Curriculum Vita

Name: **Jia Wang**

Affiliation: Great Lakes Environmental research Laboratory (GLERL)
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Arctic Modeling Group Research Website:
http://www.frontier.iarc.uaf.edu/amg/index.html
http://www.frontier.iarc.uaf.edu:8080/~jwang/ModelingProducts/

Education

Ph.D., 1993, Atmospheric and Oceanic Sciences, McGill University
Ph.D., 1987, Oceanography, Institute of Oceanology/Chinese Academy of Sciences
M.Sc., 1983, Oceanography, Shandong College of Oceanology, Qingdao, China
B.Sc., 1980, Oceanography, Shandong College of Oceanology, Qingdao, China

Professional Experience

08/07-present: Research Scientist, NOAA/GLERL
Leader of Arctic Modeling Group
04/06-08/07: Research Professor
Leader of Arctic Modeling Group
Theme Leader of IARC/NSF/JAMSTEC Integration/Synthesis Project
04/04-04/06: Research Associate Professor
Leader of Arctic Modeling Group
Theme Leader of IARC/JAMSTEC Integration/Synthesis Project
International Arctic Research Center
University of Alaska Fairbanks, AK 99775

05/06-present: Affiliate Professor
01/98-04/06: Affiliate Associate Professor
School of Fisheries and Ocean Sciences
University of Alaska Fairbanks, AK 99775

01/98-03/03: Senior Scientist, Subgroup Leader and Acting Group Leader of Arctic Modeling

and Diagnosis Group
Frontier Research System for Global Change (FRSGC)/JAMSTEC/Japan,
dispatched to University of Alaska Fairbanks, AK 99775

04/95-12/97: Associate (04/95-04/96) and Senior (04/96-12/97) Research Scientist
Department of Applied Marine Physics
University of Miami

01/94-03/95: NSERC Postdoctoral Fellow
Bedford Institute of Oceanography
Dartmouth, Nova Scotia, Canada

02-12/93: Postdoctoral Investigator
Woods Hole Oceanographic Institution
Woods Hole, MA

09/89-12/92: Research and Teaching Assistant
Department of Atmospheric and Oceanic Sciences
McGill University, Montreal Canada

01/88-05/89: Visiting Scientist
US Geological Survey, Menlo Park, CA

01/86-12/87: Assistant Scientist
Institute of Oceanology
Chinese Academy of Sciences
Qingdao, China

Other Positions Held

University of Alaska Fairbanks	Affiliate Professor	09/07-present
JPL (Sabbatical)	Visiting Scientist	03/07-08/07
UCLA (Sabbatical)	Visiting Professor	09/06-02/07
Ocean University of China:	Guest Professor	2002
University of Alaska Anchorage:	Visiting Professor	2001
National Institute of Polar Research:	Guest Professor	2001-present
Fudan University, Shanghai, China:	Visiting Professor	1998-Present
First Institute of Oceanography, SOA:	Guest Professor	1999-Present

Awards and Honors

• Outstanding Productivity and Excellence in Science Award of 2000, Frontier Research System for Global Change, Tokyo, Japan, 2000.

- State Oceanic Administration (SAO), China: Honorary Ocean Scholar and professor (highest honor), 08/2001

- Polar Research Institute of China: Honorary Guest Professor, 3/2001

Research Interests

- Polar and subpolar (including the Great Lakes) climate change (atmosphere, sea ice, oceanography, and ecosystem) and interactions
- Global coupled atmosphere-ice-ocean modeling and basin-scale ocean-ice-ecosystem modeling
- Regional/coastal ocean and sea ice dynamics and modeling

Current Research Grants

1. "Sea Ice-Ocean-Oilspill Modeling System (SIOMS) for the Nearshore Beaufort and Chukchi Seas: Improvement and Parameterization (Phase II)." Minerals Management Service (MMS)**, PI,** 5/2004-11/2007: $568,249.

2. "Modeling Study on the Response of Lower Trophic Level Production to Climate Change" supported by North Pacific Research Board (NPRB). **Co-PI**, PI-M. Jin: 6/2006-5/2008: $149,547

3. "Development and Validation of Polar Ocean Ecosystem Model by Using Satellite Data." Japan Aerospace and Exploration Agency (JAXA), **PI**, 2005-2008, $126,348

4. "Collaborative Research: The Impacts of Arctic Storms on Landfast Ice Variations", NSF, **co-PI**, 2007-2010: $45,688.

5. "Sea Ice-Ocean-Oilspill Modeling System (SIOMS) for the Nearshore Beaufort and Chukchi Seas: Integration and Synthesis (Phase III)." Minerals Management Service (MMS)**, PI,** 11/2007-10/2009: ~$329,602.

6. "Modeling sea ice-ocean-ecosystem responses to climate changes in the Bering-Chukchi-Beaufort seas with data assimilation of RUSALCA measurements", NOAA, **PI**, 7/2007-6/2012: $1,225,399.

Pending Research Grants

- "ASSESSING THE BIO-OPTICAL RESPONSE OF COASTAL ARCTIC ECOSYSTEMS TO DIMINISHED SEA ICE", NOPP, **co-PI**, 2007-2010: $368,868

• "In investigation of direct/indirect climate impacts on the Bering Sea Green Belt via Aleutian Low." NSF-BEST, **co-PI (PI: Mizobata),** 10/2007-9/2010, $150,826.

• "BEST: Effects of varying sea ice characteristics n phytoplankton community structure and primary production in the eastern Bering Sea." **Co-PI (PI: Jin)**, NSF-BEST, 10/2007-9/2010: $538,314.

PI or Co-PI in Recent and Past Research Grants

• "Development of Coupled Ice-Ocean-Ecosystem Models in Polar and Subpolar Seas." Japan Marine Science and Technology Center/IARC (JAMSTEC)/IARC, **PI,** 2004-2006, $102,442

• "Assessment of Coupled CCSR/NIES/FRCGC Atmosphere-Ice-Ocean Climate Model for the 20th Century Climate." Japan Marine Science and Technology Center/IARC (JAMSTEC)/IARC, **PI**, 2004-2006, $100,424

• "Workshop on Hydrological Modeling for Freshwater Discharge from the Alaska Arctic Coast." Minerals Management Service (MMS**), PI,** 5/2004-9/2005, $77,844

• "Nowcast/Forecast Models of Ice-Ocean-Oil Spill System in the Beaufort Sea." Minerals Management Service (MMS**), PI**, 2000-2004, $400,000

• "Workshop on Small-Scale Ice-Ocean Modeling in the Nearshore Chukchi and Beaufort Seas." Minerals Management Service (MMS**), PI**, 2002-2003, $68,000

• "Arctic Ocean Model Intercomparison Project (AOMIP)" National Science Foundation (NSF/IARC), **Co-PI; PI**-A. Proshutinsky; 2000-2004, $750,000

• "3-D Coupled Biological-Physical Model of Price William Sound, Alaska." Oil Spill Recovery Institute (OSRI), Alaska, **PI**, 1999-2002, $150,000

• "Wavelet Analysis and EOF Analysis of Arctic Climate Data" NOAA/CIFAR, **PI**, 1999-2001, $50,000

• "3-D Ocean State Simulations from 1995-98 in Prince William Sound, Alaska." Exxon Valdez Oil Spill Trustee Council (EVOSTC), **PI**, 1998-2001, $160,000

• "Modeling Ice-Ocean Climate Change in the pan Arctic and North Atlantic Ocean." Dept. of Fisheries and Oceans of Canada, **PI**, 1998-2001, $89,000.

• "Coupled Ice-Ocean Modeling in the Labrador Sea." Dept. of Fisheries and Oceans of Canada, **PI**, 1999-2000, $20,000.

