

Professor Xiao Hua Wang

Expertise

- Physical oceanography in bays and estuaries.
- Numerical modelling in shallow seas.
- Bottom boundary layer and sediment transport dynamics.
- Coastal Integrated Management Systems.

Field of Research (FoR)

- Physical Oceanography
- Economic Development Policy
- Environmental Management
- Ecological Impacts of Climate Change
- Natural Resource Management
- Environmental Impact Assessment
- Climate Change Processes

Biography

Professor Xiao (Hua) Wang graduated from Ocean University of China, and holds a PhD in Physical Oceanography from James Cook University in Australia. He is the Founding Director of the Sino-Australian Research Centre for Coastal Management (SARCCM), University of New South Wales, Australia, and an Associate Editor for Estuarine, Coastal and Shelf Science (IF 2.32) and Limnology and Oceanography: Methods (IF 1.992), respectively. He has over 25 years experience in both undergraduate and postgraduate teaching. His research concerns the modelling of ocean circulation, sediment transport dynamics, and understanding coastal management issues. He has over 90 publications including peer-reviewed journal papers, book chapters, international conference abstracts, and government/technical reports. His work has been funded by a variety sources including the Australia Research Council, the EU Framework, and the US Office of Naval Research.

Prof. Wang is the Coordinator for China Scholarship Council (CSC) Scholarship program at UNSW Canberra. He initiated and subsequently managed the MOU for academic exchange and research collaboration between UNSW and OUC since 2008. This agreement has resulted in a total of 45 OUC HDRs enrolled at UNSW (including 22 completions) and numerous academics visits between two institutions.

Prof. Wang has been involved in several international collaborative projects with both European and US scientists. He was a Visiting Scientist at Princeton University USA in 1995; a Visiting Scientist in the Institute of Atmospheric and Oceanic Sciences-CNR, Italy in 1999; a Visiting Professor at the University of Bologna Italy in 2001; and a guest investigator in Woods Hole Oceanographic Institution in 2005. From 1999-2004, he has spent approximately one month per year in Bologna, Italy to conduct his study of the Adriatic Sea. Since 2005, he has spent one month per year in China to study the sediment dynamics in the Yellow and East China Seas.

Select Publications

Book Chapters

Qiao L; Liang S; Song D; Wu W; Wang XH, 2019, 'Jiaozhou Bay', in Wang X (ed.), Elsevier, London, UK, pp. 5 - 23, <http://dx.doi.org/10.1016/B978-0-12-811977-8.00002-9>

Li L; Ye T; Wang XH; He Z; Shao M, 2018, 'Changes in the Hydrodynamics of Hangzhou Bay Due to Land Reclamation in the Past 60 Years', in Elsevier Academic Press, London, UK, pp. 77 - 93, <http://dx.doi.org/10.1016/B978-0-12-811977-8.00005-4>

Wang XH; Jalon Rojas I, 2018, 'Remarks', in Wang XH (ed.), Elsevier Academic Press

Jalon Rojas I; Wang XH, 2018, 'Introduction', in Wang XH (ed.), Academic Press

Andutta F; Wang XH; Li L; Williams D, 2013, 'Hydrodynamics and sediment transport in a macro-tidal estuary: Darwin Harbour', in Wolanski E (ed.), *Estuaries of Australia in 2050 and beyond*, edn. 2013, Springer, Dordrecht, pp. 111 - 129, http://link.springer.com/chapter/10.1007/978-94-007-7019-5_7

Wang XH; Andutta F, 2013, 'Sediment Transport Dynamics in Ports, Estuaries and Other Coastal Environments', in Manning A (ed.), *SEDIMENT TRANSPORT PROCESSES AND THEIR MODELLING APPLICATIONS*, edn. 1st, INTECH, Janeza Trdine 9, 51000 Rijeka, Croatia, pp. 3 - 35, <http://dx.doi.org/10.5772/51022>

Zhao L; Wang XH, 2007, 'The Enlightenment on Our Marine Disaster and Income from Australian Marine Parks Zone Plan', in Zhao L; Wang XD (ed.), *Economics Study on Marine Disaster and Marine Income*, edn. 1, Economic Science Press, Beijing, China, pp. 276 - 303

Journal articles

Zhang Z; Ma Y; Xu N; Li S; Sun J; Wang XH, 2019, 'Theoretical background noise rate over water surface for a photon-counting lidar and its application in land and sea cover

classification', *Optics Express*, vol. 27, pp. A1490 - A1505, <http://dx.doi.org/10.1364/OE.27.0A1490>

Li L; Ye T; Wang XH; Xia Y, 2019, 'Tracking the multidecadal variability of the surface turbidity maximum zone in Hangzhou Bay, China', *International Journal of Remote Sensing*, vol. 40, pp. 9519 - 9540, <http://dx.doi.org/10.1080/01431161.2019.1633701>

Cheng Z; Wang XH; Jalón-Rojas I; Liu Y, 2019, 'Reconstruction of sedimentation changes under anthropogenic influence in a medium-scale estuary based on a decadal chronological framework', *Estuarine, Coastal and Shelf Science*, vol. 227, <http://dx.doi.org/10.1016/j.ecss.2019.106295>

