

## Curriculum Vitae

### **Chuanmin Hu**

#### ***Address***

College of Marine Science (CMS), University of South Florida (USF)  
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#### ***Education***

Ph.D. in Physics, 1997, University of Miami, Miami, Florida, Advisers: Kenneth J. Voss and Howard R. Gordon. Thesis title: *In situ measurement of inelastic light scattering in natural waters*, 176 pp.  
M.S. in Physics, 1992, Institute of Physics, Academia Sinica, Beijing, China  
B.S. in Physics, 1989, University of Sci. and Tech. of China, Hefei, China

#### ***Positions***

2009 – Associate Professor, USF/CMS, Optical Oceanography Laboratory  
2001 – 2009, Assistant Research Professor, Associate Research Professor, USF/CMS  
1998 – 2000, Post-doctorate Research Associate, USF/CMS  
1993 – 1997, Research Assistant, University of Miami, Physics Department

#### ***Working Experience***

1998 – present. Optical remote sensing of the ocean: from theory, instrumentation, algorithm development, to applications. Work mainly focused on coastal ocean color remote sensing from a variety of platforms, including ship-borne, airborne, and satellite sensors. Major topics include harmful algal blooms (HABs) and coastal and inland water quality.  
1993 – 1997. Underwater light measurement and Monte-Carlo simulations. Development of a fiber-optic instrument system to measure inelastic scattering (Raman scattering, chlorophyll and CDOM fluorescence) in natural waters under solar illumination. For the first time, Raman scattering of water molecules is measured in a natural environment in a passive way.

#### ***Graduate Education and Mentoring***

Graduate courses: Practical IDL Programming, Optical Oceanography, Environmental Optics and Remote Sensing, Marine Resource Remote Sensing, Directed Research, Independent Study

Postdocs: Jun Zhao, Chengfeng Le

Students: Brian Barnes, Robert Hardy, Ryan Lloyd, Daniel Sensi, Kun Yu, Lian Feng

Ph.D. dissertation committee member: Inia Soto, Carrie Wall, Brian Zielinski, Sennai Habtes, Kara Radabaugh, Marina Marrari (graduated), Zhiqiang Chen (graduated), Bisman Nababan (graduated)

MS thesis committee member: Ana Odriozola (graduated), Haiying Zhang (graduated)

#### ***Professional Activities***

2008 – , Topical Editor (ocean optics and remote sensing), *Applied Optics*

Member of AGU, ASLO, and APS

Visiting professorship at Wuhan University and Ocean University of China

Reviewer of professional journals: *Remote Sensing of Environment*, *Applied Optics*, *International Journal of Remote Sensing*, *Limnology & Oceanography*, *Marine Chemistry*, *Journal of Geophysical Research*, *Geophysical Research Letters*, *Oceanography*, *Progress in Oceanography*, *Journal of Oceanography*, *Chinese Science Bulletin*, *IEEE Geosci. & Remote Sens.*, *Journal of Applied Remote Sensing*, *Journal of Phycology*, *Continental Shelf Research*, etc.

Reviewer and panelist of NASA, NOAA, and NSF proposals

Convener of international conference sessions

Member, Products and Service Committee, GCOOS

Member, Data Management Committee, SECOORA

Member, NASA GEO-CAPE mission science definition team

Member, Water Quality and Harmful Algal Blooms Teams, Gulf of Mexico Alliance, 2010 –

Member, Program Committee, Asia-Pacific Remote Sensing Symposium, fall 2012

Member, Program Committee, Second International Conference on Global Change and the Environment in Asia and Pacific (GCEAP, 28-29 Oct 2010)

Member, Advisory Committee of NASA/GSFC Ocean Ecology Lab

Member, USF Honors and Awards Committee, 2011 –

Member, USF Research Misconduct Committee, 2011 –

Member, USF/CMS Faculty Evaluation Committee, spring 2011

Chair, USF/CMS Advisory Committee for Center of Ocean Technology (COT), 2011 –

Chair, USF/CMS Curriculum Committee, 2011 –

### **Research Interests**

Ocean color remote sensing algorithms and novel products

River plumes, land-ocean interactions, ecosystem connectivity

Harmful algal blooms and dark water events

Coastal and inland water quality

Coastal ocean observing systems

### **Collaborators (with whom C. Hu has joint publications or projects during the past 5 years)**

Kendall Carder, Frank Muller-Karger, Pamela Muller, John Walsh, Robert Weisberg, Mark Luther, Paula Coble, Kendra Daly, David Mann, Gabe Vargo, USF/CMS