• "Ocean Modeling of Ocean Circulation in Prince William Sound, Alaska." Exxon Valdez Oil Spill Trustee Council (EVOSTC), **co-PI**, 1995-1997, $200,000

• "Modeling of Ocean Circulation in the Sea of Japan." Office of Naval Research (ONR), **co-PI**, 1995-1997, $180,000

Professional Memberships

American Geophysical Union; American Meteorological Society

Professional Activities

- Proposal reviewer for the U.S. National Science Foundation, NOAA, NASA, North Pacific Research Board, Exxon Valdez Oil Spill Trustee Council, the United Kingdom Natural Science and Engineering Research Council, the Canadian Natural Science and Engineering Research Council, and the National Science Foundation of China.
- Manuscript reviewer for major scientific journals, such as, *Geophys. Res. Lett., J. Phys. Oceanogr., J. Geophys. Res.,, J. Climate, Monthly Weather Review, J. of Atmos. and Oceanic Technology, J. Marine Systems, Deep-Sea Res, Prog. Oceanogr., Continental Shelf Res., Estu. Coast. Shelf Sci., Advances in Atmospheric Sciences of China, Chinese J. of Limnol. Oceanogr. J. Oceanography of Japan, Acta Oceanologia Sinica*, among others.

Other Significant Experience

Organizer and Chair of Workshops:

- International Workshop on Polar-Global Climate Modeling: Connections and Interplay. Fairbanks, AK, June 14-16. 2006.
- Workshop on Hydrological Modeling for Freshwater Discharge from the Alaska Arctic Coast. Fairbanks, AK, October 7-8, 2004
- Second IARC/CAMP-FRSGC Collaboration Workshop on Arctic Climate Modeling, Yokohama Institute for Earth Science, Yokohama, Nov. 5, 2003.
- First IARC/CAMP-FRSGC Collaboration Workshop on Arctic Climate Modeling, Yokohama Institute for Earth Science, Yokohama, June 10, 2003.
- International Workshop on Small-Scale Sea Ice-Ocean Modeling for the Nearshore Beaufort and Chukchi Seas, Fairbanks, AK, August 7-9, 2002

Chairperson of Sessions at Conferences/Meetings:

- International Conference of Remote Sensing and Ocean Modeling, Beijing, July 1997
- The US-China Workshop on Arctic Computer Modeling and Observations, Qingdao, May 1999
- International Conference of Computer Modelling of Seas and Coastal Regions, Greece, June 2000
- International Symposium of Coastal Seas in Response to Climate Change, Qingdao, China, August 2000

• International China-Norway Symposium of Polar Sciences, Shanghai, China, August 2001
• International Chinese Ocean-Atmosphere Conference. June 28-30, 2004, Beijing
• The Second International Symposium on Polar Sciences of China. October 15-17, 2004, Beijing
• 2007 Fall AGU Meeting in San Francisco, Dec. 10-15, 2006

Professional Activities:

• Pacific Arctic Group (PAG) IPY Cruise Planning Meeting Oct. 13-15, 2006, USA member, also the coordinator of PAG modeling activities and model-data synthesis,.
• Panel member of the International Scientific Advisory Committee in Computer Modelling of Seas and Coastal Regions, Wessex Institute of Technology, UK, 1997-2000
• Overseas Academic Committee of the Key Laboratory of State of Oceanic Administration (SOA), China, 1998-2000
• Invited participant, NPRB sponsored workshop: Workshop on the Bering Sea Ocean Circulation Modelling, Feb. 3-4, PMEL/NOAA, Seattle
• Invited participant, ILTS/Hokkaido University sponsored: International Workshop on Modeling of Sea Ice and Ocean circulation, with an emphasis on the Sea of Okhotsk, Feb. 18, ILTS, Hokkaido University, Japan
• Invited participant, NOAA Arctic Initiate Workshop, July 25-26, 2001, Washington DC.
• Participant in over 16 scientific expeditions to the Arctic Ocean, the Northwest Pacific, Labrador Sea, Gulf of Main, San Francisco Bay, South China Sea, East China Sea, Bohai Sea;
• Seminar convener, Frontier Research System for Global Change (FRSGC, Physics Group)/UAF, 1998-2000;

Leadership:

• Subgroup leader of Arctic Modeling Group, FRSGC/JAMSTEC, 1998-2002. At the beginning of the establishment of the Frontier Research System for Global Change (FRSGC) Program at IARC/UAF, I was the first senior scientist hired as subgroup leader in January 1998 to set up the IARC-Frontier infrastructure, such as the computer system, research programs, recruiting scientists, weekly seminar, etc. I organized an IARC seminar once a week. Our regular seminar has been year-round and well attended.
• Acting group leader of Arctic Modeling and Diagnosis Group, FRSGC/JAMSTEC/Japan, 2002-2004
• Leader of Arctic Modeling Group; Theme Leader for IARC/NSF/JAMSTEC Integration/Synthesis Program, International Arctic Research Center, 2004-present.

Oceanographic Cruises:

1984: East China Sea: cold summer water mass
1985-86: China First Northwestern Pacific Cruise in TOGA: air-sea interactions
1988: San Francisco Bay: tidal current and tidal gauge recovery
1993: Western Gulf of Maine: physical-biological processes
1994: Labrador Sea: dense water formation

1996: Prince William Sound (Sound Ecosystem Assessment): physical and biological
2000: Mirai Bering-Chukchi Seas Cruise: physical and biogeochemical studies of water mass analysis

Postdocs and Graduate students instructed

Postdocs/Research Associates: Dr. Jun Takahashi (1999-2002), Dr. Meibing Jin (1998-2000), Dr. Qinzheng Liu (1999-2001), Dr. Bingyi Wu (2000-2002), Dr. Sheng Zhang (2004-2007), Dr. Kohei Mizobata (current), Mr. Haoguo Hu (current)
Graduate students: Congbiao Liu (2003-2005), Zhedong Zhang (1998-2000), Linong Yan (2000-2002)
Ph.D. Thesis Committee: Rawshan Ara Muna (UAF, current), K. Mizobata (Hokkaido University, 2002-05), T. Iida (Hokkaido University, 2003-26)
Visiting Scientists hosted: Dr. Bob Pickart (WHOI, 2005-06), Dr. Markus Meier (Sweden, 2002), Dr. Jari Haapala (Finland, 2003), Dr. Charles Tang (BIO, Canada, 2003), Dr. R. Gerdes and C. Koberle (AWI, Germany, 2003), Dr. F.J. Saucier (DFO, Canada, 2002), Dr. Jingping Zhao (OUC, China, 2001), Dr. Dongxiao Wang (SCSIO/CAS, China, 2001, 2003), Dr. Ping Shi (SCSIO/CAS, China 2002), Dr. Lijun Han (IO/CAS, China, 2000-2001), Dr. Z. Wan (Xiamen University, China, 2001), Dr. Xiao-Yi Yang (SCSIO/CAS, China)

Teaching Experience

UAF: Instructional Activities

Semester	Course Name, Number & Title	Credits	Contact Hours (Lecture & lab, i.e. 3&0)	Students # of	Type	Shared
2001	CE 674: Waves, Tides, and Ocean Processes	4	1	10	Class room	Prof. Orson Smith (UAA)
2002	STAT 482: Multivariate Analysis	4	1	8	Class room	Prof. S. Zhang (UAF)
2005	ATM 693: Climate Journal Club	1	1	12	Class room	Profs. I. Polyakov, U. Bhatt (UAF)

Course	Level	Credit		Institution
Fortran Language (with computer lab)	200	3	taught	Ocean Univ. China
Physical oceanography	200	4	taught	same
Fluid mechanics	200	4	taught	same
Numerical methods (with computer lab)	300	3	taught	same
Statistics	200	3	taught	same

Numerical analysis of partial differential equations (with computer lab)	500	4	TA	same
Numerical analysis of fluid mechanics (with computer lab)	500	4	TA	McGill
Numerical methods (with computer lab)	500	3	TA	McGill

During I was employed at the University of Miami, I was invited to give

Short course on advance numerical methods in fluid dynamics	1	taught
Short course on 3-d ocean circulation model and computer simulation	2	taught

I am a guest professor/visiting professor at five universities/institutions in China and the US. I am frequently invited to give seminars/short courses in computer modeling/simulation.