Jalon-Rojas I; Wang XH; Fredj E, 2019, 'Technical note: On the importance of a three-dimensional approach for modelling the transport of neustic microplastics', *Ocean Science*, vol. 15, pp. 717 - 724, <http://dx.doi.org/10.5194/os-15-717-2019>

Ma Y; Xu N; Sun J; Wang XH; Yang F; Li S, 2019, 'Estimating water levels and volumes of lakes dated back to the 1980s using Landsat imagery and photon-counting lidar datasets', *Remote Sensing of Environment*, vol. 232, <http://dx.doi.org/10.1016/j.rse.2019.111287>

Xiao Y; Wang XH; Ritchie EA; Rizwi F; Qiao L, 2019, 'The development and evolution of the Burdekin River estuary freshwater plume during Cyclone Debbie (2017)', *Estuarine, Coastal and Shelf Science*, vol. 224, pp. 187 - 196, <http://dx.doi.org/10.1016/j.ecss.2019.04.037>

Andutta FP; Patterson RG; Wang XH, 2019, 'Monsoon driven waves superpose the effect from macro-tidal currents on sediment resuspension and distribution', *Estuarine, Coastal and Shelf Science*, vol. 223, pp. 85 - 93, <http://dx.doi.org/10.1016/j.ecss.2019.04.036>

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Huang Z; Wang XH, 2019, 'Mapping the spatial and temporal variability of the upwelling systems of the Australian south-eastern coast using 14-year of MODIS data', *Remote Sensing of Environment*, vol. 227, pp. 90 - 109, <http://dx.doi.org/10.1016/j.rse.2019.04.002>

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Yuan Y; Jalón-Rojas I; Wang XH; Song D, 2019, 'Design, construction, and application of a regional ocean database: A case study in Jiaozhou Bay, China', *Limnology and Oceanography: Methods*, vol. 17, pp. 210 - 222, <http://dx.doi.org/10.1002/lom3.10304>

Xiao Z; Wang XH; Roughan M; Harrison D, 2019, 'Numerical modelling of the Sydney Harbour Estuary, New South Wales: Lateral circulation and asymmetric vertical mixing', *Estuarine, Coastal and Shelf Science*, vol. 217, pp. 132 - 147, <http://dx.doi.org/10.1016/j.ecss.2018.11.004>

2018, 'Introduction to the national blue bay remediation action plan in China', *Australian Journal of Maritime and Ocean Affairs*, vol. 10, pp. 256 - 262, <http://dx.doi.org/10.1080/18366503.2018.1534522>

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Yang G; Wang XH; Ritchie EA; Qiao L; Li G; Cheng Z, 2018, 'Using 250-M surface reflectance MODIS Aqua/Terra product to estimate turbidity in a macro-tidal harbour: Darwin Harbour, Australia', *Remote Sensing*, vol. 10, <http://dx.doi.org/10.3390/rs10070997>

Gu C; Li H; Xu F; Cheng P; Wang XH; Xu S; Peng Y, 2018, 'Numerical study of Jiulongjiang river plume in the wet season 2015', *Regional Studies in Marine Science*, vol. 24, pp. 82 - 96, <http://dx.doi.org/10.1016/j.rsma.2018.07.004>

Gao GD; Wang XH; Song D; Bao X; Yin BS; Yang DZ; Ding Y; Li H; Hou F; Ren Z, 2018, 'Effects of wave-current interactions on suspended-sediment dynamics during strong wave events in Jiaozhou Bay, Qingdao, China', *Journal of Physical Oceanography*, vol. 48, pp. 1053 - 1078, <http://dx.doi.org/10.1175/JPO-D-17-0259.1>

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Li L; Guan W; Hu J; Cheng P; Wang XH, 2018, 'Responses of water environment to tidal flat reduction in Xiangshan Bay: Part I hydrodynamics', *Estuarine, Coastal and Shelf Science*, vol. 206, pp. 14 - 26, <http://dx.doi.org/10.1016/j.ecss.2017.11.003>

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Gao GD; Wang XH; Bao XW; Song D; Lin XP; Qiao LL, 2017, 'The impacts of land reclamation on suspended-sediment dynamics in Jiaozhou Bay, Qingdao, China', *Estuarine, Coastal and Shelf Science*, vol. 206, pp. 61 - 75, <http://dx.doi.org/10.1016/j.ecss.2017.01.012>

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Journal articles

Wang XH; Cho YK; Guo X; Wu CR; Zhou J, 2015, 'The status of coastal oceanography in heavily impacted Yellow and East China Sea: Past trends, progress, and possible futures', *Estuarine, Coastal and Shelf Science*, vol. 163, pp. 235 - 243, <http://dx.doi.org/10.1016/j.ecss.2015.05.039>

Zhang F; Wang XH; Nunes PALD; Ma C, 2015, 'The recreational value of gold coast beaches, Australia: An application of the travel cost method', *Ecosystem Services*, vol. 11, pp. 106 - 114, <http://dx.doi.org/10.1016/j.ecoser.2014.09.001>

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