Larry Hall, Dmitry Goldgof, Dept. Computer Science and Engineering, USF/Tampa

Karen Steidinger, David Palandro, Paul Carlson, FWRI/FWC

Peter Swarzenski, John Brock, David Zawada, USGS, St. Petersburg, FL

Zhongping Lee, University of Massachusetts at Boston

Brian Lapointe, HBOI/Florida Atlantic University

Doug Biggs, Thomas Linton, Texas A&M University

James Hendee, Libby Johns, Peter Ortner, Xiaofeng Li, William Pichel, NOAA

Changsheng Chen, University of Massachusetts at Dartmouth

Robert Arnone, Naval Research Lab  
 Thomas Rossby, University of Rhode Island  
 Nan Walker and Eurico D'Sa, Louisiana State Univ  
 Jinyu Sheng, Department of Oceanography, Dalhousie University, Canada  
 Serge Andrefouet, Institut de Recherche pour le Développement (I.R.D.), New Caledonia.  
 Shaoling Shang and Huasheng Hong, Xiamen University, China  
 Ming-Xia He, Ocean University of China, Qingdao, China  
 Ronghua Ma and Hongtao Duan, Institute of Geography and Limnology, Academia Sinica  
 Xiaoling Chen, Wuhan University, China  
 I-I Lin, National Taiwan University  
 Peter Mumby, University of Queensland, Australia  
 Johnny Johannessen, Nansen Environmental and Remote Sensing Center, Norway  
 Bertrand Chapron, IFREMER, France  
 Rolf Riethmüller, Institute of Coastal Research, Germany

### ***Invited Talks***

February 16, 2012. Invited presentation for Sarasota Power & Sail Squadron, Sarasota, Florida: "Monitoring the coastal ocean using optical remote sensing."  
 March 8, 2011. Invited seminar at TAMU Galveston: "Satellite remote sensing of coastal environments: New applications using old concepts"  
 May 16-17, 2011, SECOORA annual meeting, Jacksonville, Florida, Invited talk: "SECOORA satellite remote sensing component"  
 Oct 28 – 29, 2010, Hongkong, China, Second International Conference on Global Change and the Environment in Asia and Pacific (GCEAP, 28-29 Oct 2010). Plenary talk: "A remote sensing view of aquatic hazards in East China and the US Gulf Coast"  
 Sept 27 – Oct 1, 2010, Ocean Optics XX conference, Anchorage, Alaska. Invited talk: "One index, many applications"  
 March 5, 2010, Invited seminar at Dalhousie University, Department of Oceanography, Canada, "Satellite remote sensing of coastal environments: Maximizing the power of MODIS"  
 Feb 4, 2010, Estuarine Nutrient Criteria Workshop, FWCC, St. Petersburg, Florida. Invited talk: "Satellite Chl in Near-shore Waters of the West Florida: Influence of River Discharge"  
 Dec 18-19, 2009, The 9<sup>th</sup> National Symposium on Ocean Color Remote Sensing of Case-II Waters, Nanchang, China, invited presentation: "Assessment of blue-green algae blooms in two freshwater lakes of China using MODIS"  
 Dec 8-10, 2009, NASA Applied Sciences Gulf Workshop, New Orleans, Louisiana, Invited presentation: "An overview of NASA ocean color data products"  
 Sept 22-24, 2009, NASA GEO-CAPE working group meeting, Columbia, Maryland, Invited presentation: "GEO-CAPE requirements on measurement sensitivity, saturation, and solar angles"

May 6-8, 2009, Ocean color research team meeting, Westin New York at Times Square Hotel, New York, invited presentation: “Coastal ocean color from space: where are we and what’s next”

### **Projects and Grants**

Funding of > 10 projects from NASA, NOAA, EPA, and USGS exceeded 4 million US\$ in the past 5 years.