Invited Talks (since 1998)

- Sea ice-ocean-oil spill modeling system (SIOMS) for the nearshore Beaufort and Chukchi Seas: improvement and parameterization (Phase II). Feb 14, 2006. CMI/MMS Annual Research Review Meeting, Fairbanks, Alaska.
- The Arctic winter atmospheric Dipole Anomaly (DA) and sea ice motion: Data analysis and modeling. April 4-7, 2006, Old Dominion University, Norfolk, Virginia.
- Modeling the 20th century Arctic climate using the CCSR/NIES/FRCGC global climate model. Workshop on Polar-Global Climate Modeling: Connection and Interplay. June 14-16, 2006, Fairbanks, Alaska.
- Modeling 3-D environmental hydrodynamic fields of the Bering Sea. Workshop on the Bering Sea Ocean Circulation Modelling, PMEL/NOAA, Seattle. Feb. 3-4, 2005.
- Simulating the seasonal cycle of ice-ocean circulation in the Sea of Okhotsk. Workshop on modelling of sea ice and ocean circulation, with an emphasis on the Sea of Okhotsk, ILTS, Hokkaido University, Japan. Feb. 18, 2005.
- Assessment of the CCSR/NIES/FRCGC global model. CCSR/University of Tokyo, Japan, Feb. 16, 2005.
- A coupled ice-ocean-oilspill modelling system in the Beaufort Sea. MMS Headquarters, Herndon, VA, March 3, 2004.
- Search for causes and drivers of Arctic climate variability: Which atmospheric regime is more important in the Arctic Ocean? The Joint APL and Dept. of Atmospheric Science Seminar, University of Washington, March 4, 2004.
- Small-scale ice-ocean modelling for the nearshore Beaufort and Chukchi seas. MMS Physical Oceanography Workshop, Fairbanks, Feb 4-6, 2003.
- Preliminary spinup results and scenario simulations. Arctic Ocean Model Intercomparison Project Workshop #6, Woods Hole Oceanographic Institution, May 8-9, 2003.
- Linking the northern hemisphere sea ice trend and quasi-decadal sea ice oscillation: a new feedback loop. First CAMP-FRSGC Collaboration Workshop, Yokohama Institute for Earth Science, Yokohama, June 10, 2003 (co-chair)
- A 3-D coupled biological-physical model and its application to the 1996 spring plankton bloom in Prince William Sound, Alaska. Prince William Sound Biological Modeling

Workshop, Anchorage, June 16-18, 2003
- Search for causes and drivers: Which atmospheric regime is responsible for sea ice motion in the central Arctic Ocean? The Second CAMP-FRSGC Collaboration Workshop, Yokohama Institute for Earth Science, Yokohama, Nov. 5, 2003 (as co-chair).
- Linking the northern hemisphere sea ice trend and quasi-decadal sea ice oscillation: Hypothesis, observations, and modeling. McGill University, Quebec, May 19, 2002.
- Simulating the seasonal cycle using a coupled ice-ocean model in the pan Arctic-North Atlantic Ocean. AOMIP (Arctic Ocean Models Intercomparison Project) Workshop. Washington, DC, May 30, 2002.
- Modeling shelf-basin interactions in the Arctic Ocean (key note speaker), Workshop on Arctic Circulation modeling and measurement, Lamont-Doberty Earth Observatory, Columbia Univ., June 17-20, 2002.
- Arctic sea ice oscillation: Regional and seasonal perspectives. Frontier Research System for Global Change, FRSGC Headquarters, Tokyo, March (Invited Recipient for Outstanding Achievement Prize), 2001.
- Arctic coupled ice-ocean modelling. State Oceanic Administration, China August (Invited Recipient for SOA Honorary Ocean Scholar Prize, the highest prize), 2001.
- A coupled biological-physical model in Prince William Sound, Alaska. International Association of Biological Oceanography (IABO), Argentina, Nov 21-26, 2001.
- A coupled hydrological-ocean model in the Gulf of Alaska. Exxon Valdez Oil Spill Trustee Council, Anchorage, November 5-6, 2001.
- Arctic Oscillation and Arctic sea ice oscillation. Alfred-Wegener Institute for Polar Research. Germany, May, 2000.
- A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental shelves/slopes Alfred-Wegener Institute for Polar Research. Germany, May, 2000.
- Arctic Oscillation and Arctic sea ice oscillation. Frontier Research System for Global Change, FRSGC Headquarters, Tokyo, March, 1999.
- Arctic Oscillation and Arctic sea ice oscillation. National Center for Environmental Forecasts, State Oceanic Administration, Bejing, China, April, 1999.
- A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental shelves/slopes. Beijing University, China, April, 1999.
- Seasonal circulation and model-data comparison in Prince William Sound. Exxon Valdez Oil Spill Trustee Council, January 25-28, Anchorage, Jan. 16-19, 1998.
- A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental shelves/slopes. APL, University of Washington, April, 1998.
- A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental shelves/slopes. University of Hokkaido, April, 1998.

Special Series Lecture:
- "An introduction to a 3-D coastal ocean model and applications to China seas." Joint NSFC/ SOA/CAS-sponsored Invited series lecture at 6 institutions and universities of oceanography in Beijing, Qingdao, Guangzhou and Beihai, China, Aug. 1-30, 1994.

Publications
(Peer-reviewed papers: 59; Proceedings/books: 11; Internal reports: 14)

A: Peer-reviewed Publications
Year 2007:

59) Mizobata, K., S.-I. Saitoh, and J. Wang, 2007. Summer biological enhancement in relation to the mesoscale eddy at the shelf break in the vicinity of the Pribilof Islands. Deep Sea Res. (in press)

58) Yang, X.-Y., D. Wang, J. Wang, and R.-X. Huang, 2007. The connection between decadal variability of circulation in the Southern Ocean and the Southern Annular Mode. *Geophys. Res. Lett. Vol. 34,* L16604, doi: 10.1029/2007GL030526.

57) Holloway, G., F. Dupont, E. Golubeva, S. Hakkinen, E. Hunke, M. Jin, M. Karcher, F. Kauker, M. Maltrud, M. A. Morales Maqueda, W. Maslowski, G. Platovc, D. Stark, T. Suzhki, M. Steele, J. Wang, J. Zhang. 2007. Water properties and circulation in Arctic Ocean models. *Journal of Geophysical Research, 112*, C04S03, doi:10.1029/2006JC003642.

56) Jin, M., C. Deal, J. Wang , V. Alexander, R. Gradinger, S. Saitoh, T. Iida, Z. Wan, and P. Stabeno**.** Ice-associated phytoplankton blooms in the southeastern Bering Sea**.** *Geophys. Res. Lett., 34* , L06612, doi:10.1029/2006GL028849.

Year 2006:

55) Watanabe, E., J. Wang, T. Sumi, and H. Hasumi, 2006. Arctic Dipole and its contribution to sea ice exports in the last 20th century. Geophys. Res. Lett., 33, L23703, doi:10.1029/2006GL028112.

54) Jin, M. C.J. Deal, J. Wang, K.-H. Shin, N. Tanaka, T. Whitledge, S. H. Lee, R.R. Gradinger, 2006. Controls of the landfast ice-ocean ecosystem offshore Barrow, Alaska. *Annals of Glaciology, 44, 63-72.*

53) Mizobata, K., J. Wang and S.-I. Saitoh, 2006. Eddy-induced cross-slope exchange along the Bering Sea shelf break using a 3D ocean general circulation model and satellite multi-sensor remote sensing. *J. Geophys. Res*., 111, C10017, doi:10.1029/2005JC003335.

52) Jin, M., C.J. Deal, J. Wang, N. Tanaka, and M. Ikeda, 2006. Vertical mixing effects on the phytoplankton bloom in the southeastern Bering Sea mid-shelf. *J. Geophys. Res*., 111, C03002, doi:10.1029/2005JC002994.

51) Wu, B., J. Wang, J.E. Walsh, 2006. Dipole anomaly in the winter Arctic atmosphere and its association with Arctic sea ice motion. *J. Climate, 19(2), 210-225. DOI: 10.1175/JCLI3619.1*

Year 2005:

50) Wang, J., Q. Liu, M. Jin, M. Ikeda and F.J. Saucier, 2005. A coupled ice-ocean model in the pan-Arctic and the northern North Atlantic Ocean: Simulation of seasonal cycles. *J. Oceanogr., 61***,** 213-233.

