Professor, Dr. Shen Fang

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Background

Shen Fang is a Professor in State Key Laboratory of Estuarine and Coastal Research (SKLEC), East China Normal University (ECNU). She is a Director of Centre for Remote Sensing and Geoinformatics in SKLEC. She received BS from China University of Mining and Technology in 1986 and PhD from Chengdu University of Technology in 2000. She was a postdoctoral researcher of Shanghai Institute of Technical Physics, Chinese Academy of Science from 2000 to 2002. She was a visiting scholar of Water Resources and Management Department, International Institute for Geo-Information Science and Earth Observation (ITC), the Netherlands from 2006 to 2007 and a visiting scientist of Marine Optics and Remote Sensing group of Laboratoire d'Océanographie de Villefranche (LOV), France in 2011. Her recent interests of research focus on ocean-colour remote sensing in coastal waters or highly turbid coastal waters, ocean optics in estuarine and coastal waters, and bio-optical measurements and modelling. She was PI and Participant of more than 30 research projects and published more than 40 peers-reviewed papers in Journals.

Activities in education

- Annual courses and lectures in Remote Sensing Principle, Remote Sensing of Estuaries and Coasts to Master and PhD students in SKLEC, ECNU.
- Supervisor of MS and PhD students (6 graduated, 7 ongoing) in Remote Sensing of Ocean Colour
- Invited guest lecturer, ESA-China Dragon 2 Programme Advanced Training Course in Ocean Remote Sensing, 24-29 Oct. 2011

Recent projects

- 2013-2016, National Science Foundation of China (NSFC) project "Optical mechanism and algorithms of remote estimation of chlorophyll-a concentration in turbid sediment-rich coastal waters", PI
- 2013-2015, National Research Foundation for the Doctoral Program of Higher Education of China project "Remote sensing of turbid coastal water color parameters based on radiative transfer models", PI
- 2012-2016, Ministry of Science and Technology (MOST) - European Space Agency (ESA) joint Dragon-3 programme "Variations of Estuarine Turbid Plumes and Mudflats in Response to Human Activities and Climate Change", Id. 10555, PI.
- 2009-2011, NSFC Project "Inherent optical properties of suspended particles and remote sensing forward/inversed process and mechanism for case 2 waters in dynamical estuary", PI.
- 2008-2012, MOST-ESA Dragon-2 Programme "Estuarine, Inland and Coastal Water Quality Monitoring using Earth Observation Data" ID: 5351, Co-PI.
- 2007-2009, ESA Category-1 Project "Coastal water quality monitoring and evaluating with MERIS satellite data in Yangtze River estuary and nearby coastal area (CIP.4359)", PI.

Selected Publications

Fang Shen, Yunxuan Zhou and Guanlin Hong. Absorption property of non-algal particles and contribution to total light absorption in optically complex waters, a case study in Yangtze Estuary and adjacent coast. *Adv. Comp. Envir. Sci*. 142: 61-66 (2012).

Fang Shen and Wouter Verhoef. (2010). Suppression of local haze variations in MERIS images over turbid coastal waters for retrieval of suspended sediment concentration. *Optics Express*, 18(12), 12653-12662, doi:10.1364/OE.18.012653

Fang Shen, Wouter Verhoef, Yunxuan Zhou, Mhd. Suhyb Salama, Xiaoli Liu. Satellite estimates of wide-range suspended sediment concentrations in Changjiang (Yangtze) estuary using MERIS data. *Estuaries and Coasts*. 2010, Vol.33, No.6, 1420-1429.

Fang Shen, Yun-Xuan Zhou, Dao-Ji Li, Wei-Jian Zhu and Mhd. Suhyb Salama, MERIS estimation of chlorophyll-a concentration in the turbid sediment-laden waters of the Changjiang (Yangtze) Estuary. *Int. J. of Remote Sensing*. 2010, Vol. 31, No. 17, 4635–4650.

Fang Shen, Mhd. Suhyb Salama, Yunxuan Zhou, Jiufa Li, Zhongbo(Bob) Su and Dingbo Kuang. Remote-sensing reflectance characteristics of highly turbid estuarine waters – a comparative experiment of the Yangtze River and the Yellow River. *Int. J. of Remote Sensing*. 2010, 31(10):2639–2654.

Fang Shen, Yun-Xuan Zhou, Jiu-Fa Li, Xiao-Li Liu. Theoretical analysis and

	experimental observation for the effect of suspended sediment particle size on remote-sensing reflectance. *Journal of Infrared and Millimeter Waves*. 2009, 28(3): 168-172. M. Suhyb Salama and **Fang Shen**. Simultaneous atmospheric correction and quantification of suspended particulate matters from orbital and geostationary earth observation sensors. *Estuarine, Coastal and Shelf Science*. 2010, 86: 499-511. Salama MS and **Shen F**. Stochastic inversion of ocean color data using the cross-entropy method. *Optics Express*, 18(2):479-499. doi:10.1364/OE.18.000479, 2010