### **10 Selected Publications (complete list available in the appendix)**

- Hu, C., Z. Lee, and B. Franz (2012). Chlorophyll a algorithms for oligotrophic oceans: A novel approach based on three-band reflectance difference. *J. Geophys. Res.*, 117, C01011, doi:10.1029/2011JC007395.
- Hu, C., R. H. Weisberg, Y. Liu, L. Zheng, K. Daly, D. English, J. Zhao, and G. Vargo (2011). Did the northeastern Gulf of Mexico become greener after the Deepwater Horizon oil spill? *Geophys. Res. Lett.* 38, L09601, doi:10.1029/2011GL047184.
- Hu, C., D. Li, C. Chen, J. Ge, F. E. Muller-Karger, J. Liu, F. Yu, and M-X He (2010). On the recurrent *Ulva prolifera* blooms in the Yellow Sea and East China Sea. *J. Geophys. Res.* 115, C05017, doi:10.1029/2009JC005561.
- Hu, C. (2009). A novel ocean color index to detect floating algae in the global oceans. *Remote Sens. Environ.* 113 :2118-2129.
- Hu, C., F. E. Muller-Karger, and P. W. Swarzenski (2006). Hurricanes, submarine groundwater discharge, and Florida’s red tides. *Geophys. Res. Lett.* Vol. 33, L11601, doi:10.1029/2005GL025449.
- Hu, C., F. E. Muller-Karger, C. Taylor, K. L. Carder, C. Kelble, E. Johns, and C. Heil (2005). Red tide detection and tracing using MODIS fluorescence data: A regional example in SW Florida coastal waters. *Remote Sens. Environ.*, 97:311-321.
- Hu, C., Z. Chen, T. D. Clayton, P. Swarzenski, J. C. Brock, and F. E. Muller-Karger (2004). Assessment of estuarine water-quality indicators using MODIS medium-resolution bands: Initial results from Tampa Bay, Florida. *Remote Sens. Environ.* 93:423-441.
- Hu, C., E. Montgomery, R. Schmitt, and F. E. Muller-Karger (2004). The Amazon and Orinoco River plumes in the tropical Atlantic: Observation from space and S-Floats. *Deep Sea Res-II*. 51:1151-1171.
- Hu, C., K. E. Hackett, M. K. Callahan, S. Andréfouët, J. L. Wheaton, J. W. Porter, F. E. Muller-Karger (2003). The 2002 ocean color anomaly in the Florida Bight : a cause of local coral reef decline? *Geophys. Res. Lett.* 30(3), 1151, doi:10.1029/2002GL016479.
- Hu, C., Muller-Karger, F. E., Andrefouet, S., and Carder, K. L., (2001), Atmospheric correction and calibration of LANDSAT-7/ETM+ imagery over aquatic environments: a multi-platform approach using SeaWiFS/MODIS, *Remote Sens. Environ.* 78:99-107.

## Appendix 1. Publications

### Referred Journal Publications (underlined names are students)

- 2012     **Hu, C.**, Z. Lee, and B. Franz (2012). Chlorophyll a algorithms for oligotrophic oceans: A novel approach based on three-band reflectance difference. *J. Geophys. Res.*, 117, C01011, doi:10.1029/2011JC007395.
- 2011     Feng, L., **C. Hu**, X. Chen, & R. Li (2011). Satellite observations make it possible to estimate Poyang Lake's water budget. *Environ. Res. Lett.*, 6, 044023
- 2011     Rossby, T., C. Flagg, P. Ortner, and **C. Hu** (2011). A tale of two eddies: Diagnosing coherent eddies through acoustic remote sensing. *J. Geophys. Res.* 116, C12017, DOI: 10.1029/2011JC007307.
- 2011     Dash, P., N. D. Walker, D. R. Mishra, **C. Hu**, J. L. Pinckney, and E. J. D'Sa (2011). Estimation of cyanobacterial pigments in a freshwater lake using OCM satellite data. *Remote Sens. Environ.* 115:3409-3423.
- 2011     Soto, I. M., F. E. Muller-Karger, P. Hallock, and **C. Hu** (2011). Sea Surface Temperature Variability in the Florida Keys and Its Relationship to Coral Cover. *J. Mar. Biology.*, Volume 2011 (2011), Article ID 981723, 10 pages, doi:10.1155/2011/981723.
- 2011     Yu, K., **C. Hu**, F. E. Muller-Karger, D. Lu, and I. Soto (2011). Shoreline changes in west-central Florida between 1987 and 2008 from Landsat observations, *Int. J. Remote Sens.*, 32(23):8299-8313.
- 2011     Barnes, B., **C. Hu**, and F. E. Muller-Karger (2011). An Improved High-Resolution SST Climatology to Assess Cold Water Events off Florida. *IEEE Geosci. Remote Sens. Lett.*, 8:769-773.
- 2011     Nababan, B., F. E. Muller-Karger, **C. Hu**, and D. C. Biggs (2011). Chlorophyll variability in the northeastern Gulf of Mexico. *Int. J. Remote Sens.* 32(23): 8373-8391.
- 2011     Feng, L., **C. Hu**, X. Chen, R. Li, L. Tian, and B. Murch (2011). MODIS observations of the bottom topography and its inter-annual variability of Poyang Lake. *Remote Sens. Environ.* 115:2729-2741.
- 2011     **Hu, C.**, R. H. Weisberg, Y. Liu, L. Zheng, K. Daly, D. English, J. Zhao, and G. Vargo (2011). Did the northeastern Gulf of Mexico become greener after the Deepwater Horizon oil spill? *Geophys. Res. Lett.* 38, L09601, doi:10.1029/2011GL047184.
- 2011     Lorenzoni, L., **C. Hu**, R. Varela, G. Arias, L. Guzman, and F. E. Muller-Karger (2011). Bio-optical characteristics of Cariaco Basin (Caribbean Sea) waters. *Cont. Shelf Res.* 31:582-593.
- 2011     Lin, I-I., **C. Hu**, Y-H. Li, T-Y. Ho, T. Fischer, G. T. F. Wong, J. Wu, C-W. Huang, D. A. Chu, D-S. Ko, and J-P. Chen (2011). Fertilization potential of volcanic dust in the low - nutrient low - chlorophyll western North 35 Pacific