49) Wang, J., M. Ikeda, S. Zhang and R. Gerdes, 2005. Linking the northern hemisphere sea ice reduction trend and the quasi-decadal Arctic Sea Ice Oscillation**.** *Climate Dyn., 24*: 115-130, DOI: 10.1007/s00382-004-0454-5

Year 2004:

48) Wu, B. J. Wang and R. Zhang, 2004. Effects of intraseasonal variations of the Arctic Oscillation on the Barents Sea. *Polar Meteorolo. Glaciol*., 18, 82-95.

47) Geyer, W.R., R.P. Signell, D.A. Fong, J. Wang, D.M. Anderson, and B.A. Keefer, 2004. The freshwater transport and dynamics of the Western Maine Current. *Continen. Shelf Res. 24***,** 1339-1357.

46) Wang, J., B. Wu, C. Tang, J.E. Walsh and M. Ikeda, 2004. Seesaw structure of subsurface temperature anomalies between the Barents Sea and the Labrador Sea. *Geophys. Res. Lett. 31*, L19301, doi: 10.1029/2004GL019981.

45) Wang, J., M. Jin, D. Musgrave and M. Ikeda, 2004. A numerical hydrological digital elevation model for freshwater discharge into the Gulf of Alaska. *J. Geophys. Res*., 109, C07009, doi:10.1029/2002JC001430.

44) Wu, B., J. Wang, and J. Walsh, 2004. Possible feedback of winter sea ice in the Greenland and Barents Seas on the local atmosphere, *Mon. Wea. Rev.,* 132(7), 1868-1876.

43) Jin, M. and J. Wang, 2004. Interannual variability and sensitivity study of the ocean circulation and thermohaline structures in Prince William Sound, Alaska, *Cont. Shelf Res.*, 24(3), 393-411.

Year 2003:

42) Wang, J., R. Kwok, F.J. Saucier, J. Hutchings, M. Ikeda, W. Hibler III, J. Haapala, M.D. Coon, H.E.M. Meier, H. Eicken, N. Tanaka, R. Prentki, and W. Johnson, 2003. Working

towards improved small-scale sea ice and ocean modeling in the Arctic seas. *EOS*, AGU, Vol . 84 (34), 325, 329-330.

41) Wang, J., M. Ikeda and F. Saucier, 2003. A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental slopes, *J. Geophys. Res.*, 108(C5), 3161, doi: 10.1029/2000JC000517.

40**)** Ikeda, M., J. Wang, and A. Makshtak, 2003. Importance of clouds to the decaying trend in the Arctic ice cover. *J. Meteorol. Soc. Japan*, 81, 179-189.

39) Wang, D.**,** J. Wang, L. Wu, and Z. Liu, 2003. Regime shifts in the North Pacific simulated by a COADS-driven isopycnal model. Advances in Atmospheric Sciences, 20(5), 743-754.

38) Wang, D.**,** J. Wang, L. Wu, and Z. Liu, 2003. Relative importance of wind and buoyancy forcing for interdecadal regime shifts in the Pacific. Science in China (D Series), 46(5), 417-427.

Year 2002:

37) Ikeda, M., J. Wang, A. Makshtas, 2002. The Arctic sea ice and global warming. Kaiyo (*The Ocean) Monthly*, 34(2), 875-878. (in Japanese)

36) Wang, J., M. Ikeda, R. Colony, X. Zhang, 2002. Quasi-decadal variability of sea ice in the Arctic Ocean. Kaiyo (*The Ocean) Monthly*, 34(2), 865-849. (in Japanese)

35) Takahashi, J. and J. Wang, 2002. Mechanism for dense water transport along Arctic continental shelf. Kaiyo (*The Ocean) Monthly*, 34(2), 831-834. (in Japanese)

34**)** Wu, B. and J. Wang**,** 2002b. Possible impacts of winter Arctic Oscillation on Siberian High and the East Asia winter monsoon. *Advances in Atmospheric Sciences*, 19, 297-320.

33**)** Wu, B. and J. Wang**,** 2002a. Winter Arctic Oscillation, Siberian High and the East Asia winter monsoon. *Geophys. Res. Lett***.,** 29(19), 1897-1900.

Year 2001:

32) Proshutinsky, A., et al and J. Wang. 2001. Multinational effort studies differences among Arctic Ocean models. *EOS*, AGU, 82(51), 637-644.

31) Eslinger, D.L., R.T. Cooney, C.P. McRoy, A. Ward, T. Kline, E.P. Simpson, J. Wang and J.R. Allen, 2001. Plankton dynamics: Observed and modeled response to physical forcing in Prince William Sound, Alaska. *Fisheries Oceanogr*., 10 (Suppl. 1), 81-96.

30) Wang, J., M. Jin, V. Patrick, J. Allen, D. Eslinger, and T. Cooney, 2001. Numerical simulation of the seasonal ocean circulation patterns and thermohaline structure of Prince William Sound, Alaska using freshwater of a line source. *Fisheries Oceanogr*., , 10 (Suppl. 1), 132-148.

29) Wang, J. and M. Ikeda, 2001. Arctic Sea-Ice Oscillation: Regional and seasonal perspectives. *Annals of Glaciology*, 33, 481-492.

28) Ikeda, M., J. Wang, and J-P Zhao, 2001. Hypersensitive decadal oscillations in the Arctic/ subarctic climate. *Geophys. Res. Lett*., 28(7): 1275-1278.

27) Wang, J., 2001. A nowcast/forecast system for coastal ocean circulation (NFSCOC) with a simple nudging data assimilation. *J. Atmos. Oceanic Tech*. 18(6): 1037-1047.

Year 2000:

26) Wang, J. and M. Ikeda, 2000. Arctic Oscillation and Arctic Sea-Ice Oscillation. *Geophys. Res. Lett.*, 27(9), 1287-1290.

Before Year 2000:

25) Wang, J., R. Mo, Z. Gao, Z. Yin and M. Chen, 1999. Sensitivity study of coastal plumes. *Acta Oceanologica Sinica*, 18, 147-166.

24) Ren, J.-C., I.-F. Shen, M.-D. Tao, and J. Wang, 1999. The instability of non-hydrostatic stratified flows. *J. of Hydrodynamics*, (Series B), 4: 38-43.

23) Wang, J., 1998. A two-channel laterally averaged estuarine circulation model (LAECIM), *J. Geophys. Res*., 103: 18,381-18,391.

22) Deleersnuijder, E., J. Wang, and C.N.K. Mooers, 1998. A two-compartment model for understanding the simulated 3-D circulation in Prince William Sound, Alaska. *Cont. Shelf Res.*, 18: 279-287.

21) Mooers, C.N.K. and J. Wang, 1998. On the implementation of a 3-D circulation model for Prince William Sound, Alaska. *Cont. Shelf Res*., 18: 253-277.

20) Wang, J. and C.N.K. Mooers. 1997. Three-dimensional perspectives of the Florida

Current: transport, potential vorticity, and related dynamical properties, *Dyn. Atmos. & Oceans*, 27: 135-149.

19) Wang, J., R.T. Cheng and P.C. Smith, 1997. Seasonal sea-level variations in San Francisco Bay in response to atmospheric forcing, 1980, *Estuarine, Coastal and Shelf Science*, 45: 39-52.

18) Wang, J. and M. Ikeda, 1997c. Inertial stability and phase error of time integration schemes in ocean general circulation models, *Mon. Wea. Rev.*, 125(9): 2316-2327.

17) Wang, J. and M. Ikeda, 1997b. Diagnosing ocean unstable baroclinic waves and meanders using quasi-geostrophic equations and Q-vector method, *J. Phys. Oceanogr*. 27(6): 1158-1172.

16) Wang, J. and M. Ikeda, 1997a. A 3D ocean general circulation model for mesoscale eddies-II: Diagnostic analysis, *Acta Oceanologica Sinica*. 16(1): 29-43.

15) Wang, J. and M. Ikeda, 1996. A 3D ocean general circulation model for mesoscale eddies-I: Meander simulation and linear growth rate, *Acta Oceanologica Sinica*, 15: 31-58.

