, to visit industrial and academic institutions all around the world. Many years later, no matter what I was facing, I could always remember those distant days when Prof. Qu guided me through this academic journey.

22. YUE Xuanwu 2019

First of all, I want to express my greatest gratitude to Professor Huamin Qu, who is my supervi- sor and life changer. I remember the first time we met in Peking University 2014 Visualization Summer School. I was impressed and attracted by Prof Qu's knowledge and VisLab deeply. A self-introduction during the course break opened a new gate in my whole life. During the past four years, I was honored to pursue my Ph.D. under Professor Qu's supervision. His academic professionalism and thoughtful care guided me in my self-discovery journey. He inspired me not only in the research problems but also the in crossroads of life. Every individual meeting, every late-night posting in our lab wechat group, every email encouraged me to move on. Also, I was motivated by his love and passion for his family, visualization research areas, HKUST. and Hong Kong society. I would never develop the ability and build the courage to face the world without him.

21. ZHAO Mingqian 2019

I thank my supervisor Prof. Huamin Qu for giving me the opportunity to do the research that I am interested in and always provide support & understanding to me when I get stuck.

20. XU Ke 2019

I would never have completed this work without the help from many people. First and foremost, I would like to thank my supervisor, Prof. Huamin Qu, for offering me the precious opportunity to pursue my PhD on the study of data visualization. Professor Qu has always been very supportive throughout my PhD study. He gave me the opportunity to conduct research based on my interests and in my preferred places. No matter where I were and what I were doing, he could always offered great help and suggestions to make the best choice for me. Professor Qu has also inspired me a lot through his love to family, commitment to students, passion to work and capability to solve problems. I am grateful for every experience and lesson learned under the supervision of Professor Qu, which made me more persistent, optimistic and open-minded.

19. LIU Dongyu 2019

Dongyu Liu

I would like to begin by giving my wholehearted appreciation to my supervisor, Prof. Huamin Qu, for his encouragement, support, and guidance throughout my PhD study. The first time I met Prof. Qu was in the department's early PhD recruitment event. He was one of my two interviewers and I believed we have attracted each other at first sight. I then obtained a valuable opportunity to pursue my PhD in Prof. Qu's group (HKUST Vis-Lab). He opened a new and wonderful world to me and taught me everything I yearned to know. Prof. Qu is a discoverer-minded and genuine intellectual whose enthusiasm and passion for research has a huge influence on me. Beyond research, he often shares his philosophy about life, from which I learn how to face up to new challenges and strive for excellence. I am deeply impressed by his determination, diligence, tenacity, and leadership; thus, I always regard him as my positive role model to keep myself moving forward.

One of the proudest moments in my life is when Prof. Qu attended my wedding as the chief witness in 2016. Deep in my heart, he is not only an academic advisor but also a life mentor to me.

18. LI Quan 2018

I am deeply indebted to my supervisor Prof. Huamin Qu for his fundamental role in my doctoral work. Since my first day at HKUST, he provided me with every bit of guidance, assistance, and expertise that I needed during my first semesters. He believed in me like nobody else and gave me endless support. He helped me since I was a master student when we first met at the summer school on visualization organized by Peking University. After that, we met many times and had numerous conversations. It all started in Spring 2014 when we met in Japan and later he offered me such a great opportunity to join the VisLab at HKUST. I was deeply touched and convinced by his personality. He taught me the fundamentals of conducting scientific research in the visualization area, and inspired me by his hardworking and passionate attitude. His challenges and productive critics brought this work towards a completion. I could not have imagined having a better life coach for my Ph.D. study.

17. ZHAO Xun 2018

First and Foremost, I am deeply indebted to my supervisor, Prof. Huamin Qu, who had given me a second chance and been extremely supportive and helpful during this journey. Without him, this thesis would not even be possible. When I hit the bottom and felt I was almost drowning, Prof. Qu saved me and carried me through the difficult times. He told me that "It is not your fault, it is just the nature of research. You just keep going and you will make it!" And here I am! By introducing me the world of visualization, he leads me to the topic that I am truly interested in. As a supervisor, he really cares for his students and is concerned with their personal growth. He shows great sympathy towards the students who are struggling and is willing to help at anytime. He never gives up on any students and guides students through this Phd grind with great patience. He is very generous to students and provides us various opportunities to do interns and oversea exchanges. During the last two years, he provided me the opportunities to visit New York University and Microsoft Research Asia to broaden my horizon. As a professor, he is unbelievably diligent and always striving for better. We can always find him in his office to discuss research problems. He never settles and is always willing to take challenges. To me, he is not only an intelligent and great supervisor, but already a family member.

16. CHEN Yuanzhe 2018

First and foremost, I would like to thank my advisor, Prof. Huamin Qu, for his support, guidance and wisdom, and also for building such a great research lab so that I could focus on my research and have the opportunity to work with so many talented researchers. With his guidance, I learned how to handle all the uncertain issues in my research and get things done, understood how to manage a research project and collaborate with others, and realized there are things such as proactiveness are as valuable as technical competence. I feel so grateful that Prof. Qu is willing to share his wisdom not only about research, but also about career and everything in our lives. Through the four years of my doctoral study, what he taught me not only makes me a better researcher, but also help me to be a better person. Thank you very much.