- subtropical gyre: Satellite evidence and laboratory study. *Global Biogeochem. Cycles*, 25, GB1006, doi:10.1029/2009GB003758.
- 2011 Zhang, C., H. Hong, **C. Hu**, and S. Shang (2011). Evolution of a coastal upwelling event during summer 2004 in the southern Taiwan Strait. *Acta Oceanol. Sinica*, 30:1-6.
- 2011 Liu, Y, R. H. Weisberg, **C. Hu**, and L. Zheng (2011). Tracking the Deepwater Horizon oil spill: A modelling perspective. *EOS. AGU Trans.* 92(6):45-46.
- 2011 **Hu, C.** (2011). An empirical approach to derive MODIS ocean color patterns under severe sun glint. *Geophys. Res. Lett.*, 38, L01603, doi:10.1029/2010GL045422.
- 2010 Ma, R., H. Duan, **C. Hu**, X. Feng, A. Li, W. Ju, J. Jiang, and G. Yang (2010). A half-century of changes in China's lakes: Global warming or human influence? *Geophys. Res. Lett.* 37, L24106, doi:10.1029/2010GL045514.
- 2010 Chen, Z., **C. Hu**, F. E. Muller-Karger, and M. Luther (2010). Short-term variability of suspended sediment and phytoplankton in Tampa Bay, Florida: Observations from a coastal oceanographic tower and ocean color satellites. *Estuarine Coastal and Shelf Science*, 89:62-72.
- 2010 Lee, Z., **C. Hu**, B. Casey, S. Shang, H. Dierssen, and R. Arnone (2010). Global shallow-water bathymetry from satellite ocean color data. *Eos. AGU Trans.* 91(46):429-430.
- 2010 Lee, Z., S. Shang, **C. Hu**, M. Lewis, R. Arnone, Y. Li, and B. Lubac (2010), Time series of bio-optical properties in a subtropical gyre: Implications for the evaluation of interannual trends of biogeochemical properties, *J. Geophys. Res.*, 115, C09012, doi:10.1029/2009JC005865.
- 2010 Du, C., S. Shang, Q. Dong, **C. Hu**, and J. Wu (2010). Characteristics of chromophoric dissolved organic matter in the nearshore waters of the western Taiwan Strait. *Estuarine Coastal and Shelf Science*, 88:350-356.
- 2010 **Hu, C.**, J. Cannizzaro, K. L. Carder, F. E. Muller-Karger, and R. Hardy (2010). Remote detection of *Trichodesmium* blooms in optically complex coastal waters: Examples with MODIS full-spectral data. *Remote Sens. Environ.*, 114:2048-2058.
- 2010 **Hu, C.**, D. Li, C. Chen, J. Ge, F. E. Muller-Karger, J. Liu, F. Yu, and M-X He (2010). On the recurrent *Ulva prolifera* blooms in the Yellow Sea and East China Sea. *J. Geophys. Res.* 115, C05017, doi:10.1029/2009JC005561.
- 2010 **Hu, C.**, Z. Lee, R. Ma, K. Yu, D. Li, and S. Shang (2010). MODIS observations of cyanobacteria blooms in Taihu Lake, China. *J. Geophys. Res.* 115, C04002, doi:10.1029/2009JC005511.
- 2010 Lee, Z., R. Arnone, **C. Hu**, P. J. Werdell, and B. Lubac. (2010). Uncertainties of optical parameters and their propagations in an analytical ocean color inversion algorithm. *Appl. Opt.* 49:369-381.