14) Mysak, L.A., R.G. Ingram, J. Wang, and A. van der Baaren, 1996. Anomalous sea-ice extent in Hudson Bay, Baffin Bay and the Labrador Sea during three simultaneous ENSO and NAO episodes, *Atmosphere-Ocean*, 34: 313-343.

13) Wang, J., 1996. Global linear stability of the 2-D shallow water equations: An application of the distributive theorem of roots for polynomials on the unit circle, *Mon. Wea. Rev.*, 124(6): 1301-1310.

12) Ingram, R.G., J. Wang, C. Lin, L. Legendre and L. Fortier, 1996. Impact of freshwater on a subarctic ecosystem under seasonal sea ice cover (southern Hudson Bay, Canada). I: Interannual variability and predicted global warming influence on river plume dynamics and sea ice, *J. of Marine Systems*, 7: 221-231.

11) Wang, J., L.A. Mysak and R.G. Ingram, 1994c. A numerical simulation of sea-ice cover in Hudson Bay, *J. Phys. Oceanogr.*, 24(12): 2515-2533.

10) Wang, J., L.A. Mysak and R.G. Ingram, 1994b. A 3-D numerical simulation of Hudson Bay summer ocean circulation, *J. Phys. Oceanogr.*, 24(12): 2496-2514.

9) Wang, J, L.A. Mysak and R.G. Ingram, 1994a. Interannual variability of sea-ice cover in Hudson Bay, Baffin Bay and the Labrador Sea, *Atmosphere-Ocean*, 32(2): 421-447.

8) Wang, J. and Y. Yuan, 1994. Double Kelvin waves along the Okinawa Trough in the East China Sea-I: Analytical solutions and observations, *Acta Oceanologica Sinica*, 13(1): 1-21.

7) Wang, J. and R.T. Cheng, 1993. On low-pass digital filters in oceanography, *Acta*

Oceanologica Sinica, 12(2): 183-196.

6) Wang, J., R.G. Ingram and L.A. Mysak, 1991. Variability of internal tides in the Laurentian Channel, *J. Geophys. Res.*, 96: 16,859-16,875.

5) Ford, J.M., J. Wang and R.T. Cheng, 1990. Predicting the vertical structure of tidal current and salinity in San Francisco Bay, California, *Water Resources Res.*, 26(5): 1,027-1,045.

4) Wang, J., M. Feng and Y. Yuan, 1989, Preliminary study of heat transport in the southern Yellow Sea, China, *Oceanol. Limnol. Sinica,* 20(3): 274-280 (in Chinese with an English abstract).

3) Wang, J. and Y. Yuan, 1988. Numerical modelling of wintertime circulation in the East China Sea, *Chinese J. Oceano. Limno.*, 6(4): 300-319.

2) Wang, J., Y. Yuan and Z. Pan, 1988, Numerical study and analysis of continental shelf waves in the East China Sea, Acta Oceanologica Sinica, 10(6): 666-677 (in Chinese).

1) Wang, J., 1985, A numerical model of the steady-state circulation in the South China Sea, *Journal of Shandong College of Oceanology*, 15(3): 22-32 (in Chinese with an English abstract).

B: Manuscripts submitted or in preparation

1) Deal, C.J., M. Jin, J. Wang, N. Tanaka, M. Ikeda, T. Whitledge and T. Rho, 2007. Dynamics of plankton and nutrients in the Bering Sea: An ecosystem model study with special focus on the coccolithophore bloom and water column nitrification (submitted to *Prog. Oceanogr*.)

3) Wang, J., B.-Y. Wu, M. J.E. Walsh and M. Ikeda, 2007. The response of the Arctic sea ice to the winter atmospheric Dipole Anomaly (Submitted to *Annuals of Glaciology*).

4) Iida, T, S.-I. Saitoh, J, Wang, and M. Jin, 2007. The springtime plankton dynamics in the Bering Sea shelf and the effects of wind forcing and solar radiation (in prep. *Progress in Oceanogr*.)

5) Wang, J., M. Jin, J. Takahashi, T. Suzuki, A. Hall, J.E. Walsh, M. Ikeda, H. Hasumi and I.V. Polyakov, 2007. Decadal Arctic Ocean warming episodes caused by the intruding Atlantic Water in the 20th century (submitted to Geophys. Res. Lett.)

6) Wang, J., M. Jin, J. Takahashi, T. Suzuki, J.E. Walsh, H. Hasumi and M. Ikeda. Multi-decadal variability of the Arctic Atlantic Water during the 20th century: Modeling vs. observations.

7) Hu, H. and J. Wang. On the ocean circulation and vertical thermohaline structures in the Bering Sea. (Submitted to J. Geophys. Res.)

8) Wang, J., H. Hu, and K. Mizobata. Simulating sea ice and ocean circulation in the Bering Sea. (in prep.)

9) Mizobata, K., J. Wang and H. Hu, 2007. Summer Oceanic Desert triggered by the warm Pacific Water in the Chukchi Sea. (submitted to Geophys. Res. Lett.).

C: Other publications

***Papers in Refereed Books/Conference Proceedings*:**

1) Wang, J., L.A. Mysak and R.G. Ingram, 1991, Interannual variability of the atmospheric circulation and sea-ice cover in the Hudson Bay-Baffin Bay-Labrador Sea region, 1953-88. In *Proceedings of the Fifth Conference on Climate Variations*, Oct. 14-18, Denver, Colo., American Meteorological Society, Boston, Mass, pp 358-361.

2) Wang, J. and M. Ikeda, 1995, Stability analysis of finite differencing schemes for inertial oscillations in general ocean circulation models, in *Computer Modelling of Seas and Coastal Region II*, pp 19-27, eds. C.A. Brebbia et al., Computational Mechanics Publications, Southampton.

3) Wang, J. and C.N.K. Mooers, 1996. Modelling Prince William Sound ocean circulation. In *Conference on Coastal Oceanic and Atmospheric Prediction*, Atlanta, Jan. 28-Feb. 2, American Meteorological Society, Boston, pp 36-43.

4) Mooers, C.N.K. and Wang, J., 1996. The second generation of the Strait of Florida nowcast/forecast system. In *Conference on Coastal Oceanic and Atmospheric Prediction*, Atlanta, Jan. 28-Feb. 2, American Meteorological Society, Boston, pp 28-35.

5) Wang, J., C.N.K. Mooers, and V. Patrick, 1997. A three-dimensional tidal model for Prince William Sound, Alaska, in *Computer Modelling of Seas and Coastal Region III*, eds. J.R. Acinas and C.A. Brebbia, Computational Mechanics Publications, Southampton, pp 95-104.

6) Brown, E.D., J. Wang, S.L. Vaughan and B.L. Norcross, 1999. Identifying seasonal spatial scale for the ecological analysis of herring and other forage fish in Prince William Sound, Alaska. In *Ecosystem Approaches for Fisheries Management*, Alaska Sea Grant College Program, AK-SG-99-01, pp 1-11.

7) Wang, J., V. Patrick, J. Allen, S. Vaughan, C.N.K. Mooers, and M. Jin, 1999. Modeling seasonal ocean circulation of Prince William Sound, Alaska using freshwater of a line source. In *Coastal Engineering and Marina Development*, eds. C.A. Brebbia and P. Anagnostopoulos. WIT Press, Southampton-Boston, pp 55-66.

8) Wang, J. and B. Wu, 2001. Impacts of winter Arctic Oscillation on the Siberian High, the East Asian winter monsoon, and sea-ice extent. *Sixth Conference on Polar Meteorology*

and Oceanography, San Diego, p2.6.

9) Shapiro, I., Wang, J**,** R. Colony and M. Ikeda, 2001. Inter-seasonal and inter-decadal variability of freshwater and heat content in the Arctic Ocean. *Sixth Conference on Polar Meteorology and Oceanography*, San Diego, p3.6.

10) .Jin, M**.**, Wang, J, F.J. Saucier and M. Ikeda, 2001. General circulation and transport in the pan Arctic and North Atlantic Ocean. *Sixth Conference on Polar Meteorology and Oceanography*, San Diego, p1.25.

