Professor WONG, HON CHENG

School of Computer Science and Engneering, Faculty of Innovation Engineering
Macau University of Science and Technology

Office：Room A316
Tel.：+853-8897 2052
E-mail：hcwong@must.edu.mo

Academic Qualification

Ph.D. in Computer Technology and Application, Macau University of Science and Technology (MUST), Macao, China, 2005

Teaching Area

Undergraduate Courses:
CS220/SE220 Design and Analysis of Algorithms
CS440/SE440 Computer Graphics
Graduate Course:
MIIZ43 Analysis and Design of Algorithms

Research Area

Computer Vision, Computer Graphics, and Image Processing

Working Experience

Jul. 2016 to present: Full Professor, Faculfy of Information Technology, MUST
Jul. 2017 to Jun. 2019: Assistant Dean, Faculfy of Information Technology, MUST
Jul. 2009 to Jun. 2016: Associate Professor, Faculfy of Information Technology, MUST
Jul. 2013 to Dec. 2014: Assistant Director, Space Science Institute, MUST
Jan. 2009 to Jun. 2013: Program Coordinator, Faculty of Information Technology, MUST
Aug. 2010: Visiting Scholar, Solar-Terrestrial Environment Laboratory, Nagoya University, Japan
Oct. 2005 to Jun. 2009: Assistant Professor, Faculty of Information Technology, MUST
Sep. 2001 to Sep. 2005: Teaching Assistant, Faculty of Information Technology, MUST

Academic Publications (Since 2009)

1. W. Wang and H.-C. Wong. “Multi-level difference repair architecture for face
2. Y. Shang and H.-C. Wong. “Automatic portrait image pixelization”. Computers & Graphics, vol. 95, pp. 47-59, 2021.
3. G. Zhang, H.-C. Wong, and S.-L. Lo. “Multi-attention network for unsupervised video object segmentation”. IEEE Signal Processing Letters, vol. 28, 71-75, 2021.
4. W. Wang, H.-C. Wong, S.-L. Lo, and G. Zhang. “Uncouple generative adversarial
5. J. Li, H.-C. Wong, S. He, S.-L. Lo, G. Zhang, and W. Wang. “Deep pixel-level
6. Y. Xin, H.-C. Wong, S.-L. Lo, and J. Li. “Progressive full data convolutional neural
7. J. Li, S. He, H.-C. Wong, and S.-L. Lo. “Proposal-driven segmentation for videos”.
8. J. Li, H.-C. Wong, S.-L. Lo, and Y. Xin. “Multiple object detection by a deformable part-
9. X. Xu, V. Angelopoulos, Y. Wang, P. Zuo, H.-C. Wong, and J. Cui. “The energetic particle environment of the lunar nearside: SEP influence”. The Astrophysical Journal, vol. 849, no. 2, Article 151, 2017.
10. X. Xu, H.-C. Wong, Y. Ma, Y. Wang, P. Zuo, M. Zhou, Y. Peng, and X. Deng. “Anomalously high rate refilling in the near lunar wake caused by the Earth's bow shock”. Journal of Geophysical Research: Space Physics, vol. 122, no. 9, pp. 9102-9114, 2017.

11. Y. Xin and H.-C. Wong. “Intuitive volume rendeirng on mobile devices”. In Proceedings of 9th International Congress on Image and Signal Processing, BioMedical Engineering and Informatics, pp. 696-701, 2016.
12. X. Xu, H.-C. Wong, Y. Ma, Y. Wang, P. Zuo, M. Zhou, and X. Deng. “Observations of current sheets associated with solar wind reconnection exhausts passing through the near lunar wake”. Journal of Geophysical Research: Space Physics, vol. 120, no. 11, pp. 1-10, 2015.
13. X. Xu, H.-C. Wong, Y. Ma, Y. Wang, M. Zhou, P. Zuo, F. Wei, X. Feng, and X. Deng. “Evidence for newly initiated reconnection in the solar wind at 1 AU”. The Astrophysical Journal, vol. 809, no. 1, Article 5, 2015.
14. Y. Ma, H.-C. Wong, and X. Xu. “Subsonic and sunward-orientated lunar wake observed by ARTEMIS in the geomagnetotail”. Astrophysics and Space Science, vol. 358, no. 34, Article 11, 2015.
15. X. Xu, Y. Wang, F. Wei, X. Feng, X. Deng, Y. Ma, M. Zhou, Y. Pang, and H.-C. Wong. “Direct evidence for kinetic effects associated with solar wind reconnection”. Scientific Reports, vol. 5, Article 8080, 2015.
16. U.-H. Wong, T. Aoki, and H.-C. Wong. “Real-time volume visualization for large-scale grid-based fluid simulations on distributed multi-GPU systems”. In Mathematical Progress in Expressive Image Synthesis II, edited by H. Ochiai, K. Anjyo, Springer, pp. 139-152, 2015.
17. U.-H. Wong, T. Aoki, and H.-C. Wong. “Efficient magnetohydrodynamic simulations on distributed multi-GPU systems using a novel GPU Direct-MPI hybrid approach”. Computer Physics Communications, vol. 185, no. 7, pp. 1901-1913, 2014.
18. U.-H. Wong, H.-C. Wong, and Y. Ma. “Global magnetohydrodynamic simulations on multiple graphics processing units”. Computer Physics Communications, vol. 185, no. 1, pp. 144-152, 2014.
19. U.-H. Wong, Y. Wu, H.-C. Wong, Y. Liang, and Z. Tang. “Modeling the reflectance of the lunar regolith by a new method combining Monte Carlo ray tracing and Hapke's model with application to Chang'E-1 IIM data”. The Scientific World Journal, vol. 2014, Article ID 457138, 2014.
20. Y. Xin, H.-C. Wong, and U.-H. Wong. “Transfer function for direct volume rendering in the fashion of WYSIWYD (What You See Is What You Design”. International Journal of Advancements in Computing Technology, vol. 5, no. 15, pp. 84-95, 2013.
21. H.-C. Wong, U.-H. Wong, X. Feng, and Z. Tang. “Efficient magnetohydrodynamic
22. S. He, H.-C. Wong, W.-M. Pang, and U.-H. Wong. “Real-time smoke simulation with
23. S. He, H.-C. Wong, and U.-H. Wong. “An efficient adaptive vortex particle method for
24. J. Xiong, H.-C. Wong, U.-H. Wong, X. Wang, and H. Reme. “An intuitive software
25. K.-W. Ng, H.-C. Wong, U.-H. Wong, and W.-M. Pang. “Probe-volume: an exploratory
26. W.-M. Pang and H.-C. Wong. “Compression of Pre-Computed Per-Pixel Texture
27. H.-C. Wong, U.-H. Wong, and Z. Tang. “Direct volume rendering by morphing the
28. U.-H. Wong, H.-C. Wong, and Z. Tang. “A parallel implementation of a smoothed

Award

2012 Macao Science and Technology Award (Natural Science), Third Class, awarded by the Government of the Macau Special Administrative Region of the People’s Republic of China (Co-awarded)

Student Award

Shengfeng He, MSc student (2009-2011), Postgraduate Award of the 2012 Macao Science and Technology Award

Professional Qualification

Selected into the Expert Database of the National Science and Technology Program of the Ministry of Science and Technology of the People's Republic of China, 2012
Certificate in Teaching and Learning in Higher Education, MUST, 2013
Member of Institute of Electrical and Electronic Engineering (IEEE)