- 2010 Lapointe, B. R., R. Langton, B. J. Bedford, A. C. Potts, O. Day, and **C. Hu** (2010). Land-based nutrient enrichment of the Buccoo Reef Complex and fringing coral reefs of Tobago, West Indies. *Mar. Pollut. Bull.* 60:334-343.
- 2009 Cannizzaro, J. P., **C. Hu**, D. C. English, K. L. Carder, C. A. Heil, and F. E. Muller-Karger (2009). Detection of *Karenia brevis* blooms on the west Florida shelf using in situ backscattering and fluorescence data. *Harmful Algae* 8:898-909.
- 2009 **Hu, C.** (2009). A novel ocean color index to detect floating algae in the global oceans. *Remote Sens. Environ.* 113 :2118 :2129.
- 2009 **Hu, C.**, X. Li, W. G. Pichel, and F. E. Muller-Karger (2009). Detection of natural oil slicks in the NW Gulf of Mexico using MODIS imagery. *Geophys. Res. Lett.* Vol. 36, L01604, doi:10.1029/2008GL036119.
- 2009 **Hu, C.**, F. E. Muller-Karger, B. Murch, D. Myhre, J. Taylor, R. Luerssen, C. Moses, C. Zhang, L. Gramer, and J. Hendee (2009). Building an automated integrated observing system to detect sea surface temperature anomaly events in the Florida Keys. *IEEE Trans. Geosci. Remote Sens.* 47:1607-1620.
- 2009 Soto, I., S. Andrefouet, **C. Hu**, F. E. Muller-Karger, C. C. Wall, J. Sheng, and B. G. Hatcher (2009). Physical connectivity in the Mesoamerican Barrier Reef System inferred from 9 years of ocean color observations. *Coral Reefs*. DOI 10.1007/s00338-009-0465-0.
- 2008 Biggs, D. C., **C. Hu**, and F. E. Muller-Karger. Remotely sensed sea-surface chlorophyll and POC flux at Deep Gulf of Mexico Benthos sampling stations. *Deep-Sea Res. II.* 55:2555-2562.
- 2008 Wall, C., Muller-Karger, F.E., Roffer, M.A., **Hu, C.**, Yao, W. & Luther, M.E. (2008). Satellite remote sensing of surface oceanic fronts in coastal waters off west-central Florida. *Remote Sens. Environ.* 112:2963-2976.
- 2008 **Hu, C.**, and M-X. He (2008). Origin and offshore extent of floating algae in Olympic sailing area. *Eos. AGU Trans.* 89(33):302-303.
- 2008 Palandro, DA, Andréfouët, S, **Hu, C**, Hallock, P, Muller-Karger, FE, Dustan, P, Callahan, MK, Kranenburg, C and. Beaver, CR. (2008). Quantification of two decades of coral reef habitat decline in the Florida Keys National Marine Sanctuary using Landsat data (1984-2002). *Remote Sens. Environ.* 112:3388-3399.
- 2008 Marrari, M., K. L. Daly, and **C. Hu** (2008). Spatial and temporal variability of SeaWiFS chlorophyll a distributions west of the Antarctic Peninsula: Implications for Krill production. *Deep-Sea Res. II.* 55:377-392.
- 2008 **Hu, C.** (2008). Ocean color reveals sand ridge morphology on the west Florida shelf. *IEEE Geoscience and Remote Sens. Lett.* 5:443-447.
- 2008 Shang, S., L. Li, F. Sun, J. Wu, **C. Hu**, D. Chen, X. Ning, Y. Qiu, C. Zhang, and S. Shang (2008), Changes of temperature and bio-optical properties in the South China Sea in response to Typhoon Lingling, 2001, *Geophys. Res. Lett.*, 35, L10602, doi:10.1029/2008GL033502.