11) Jin, M., J. Wang, and P. McRoy, 2003. A 3-D coupled biological-physical model and its application to the 1996 spring plankton bloom in Prince William Sound, Alaska. *Ecosystem and Sustainable Development III*, eds. E. Tiezzi, C.A. Brebbia, and J.L. Uso, WIP Press, 10pp.

Internal Reports:

1) Wang, J. and L.A. Mysak, 1991, Climatic atlas of seasonal sea-level pressure and sea-ice concentration in the Hudson Bay-Baffin Bay-Labrador Sea region, 1953-88, C^2GCR Report No. 91-5, McGill Univ., Montreal, 103 pp.

2) Mysak, L.A. and J. Wang, 1991, Climatic atlas of seasonal and annual Arctic sea-level pressure, SLP anomalies and sea-ice concentration, 1953-88, C^2GCR Report No. 91-14, McGill Univ., Montreal, 194 pp.

3) Wang, J., 1993 Interannual variability of sea-ice cover in Hudson Bay, Baffin Bay and the Labrador Sea, and numerical simulation of ocean circulation and sea-ice cover in Hudson Bay, Ph.D. Thesis (also C^2GCR Report No. 93-2), McGill University, Montreal, 162 pp.

4) Mysak, L.A., R.G. Ingram and J. Wang, 1994, Anomalous sea-ice extent in Hudson Bay, Baffin Bay and the Labrador Sea during the simultaneous ENSO and NAO episodes of 1972/73 and 1982/83, C^2GCR Report No. 94-8, McGill Univ., Montreal, 24 pp.

5) Wang, J., A. van der Baaren and L.A. Mysak, 1995, A principal component analysis of gridded global sea-level pressure, surface air temperature and sea-ice concentration in the Arctic region, 1953-1993, C^2GCR Report No. 95-4, McGill Univ., Montreal, 22 pp+figures+Fortran source programs.

6) Wang, J., 1999. A nowcast/forecast system for coastal ocean circulation (NFSCOC). Internatioanl Arctic Research Center-Frontier Research System for Global Change. IARC/Frontier Tech. Rep. No. 99-1. University of Alaska Fairbanks, 97pp.

7) Wang, J and M. Jin, 2002. A 3-D coupled biological-physical model of the ecosystem in Prince William Sound, Alaska., Oil Spill Recovery Institute , OSRI Final Report, March 2002, Cordova, Alaska, 38pp.

8) Wang, J., and M. Jin, 2002. 3-D Ocean State Simulations for Ecosystem Application from

1995-1998 in Prince William Sound, Alaska. *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 00389), Chugach Development Corporation, Anchorage, Alaska, 38pp.

9) Wang, J., Q. Liu, M. Jin, 2002. A nested coupled ice-ocean model for the Beaufort Sea. Annual Report No. 8, University of Alaska, MMS/Alaska OCS Region, Anchorage, Dept. of the Interior, pp80-94.

10) Wang, J., Q. Liu and M. Jin, 2002. A User's Guide for a Coupled Ice-Ocean Model (*CIOM*) in the Pan-Arctic and North Atlantic Oceans. International Arctic Research Center-Frontier Research System for Global Change, Tech. Rep. 02-01, 65 pp.

11) Wang, J., C. Deal, Z. Wan, M. Jin, N. Tanaka and M. Ikeda, 2003. *User's Guide for a Ph*ysical-*Eco*system *M*odel (*PhEcoM*) in the Subpolar and Polar Oceans. International Arctic Research Center-Frontier Research System for Global Change, Tech. Rep. 02-02, 69 pp.

12) Jin, M. and J. Wang, 2003. Implementation of an Ocean Circulation Model in GOA: A transition from SEA to GEM, *Exxon Valdez* Oil Spill Restoration Project Final Report (Restoration Project 02603). Chugach Development Corporation, Anchorage, Alaska.

13) Wang, J, 2003. Proceedings of a Workshop on Small-Scale Sea-Ice and Ocean Modeling (SIOM) in the Nearshore Beaufort and Chukchi Seas. Final Report, Coastal Marine Institute, University of Alaska, OCS Study MMS 2003-043, 56pp.

14) Wang, J, 2005. Proceedings of a Workshop on Hydrological Modeling of Freshwater Discharge from Alaska's Arctic Coast. Final Report, Coastal Marine Institute, University of Alaska, OCS Study MMS 2005-xxx, 68pp.

D: Abstracts and Presentations:

1991:

1. Interannual variability of the atmospheric circulation and sea-ice cover in Hudson Bay, The 25th Annual Congress of CMOS, Winnipeg, Manitoba, June 3-7, Can. Meterol. Oceanogr. Soc.
2. On the physics in numerical models and applications to St. Lawrence estuary and Hudson Bay, The Workshop on 3-D Numerical Models, Woods Hole, MA, Aug. 5-7, U.S. Geological Survey.

1992:

1. Interannual variability of the atmospheric circulation and sea-ice cover in the Hudson Bay-Baffin Bay-Labrador Sea region, 1953-88, The Fifth Conference on Climate Variations, Denver, Co., Oct. 14-18, Amer. Meteor. Soc.
2. A numerical simulation of sea-ice cover in Hudson Bay, The 26th Annual Congress of CMOS, Quebec City, Quebec, June 8-12, Can. Meterol. Oceanogr. Soc.

3. A numerical simulation of ocean circulation in Hudson Bay, AGU Spring Meeting, Montreal, May 12-16, Amer. Geophys. Union.

1993:

1. A 3-d numerical simulation of Hudson Bay summer circulation, The 27th Annual Congress of CMOS, Fredericton, New Brunswick, June, Can. Meterol. Oceanogr. Soc.
2. Association of sea-ice cover in Hudson Bay and Labrador Sea with ENSO and NAO, data analysis and numerical modeling, Dept of Physical Oceanogr., Woods Hole Oceanographic Institution, July.
3. Evolution of the coastal plume of the Gulf of Maine, Observations and modeling, Workshop of the Regional Association Research of Gulf of Maine (RARGOM), Hanover, NH, Nov.

1994:

1. Numerical modeling of coastal plumes in the western Gulf of Maine: a sensitivity study, Dept of Physical Oceanogr., Woods Hole Oceanographic Institution, Jan.
2. Sea-ice observations and modeling in Hudson Bay, Dalhousie University, Nova Scotia, March.
3. Plumes and red tides in the western Gulf of Maine: observations and modeling, Bedford Institute of Oceanography, Nova Scotia, April.
4. Modeling plumes and coastal current using a 3-d model, The 28th Annual Congress of CMOS, May 29-June 3, Ottawa, Can. Meterol. Oceanogr. Soc.
5. (Invited speaker at 6 institutions and universities of oceanography in China): An introduction to a 3-D coastal ocean model and applications to China seas. Beijing, Qingdao, Guangzhou and Beihai, China, Aug. 1-Sep 30.
6. Progress of observational and numerical studies of sea ice and circulation in Hudson Bay, The 5th Canadian Ice Workshop, St. John's, Newfoundland, Nov.
7. Application of a 3-d premitive-equation model to the Labrador shelves, Memorial Univ., St. John's, Newfoundland, Nov.
8. Modeling mesoscale eddies and meanders using a 3-d ocean model, Bedford Inst. of Oceanogr., Dec.

1995:

1. On low-pass digital filters in oceanography: theory and application, Dalhousie Univ., Nova Scotia, Jan.
2. Internal tides and mixing in the Laurentian Channel: observations and theory, Maurice Lamontagne Institute (of Oceanography), Mont-Joli, Quebec, Feb.
3. Modeling ocean unstable baroclinic waves and meanders using a 3-D ocean model, RSMAS, Univ. of Miami, Feb.
4. Stability analysis of finite differencing schemes for inertial oscillations in general ocean circulation models. Second International Conference on Computer Modelling of Seas and Coastal Regions-95, Cancun, Mexico, Sep. 8-12.
5. A 3-D Prince William Sound ocean circulation model. 46th Advanced Association of America, Fairbanks, Alaska, Sep 18-22.
6. Anomalous sea-ice extent in Hudson Bay, Baffin Bay and the Labrador Sea during three simultaneous ENSO and NAO episodes of 1972/73, 1982/83 and 1991/92: A decadal

scale. Atlantic Oceanographic and Meteorological Laboratory/NOAA, Miami, FL, Oct.