15. CHEN Qing 2018

First and foremost, I would like to thank my supervisor, Prof. Huamin Qu, for his wisdom, guidance, support, and patience. It is him who led me to the research palace. He taught me to become not only a devoted researcher but also a better person. Two things have impressed me the most among many things I have learned from him. First, he is always energetic and willing to take on new challenges. He is open-minded to new technologies and never sets limits to himself. His passion and dedication have made him a role model for me to keep myself going. He has also taught me to stop worrying and get things done. The best way to overcome fear is to start working on it. Second, he could always see the goodness in people, which reminds me to "Jian Xian Si Qi" whenever I meet people with various talents and virtues and then try to learn from them. With his guidance, I believe I am now ready to face all the upcoming challenges and embark on a new journey.

14. WANG Yun 2018

I would like to thank Professor Huamin Qu, for giving me so much praise, critisism, and opportunities. His comments have made me look at myself from a new angle. I re- member the meetings, seminars, and discussions that gave me endless inpsiration. He gave me so much encouragement and helped me enjoy the whole process of my graduate study. Professor Qu has been observant and patient in regards to my mistakes and short- comings. He also celebrates all my accomplishments and achievements. Every success and faliure during my research study has made me more resilient and optimistic.
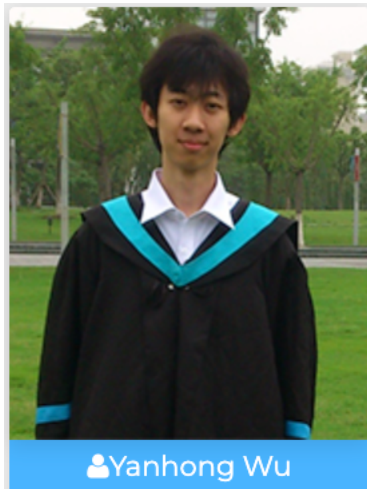
13. WANG Yong 2018

Yong Wang

First and foremost, my greatest gratitude goes to my supervisor, Prof. Huamin Qu, for his invaluable guidance and continuous support in the past four years. He led me to the fantastic field of information visualization and taught me how to do research from the scratch. It was mainly from him that I learned how to build a good researcher mindset and how to explore the unknown field with novel methods and critical thinkings. Also, he provided me with many opportunities to collaborate with excellent researchers all over the world and broaden my horizons. Apart from research, his philosophy about life and the world also deeply influenced my understanding of life and the world. I have been very impressed by his amazing diligence, persistent striving for excellence and strong willingness to embrace new challenges, which indeed motivates myself to pluck up my courage and go through all those difficulties during my PhD years. To me, what he taught me will not only benefit my future career as a visualization researcher but also my rest of life for being a better person.

12. FU Siwei 2018

First and foremost, I would like to express my sincere gratitude to my supervisor, Prof. Huamin Qu, for introducing me to the world of research and giving me the opportunity to discover my passion in information visualization. What he has taught me has gone far beyond technical competence as a researcher and will have an influence on my whole life. With detailed management, he helped me cultivate the habit of reading papers and thinking in a research mindset, which is critical for preparing myself for a research career in the future. Moreover, through his critiques and encouragement, I am better able to understand both my strengths and my shortcomings from various aspects. This will surely benefit me for the rest of my life when I face major obstacles and decisions. Finally, he has been the greatest of role models for me with his passion for and dedication to his work. His undying enthusiasm for his professional career motivates me to continue pursuing research after graduation.

11. WU Yanhong 2017

First, I would like to express my sincere gratitude to my supervisor Prof. Huamin Qu for his kind support during the past four years. He leads me into the research palace and guides me through this academic journey. To me, he is not only a talented and knowledgeable advisor but also a generous and warm-hearted friend. Whenever I have questions regarding my research or personal life, he is open to discussion and often enlightens me with his wisdom and experience. Among the many things I have learned from him, two of his characteristics impress me most. First, he is an amazingly industrious person. I can always find him in his office even in the late night. I can still remember the time when I was revising my first accepted paper, he stayed overnight with me for proofreading and was still being energetic to organize our group seminar in the next morning. I am deeply touched by his diligence, and the desire of being a researcher like him motivates me to survive this Ph.D. grind. Second, he never hesitates to take challenges and is very eager to learn new things. He always encourages us to overcome the fear of the unknown and study the most cutting-edge research topics that may have strong impacts on the society. He also provided me the opportunities to visit Microsoft Research Asia and INRIA to broaden my horizon. With his guidance and encouragement, I am now ready to embrace the infinite probabilities in the future.