- 2008 **Hu, C.**, R. Luerssen, F. E. Muller-Karger, K. L. Carder, and C. A. Heil (2008). On the remote monitoring of *Karenia brevis* blooms of the west Florida shelf. *Cont. Shelf. Res.* 28:159-176.
- 2007 Sheng, J., L. Wang, S. Andrefouet, **C. Hu**, B. Hatcher, F. E. Muller-Karger, B. Kjerfve, W. D. Heyman, and B. Yang. Upper ocean response of the Meso-American Barrier Reef System to Hurricane Mitch and coastal freshwater inputs: A study using SeaWiFS data and a nested-grid ocean circulation model. *J. Geophys. Res.* Vol. 112, C07016, doi:10.1029/2006JC003900.
- 2007 Zawada, D. G., **C. Hu**, T. Clayton, Z. Chen, J. C. Brock, and F. E. Muller-Karger (2007). Remote sensing of particle backscattering in Chesapeake Bay: A 6-year SeaWiFS retrospective view. *Estuarine, Coastal, and Shelf Science.* 73:792-806.
- 2007 Odriozola, A. L., R. Varela, **C. Hu**, Y. Astor, L. Lorenzoni, and F. E. Muller-Karger (2007). On the absorption of light in the Orinoco River plume. *Cont. Shelf Res.* 27:1447-1464.
- 2007 **Hu, C.** and F. E. Muller-Karger (2007), Response of sea surface properties to Hurricane Dennis in the eastern Gulf of Mexico, *Geophys. Res. Lett.*, VOL. 34, L07606, doi: 10.1029/2006GL028935.
- 2007 Chen Z., F. E. Muller-Karger, and **C. Hu**. Remote sensing of water clarity in Tampa Bay. *Remote Sens. Environ.* 109:249-259.
- 2007 Chen, Z., **C. Hu**, and F. E. Muller-Karger. Monitoring turbidity in Tampa Bay using MODIS/Aqua 250-m imagery. *Remote Sens. Environ.* 109:207-220.
- 2007 Chen, Z., **C. Hu**, R. N. Conmy, P. Swarzenski, F. E. Muller-Karger. Colored dissolved organic matter in Tampa Bay, Florida. *Mar. Chem.* 104:98-109.
- 2007 Oey, L-Y., T. Ezer, **C. Hu**, and F. E. Muller-Karger. Baroclinic tidal flows and inundation processes in Cook Inlet, Alaska: numerical modeling and satellite observations. *Ocean Dynamics.* DOI 10.1007/s10236-007-0103-8.
- 2006 Gower, J., **C. Hu**, G. Borstad, and S. King (2006). Ocean color satellites show extensive lines of floating Sargassum in the Gulf of Mexico. *IEEE Trans. Geosci. Remote Sens.* 44:3619-3625.
- 2006 Marrari, M., **C. Hu**, and K. Daly (2006). Validation of SeaWiFS chlorophyll-a concentrations in the Southern Ocean: A revisit. *Remote Sens. Environ.* 105:367-375.
- 2006 **Hu, C.**, F. E. Muller-Karger, and P. W. Swarzenski (2006). Hurricanes, submarine groundwater discharge, and Florida's red tides. *Geophysical Research Letters.* Vol. 33, L11601, doi:10.1029/2005GL025449.
- 2006 Zhang, C., **C. Hu**, S. Shang, F. E. Muller-Karger, Y. Li, M. Dai, B. Huang, X. Ning, and H. Hong (2006). Bridging between SeaWiFS and MODIS for continuity of chlorophyll-a assessments off Southeastern China. *Remote Sens. Environ.* 102:250-263.