1996:

1. A 3-D transport model of Prince William Sound. Exxon Valdez Oil Spill Trusteeship Council, Anchorage, Jan. 16-19.
2. Second-generation Straits of Florida nowcast/forecast system. American Meteorological Society, Atlanta, Jan. 28-Feb. 2.
3. A 3-D numerical modeling of Prince William Sound ocean circulation. American Meteorological Society, Atlanta, Jan. 28-Feb. 2.
4. Three-dimensional perspectives of the Florida Current. Ocean Science Meeting, San Diego, Feb. 12-16.
5. A model comparison of MICOM, POM, GFDL, and QG. MICOM Workshop. March, RSMAS, Univ. of Miami.
6. Modeling mesoscale eddies and baroclinic unstable waves. POM Workshop, June, Princeton University.
7. Model-data comparison in Prince William Sound, Alaska. SEA Workshop, Sep., Seward, Alaska.
8. A 3-D ocean circulation model of Prince William Sound, Alaska. AGU Fall Meeting, San Francisco, Dec. 15-19.

1997:

1. A 3-D tidal model for Prince William Sound, Alaska. Coastal Engineering 97: Computer Modelling of Seas and Coastal Regions, June 23-25, 1997, La Coruna, Spain. (invited)
2. A nowcast/forecast system for ocean circulation (in Straits of Florida) and data assimilation. First China-US Remote Sensing Conference, August 11-14, 1997, Beijing, China. (invited)
3. Model-data validation of tidal currents in Prince William Sound. Sep. 23-25, 1997, Valdez, AK., American Association of Advancement of Science 45th Annual Meeting.
4. Seasonal simulation of Prince William Sound circulation. Institute of Marine Science, Univ. of Alaska Fairbanks, Dec. 4 1997.
5. Seasonal simulation of Prince William Sound circulation: sensitivity to freshwater flux. RSMAS/Univ. of Miami, Dec. 11 1997

1998:

Invited:

1. Seasonal circulation and model-data comparison in Prince William Sound. Exxon Valdez Oil Spill Trustee Council, January 25-28, Anchorage, Jan. 16-19.
2. A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental shelves/slopes. APL, University of Washington, April.
3. A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental shelves/slopes. University of Hokkaido, April.

Oral:

1. Seasonal circulation and model-data comparison in Prince William Sound. Exxon Valdez Oil Spill Trusteeship Council, January 25-28, Anchorage.

1999:
Invited:
1. Arctic Oscillation and Arctic sea ice oscillation. Frontier Research System for Global Change, FRSGC Headquarters, Tokyo, March.
2. Arctic Oscillation and Arctic sea ice oscillation. National Center for Environmental Forecasts, State Oceanic Administration, Bejing, China, April.
3. A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental shelves/slopes. Beijing University, China, April.

2000:
Invited:
1. Arctic Oscillation and Arctic sea ice oscillation. Alfred-Wegener Institute for Polar Research.
Germany, May.
2. A theoretical, two-layer, reduced-gravity model for descending dense water flow on continental shelves/slopes Alfred-Wegener Institute for Polar Research. Germany, May.

Oral:
1. Arctic Ocean circulation modelling and freshwater budget. Frontier Research System for Global Change, FRSGC Headquarters, Tokyo, March.
2. Arctic oscillation and Arctic sea ice oscillation. European Geophysical Society Annual Assembly, May, Nice France.
3. Arctic freshwater and modelling. Shelf-Basin Interaction Workshop in the western Arctic. Atlanta, Nov.

2001:
Invited:
1. Arctic sea ice oscillation: Regional and seasonal perspectives. Frontier Research System for Global Change, FRSGC Headquarters, Tokyo, March (Invited Recipient for Outstanding Achievement Prize).
2. Arctic coupled ice-ocean modelling. State Oceanic Administration, China August (Invited Recipient for SOA Ocean Scholar, the highest prize).
3. A coupled biological-physical model in Prince William Sound, Alaska. International Association of Biological Oceanography (IABO), Argentina, Nov 21-26.
4. A coupled hydrological-ocean model in the Gulf of Alaska. Exxon Valdez Oil Spill Trustee Council, Anchorage, November 5-6.

Oral:
1. Arctic sea ice oscillations and east Asia monsoon. American Meteorological Society/5th Conference on Polar Oceanography and Meteorology, San Diego, May.
2. Did the northern hemisphere sea ice reduction trend trigger the decadal Arctic sea ice oscillations? NCAR, Boulder, CIFAR/IARC PI Meeting, October.
3. Did the northern hemisphere sea ice reduction trend trigger the decadal Arctic sea ice oscillations? International Association of Physical Science in oceanography (IAPSO), Argentina, Nov 21-26.
4. The decadal Arctic sea ice oscillations. The SEARCH (A Study of Environmental Arctic Change) Implementation Workshop. UW/Seattle, Nov. 27-29.

2002:
Invited:

1. Linking the northern hemisphere sea ice trend and quasi-decadal sea ice oscillation: Hypothesis, observations, and modeling. McGill University, Quebec, May 19.
2. Simulating the seasonal cycle using a coupled ice-ocean model in the pan Arctic-North Atlantic Ocean. AOMIP (Arctic Ocean Models Intercomparison Project) Workshop. Washington, DC, May 30.
3. Modeling shelf-basin interactions in the Arctic Ocean (key note speaker), Workshop on Arctic Circulation modeling and measurement, Lamont-Doberty Earth Observatory, Columbia Univ., June 17-20.

Oral:

1. A nested coupled ice-ocean model in the Beaufort Sea. Coastal Marine Institute Workshop on Beaufort Sea. Fairbanks, January 15, 2002.
2. The northern hemisphere sea ice trend and quasi-decadal sea ice oscillation. Ocean Science Meeting, Hawaii, Feb. 2002.
3. Linking the northern hemisphere sea ice trend and quasi-decadal sea ice oscillation. Canadian Meteorological and Oceanographic Society, Rimouski, Quebec, May 14-18.
4. A coupled ice-ocean model in the pan Arctic-North Atlantic Ocean. Canadian Meteorological and Oceanographic Society, Rimouski, Quebec, May 14-18.
5. A nested coupled ice-ocean model in the Beaufort Sea. Workshop on Small-Scale Sea Ice and Ocean Modeling, IARC/Fairbanks, August 7-9, 2002.
6. A coupled ice-ocean model in the pan Arctic-North Atlantic Ocean. Workshop on Small-Scale Sea Ice and Ocean Modeling, IARC/Fairbanks, August 7-9, 2002.
7. A nested coupled ice-ocean model in the Beaufort Sea. IARC-FRSGC and UAF Workshop on Point Barrow Sea Ice Resear5ch. IARC/Fairbanks, October 28, 2002.

2003:
Invited:

1. Wang, J., Small-scale ice-ocean modelling for the nearshore Beaufort and Chukchi seas. MMS Physical Oceanography Workshop, Fairbanks, Feb 4-6, 2003.
2. Wang, J., B. Wu, and M. Jin, Preliminary spinup results and scenario simulations. Arctic Ocean Model Intercomparison Project Workshop #6, Woods Hole Oceanographic Institution, May 8-9, 2003.
3. Wang, J., M. Ikeda, S. Zhang, and R. Gerdes, Linking the northern hemisphere sea ice trend and quasi-decadal sea ice oscillation: a new feedback loop. First CAMP-FRSGC Collaboration Workshop, Yokohama Institute for Earth Science, Yokohama, June 10, 2003 (as co-chair).
4. Wang, J., M. Jin, and P. McRoy, A 3-D coupled biological-physical model and its application to the 1996 spring plankton bloom in Prince William Sound, Alaska. Prince William Sound Biological Modeling Workshop, Anchorage, June 16-18, 2003
5. Wang, J., B. Wu, M. Jin, Search for causes and drivers: Which atmospheric regime is

responsible for sea ice motion in the central Arctic Ocean? The Second CAMP-FRSGC Collaboration Workshop, Yokohama Institute for Earth Science, Yokohama, Nov. 5, 2003 (as co-chair).