10. WU Wenchao 2016

Wenchao Wu

I feel so lucky to work closely with Prof. Qu during the past three years. I still remember the first time coming into his office and talking with him. His patience and amiableness urged me to ask for working with him, and the following three-year study proved this decision to be brilliant. During my PhD study, Prof. Qu gave me constant encouragement and valuable suggestions that are helpful for not only my future career but also my personal development. He is always supportive when I was facing obstacles. From my point of view, he is not just an advisor, but more like a family member.

9. ZHENG Yixian 2016

First and foremost, I am profoundly indebted to my supervisor, Prof. Huamin Qu, who have led me all the way into the field of visualization, providing professional guidance, extraordinary patience and constant encouragement during my postgraduate study. I could always remember the nights we sat together in his office which is full of books, discussing about the idea and the design. They are unforgettable memories I'll always treasure. He is not only a mentor on research, but also a friend in my life. He sent thousands of emails sharing what he had seen, recommended books, and provided opportunities to expand my horizons, for example, serving as teaching assistant coordinator and joining the course with CAA. All the experiences have made me more confident and prepared in both the research and daily life.

8. Xu Panpan 2014

Panpan Xu

First of All, I would like to thank my advisor Prof. Huamin Qu, for introducing me to the fascinating area of information visualization, and for his generous guidance and help in the five years of study. He is patient with my mistakes, observant of my shortcomings and supportive whenever I was facing obstacles. Through his critiques I realized things as valuable and important as technical competence for a researcher. I will always bear them in mind in the future.

7. SHI Conglei 2014

Conglei Shi

First and foremost, I would like to thank my supervisor, Prof. Huamin Qu, for his kindly guidance on my research career and gentle care for my personal life. I still remember the first time coming into his office and talking with him. The huge amount of books in the office impressed me and his attitude towards students urged me to make my mind asking him as my advisor, and the following four-year study proved that this decision is brilliant. He unconditionally supported me in all aspects: nearly 2,000 emails from him are the evidence. He created a lot of opportunities to me, such as the two-time visit to Microsoft Research Asia for one year and the visiting to Inria for six months. The encouragement from him made me more confident in my research and daily life, and the criticism from him made me become a better man. From my point of view, he is not just an advisor to me, but more like a family.

6. PU Jiansu 2013

I would like to thank my co-advisor Prof. Huamin Qu for his help, encouragement and supporting during my Ph.D study. His help and guidance on my research brought me into the beautiful garden of research.

5. CAO Nan 2012

Nan Cao

Finally and most importantly, I would like to thank my supervisor Prof. Huamin Qu. He is always able to give the strongest support to his students when they are in troubles. Learning in his team not only improves my research capability but also helps me to overcome many of my bad habits. It is a great experience in my life to work with and study from Prof. Qu as he is always able to carefully find, point out, and kindly correct my mistakes. He is just like an impartial mirror, looking at him will always be able to find my own faults and problems.

4. CUI Weiwei 2011

My first thank goes to my supervisor and mentor Huamin Qu. I deeply thank him for his guidance during these five years. It is his support and cultivation that help me gain confidence in my work and make this thesis possible. I most cherish our animated and inspiring discussions, from every long conversation in the office to every little chitchat at the dinning table. I have learnt so much from you, not only about research, but more importantly, about career, life, and everything else. Thanks for putting so much effect in me. Thank you very much.

3. CHAN Ming-Yuen 2009
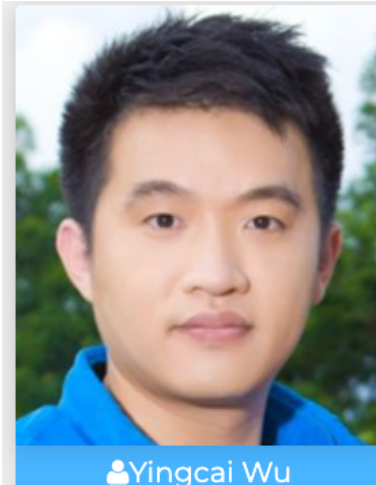

Ming-Yuen Chan

I would like to first express my deepest gratitude to my advisor Dr. Huamin Qu for his guidance and support during my PhD study. His advice was important to the completion of my thesis as well as the interesting research projects and papers.

2. ZHOU Hong 2009

Hong Zhou

First and foremost, I would like to express my deep and sincere gratitude to my supervisor, Prof. Huamin Qu, for all his guidance, support, and encouragement during my PhD study. Without his patient supervision, I would never have completed this thesis. He not only taught me a lot about how to do research but also how to develop good working habits from which I will benefit all my life.

1. WU Yingcai 2009

Above all, I would like to express my sincere gratitude to my supervisor, Dr. Huamin Qu, for the constant encouragement, the trenchant critiques, the remarkable patience, and the generous support at all times. During my PhD thesis work, he has given me valuable suggestions that are helpful for not only my future research career, but also my personal development. Among many things he taught me, three of them are particularly precious and deserve a mention here: (1) the effective time management, (2) the useful research skills such as the Blitzkrieg method, the backward induction method, and the special case method, (3) and the important cultivation of intellectual curiosity, professional pride, and ambition for academic success. This thesis would not have been possible without his help.