- 2006 **Hu, C.**, Z. Lee, F. E. Muller-Karger, K. L. Carder, and J. J. Walsh (2006). Ocean color reveals phase shift between marine plants and yellow substance. *IEEE Geoscience and Remote Sens. Lett.* 3:262-266.
- 2006 Lee, Z., and **C. Hu** (2006). Global distribution of Case-1 waters: An analysis from SeaWiFS measurements. *Remote Sens. Environ.* 101:270-276.
- 2005 **Hu, C.**, F. E. Muller-Karger, C. Taylor, K. L. Carder, C. Kelble, E. Johns, and C. Heil (2005). Red tide detection and tracing using MODIS fluorescence data: A regional example in SW Florida coastal waters. *Remote Sens. Environ.*, 97:311-321.
- 2005 **Hu, C.**, J. Nelson, E. Johns, Z. Chen, R. Weisberg, and F. E. Muller-Karger (2005). Mississippi River water in the Florida Straits and in the Gulf Stream off Georgia in summer 2004. *Geophys. Res. Lett.*, 32, L14606, doi:10.1029/2005GL022942.
- 2005 Hong, H., J. Wu, S. Shang, and **C. Hu** (2005). Absorption and fluorescence of chromophoric dissolved organic matter in the Pearl River Estuary, South China. *Mar. Chem.*, 97:78-89.
- 2005 Shang, S., C. Zhang, H. Hong, Q. Liu, G. T. F. Wong, **C. Hu**, and B. Huang (2005). Hydrographic and biological changes in the Taiwan Strait during the 1997-1998 El Nino winter. *Geophys. Res. Lett.*, 32, L11601, doi:10.1029/2005GL022578.
- 2005 Jarrett, B. D., et al. (2005), Strange bedfellows – a deep hermatypic coral reef superimposed on a drowned barrier island; southern Pulley Ridge, SW Florida platform margin. *Marine Geology*, 214:295-307.
- 2005 Muller-Karger, F. E., R. Varela, R. Thunell, R. Luerssen, **C. Hu**, and J. J. Walsh (2005). The importance of continental margins in the global carbon cycle. *Geophys. Res. Lett.* 32, L01602, doi:10.1029/2004GL021346.
- 2004 Froidefond J.M., Lahet Fl., **Hu C.**, Doxaran D. , Guiral D., Prost M.T, Ternon J-F. (2004), Mudflats and mud suspension observed from satellite data in French Guiana, *Marine Geology*. 208:153-168.
- 2004 **Hu, C.**, Z. Chen, T. D. Clayton, P. Swarzenski, J. C. Brock, and F. E. Muller-Karger (2004). Assessment of estuarine water-quality indicators using MODIS medium-resolution bands: Initial results from Tampa Bay, Florida. *Remote Sens. Environ.* 93:423-441.
- 2004 Chen, Y-J, I-I Lin, **C. Hu**, G-C Gong, and K-K Liu (2004). Primary production in the South China Sea: A comparison between ocean-color derived estimates and coupled-model output. *Acta Oceanographica Taiwanica*, 42(1):1-14.
- 2004 Palandro, D, **Hu, C**, Andrefouet, S, Muller-Karger, FE (2004) Synoptic water clarity assessment in the Florida Keys using diffuse attenuation coefficient estimated from Landsat imagery. *Hydrobiologia*. 530-531(1), pp489-493.
- 2004 Andréfouët S., C. Payri, E. J. Hochberg, **C. Hu**, M.J. Atkinson, FE Muller-Karger (2004). Use of in situ and airborne reflectance for scaling-up spectral

- discrimination of coral reef macroalgae from species to communities. *Marine Ecology Progress Series*. 283:161-177.
- 2004 **Hu, C.**, E. Montgomery, R. Schmitt, and F. E. Muller-Karger (2004). The Amazon and Orinoco River plumes in the tropical Atlantic: Observation from space and S-Floats. *Deep Sea Res.-II*. 51:1151-1171.
- 2004 Muller-Karger, F. E., R. Varela, R. Thunell, Y., Astor, H. Zhang, R. Luerssen, and **C. Hu** (2004). Processes of coastal upwelling and carbon flux in the CARIACO basin. *Deep Sea Res.-II*. 51:927-943.
- 2004 **Hu, C.**, B. Nababan, D. C. Biggs, and F. E. Muller-Karger (2004). Variability of bio-optical properties at sampling stations and implications for remote sensing: A case study in the NE Gulf of Mexico. *Int. J. Remote Sens*. 25(11):2111-2120.
- 2004 **Hu, C.**, F. E. Muller-Karger, G. A. Vargo, M. B. Neely, and E. Johns (2004). Linkages between coastal runoff and the Florida Keys ecosystem: A study of a dark plume event. *Geophys. Res. Lett.* 31, L15307, doi:10.1029/2004GL020382.
- 2004 Coble, P., **C. Hu**, R. Gould, G. Chang, and A. M. Wood (2004). Colored dissolved organic matter in the coastal ocean: An optical tool for coastal environmental assessment and management. *Oceanography*. 17:50-59.
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