Oral:

1. Wang, J., M. Ikeda, S. Zhang, and R. Gerdes, Linking the northern hemisphere sea ice trend and quasi-decadal sea ice oscillation. AMS 7th Conference on Polar Meteorology and Oceanography. Hyannis, MA, May 12-16, 2003.
2. Wang, J., M. Ikeda, and F. Saucier, A coupled ice-ocean model in the pan Arctic-North Atlantic Ocean: Simulations of seasonal cycles. AMS 7th Conference on Polar Meteorology and Oceanography. Hyannis, MA, May 12-16, 2003.
3. Wu, B. and J. Wang, Possible feedback of winter sea ice in the Greenland and Barents Seas on the local atmosphere. AMS 7th Conference on Polar Meteorology and Oceanography. Hyannis, MA, May 12-16, 2003.
4. Jin, M. and J. Wang, Shelf dense water transport in the Beaufort Sea. AMS 7th Conference on Polar Meteorology and Oceanography. Hyannis, MA, May 12-16, 2003.
5. Wang, J., M. Jin, and P. McRoy, A 3-D coupled biological-physical model and its application to the 1996 spring plankton bloom in Prince William Sound, Alaska. The 4th International Conference on Ecosystem and Sustainable Development III, Siena, Italy, June 4-6, 2003
6. Wang, J., B. Wu, M. Jin, SEARCH for causes and drivers: Which atmospheric regime is responsible for sea ice motion in the central Arctic Ocean? The Fourth International Workshop on Global change: Connection to the Arctic 2003 (GCCA4), Toyokawa, Japan, Nov. 6-7, 2003.

Poster:

1. Wang, J., B. Wu, M. Jin, The Arctic Oscillation and Dipole Forcing and Arctic sea ice motion. SEARCH Open Science Meeting, Seattle October 27-29.

2004:

Invited:

1. Wang, J., A coupled ice-ocean-oilspill modelling system in the Beaufort Sea. MMS Headquarters, Herndon, VA, March 3, 2004.

2. Wang, J. Search for causes and drivers of Arctic climate variability: Which atmospheric regime is more important in the Arctic Ocean? The joint APL and Dept. of Atmospheric Science Seminar, University of Washington, March 4, 2004.

Oral:

1. Wang, J. and M. Jin. An ice-ocean-oilspill modelling system in the Beaufort Sea. CMI/MMS Annual Meeting, Feb. 17, Fairbanks, AK.
2. Wang, J. Search for causes and drivers of Arctic climate variability: Which atmospheric regime is more important in the central Arctic Ocean? The FRSGC Annual Symposium. Yokohama, Japan, March 22-24, 2004.
3. Search for drives and causes of Arctic climate system: relationship between the Arctic Oscillation/Dipole Anomaly and Arctic sea ice. International Chinese Ocean-Atmosphere Conference. June 28-30, 2004, Beijing

4. Dipole Anomaly and Arctic sea ice. The Second International Symposium on Polar Sciences of China. October 15-17, 2004, Beijing

Poster:

1. Wang, B. Wu, and M. Jin. A coupled ice-ocean model (CIOM) in the pan Arctic and northern North Atlantic Ocean: Simulation of seasonal cycle. Marine Science in Alaska 2004 Symposium, Jan. 12-14, Anchorage, AK.
2. Wang, B. Wu, M. Jin, J. Walsh and M. Ikeda. The Arctic Oscillation and Dipole Forcing and Arctic sea ice motion. Marine Science in Alaska 2004 Symposium, Jan. 12-14, Anchorage, AK.
3. Wang, J. M. Jin, D. Musgrave. A numerical hydrological digital elevation model and ocean circulation model in the Gulf of Alaska. Marine Science in Alaska 2004 Symposium, Jan. 12-14, Anchorage, AK.

2005:

Invited:

1. Modeling 3-D environmental hydrodynamic fields of the Bering Sea. Workshop on the Bering Sea Ocean Circulation Modelling, Feb. 3-4, PMEL/NOAA, Seattle.
2. Simulating the seasonal cycle of ice-ocean circulation in the Sea of Okhotsk. Workshop on modelling of sea ice and ocean circulation, with an emphasis on the Sea of Okhotsk, Feb. 18, ILTS, Hokkaido University, Japan
3. Assessment of the CCSR/NIES/FRCGC global model. Feb. 16, CCSR/Tokyo University, Japan

Oral:

1. Modeling 3-D environmental hydrodynamic fields of the Bering Sea. Marine Science Meeting in Alaska, Jan. 24-26, Anchorage
2. Vertical mixing effects on the phytoplankton bloom in the southeastern Bering Sea mid-shelf. Marine Science Meeting in Alaska, Jan. 24-26, Anchorage
3. Hydrological modelling in the North Slope. CMI/MMS Annual Review Meeting, March 8. Fairbanks.
4. A coupled ice-ocean-oilspill modelling system (SIOMS) in the Chukchi-Beaufort Seas. MMS Transfer Meeting, Anchorage, March 14-16, 2005.
5. Modeling the 20^{th} -21^{st} century Arctic climate using the CCSR/NIES/FRCGC global climate model. FRCGC Annual Symposium, March 17-18, Yokohama, Japan.
6. The Arctic winter atmospheric Dipole Anomaly (DA) and sea ice motion: Data analysis and modeling. International Symposium on Sea Ice, Dec. 5-9, Dunedin, New Zealand.
7. Controls of the landfast ice-ocean ecosystem offshore Barrow, Alaska. International Symposium on Sea Ice, Dec. 5-9, Dunedin, New Zealand.

Poster:

1. The Arctic dipole anomaly and sea ice motion. Jan. 9-14, AMS Meeting, San Diego.
2. Search for drivers and causes of Arctic climate system: the relationship between the Arctic Oscillation and Dipole Anomaly and sea ice. EGU, Vienna, April 24-29, 2005. (solicited)
3. Evaluating the Earth Simulator global coupled ice-ocean module of the CCSR/NIES/FRCGC climate model. EGU, Vienna, April 24-29, 2005.

2006:

Invited:

1. Sea ice-ocean-oil spill modeling system (SIOMS) for the nearshore Beaufort and Chukchi Seas: improvement and parameterization (Phase II). Feb 14, CMI/MMS Annual Research Review Meeting, Fairbanks, Alaska.
2. IARC Arctic Modeling Group Activities: Modeling and climate change studies, Advancing Science and Technology in Arctic Climate Change Research, Fairbanks, March 6th, 2006.
3. The Arctic winter atmospheric Dipole Anomaly (DA) and sea ice motion: Data analysis and modeling. April 4-7, Old Dominion University, Norfolk, Virginia.
4. Modeling the 20th century Arctic climate using the CCSR/NIES/FRCGC global climate model. Workshop on Polar-Global Climate Modeling: Connection and Interplay. June 14-16, Fairbanks, Alaska.
5. Sea Ice-Ocean-oilspill Modeling System (SIOMS) for the nearshore Beaufort and Chukchi Seas: Improvement and parameterization (Phase II). May 24, MMS Modeling Review Board Meeting, MMS Headquarters, Herndon, Virginia. (oral)
6. Arctic atmospheric Dipole Anomaly and sea ice export as simulated using a climate GCM. UCLA, LA, Oct. 18, 2006
7. Simulating downscaling ice-ocean characteristics in the Beaufort-Chukchi seas using an IARC Coupled Ice-Ocean Model (CIOM). GLERL, NOAA, Ann Arbor, Oct. 30.

Oral:

1. Wang, J. and H. Hu, 2006: Downscaling ice-ocean characteristics in the Beaufort-Chukchi seas simulated by an IARC Coupled Ice-Ocean Model (CIOM). Jan 22-25, Marine Science Symposium, Anchorage.
2. Jin, M. and J. Wang, 2006: Development of coupled ice-ocean ecosystem and application to the ice-core data in land fast ice offshore Barrow. Jan 22-25, Marine Science Symposium, Anchorage.
3. Hu, H. and J. Wang, 2006: Modeling the Bering Sea Thermodynamic Characteristics Using an IARC Coupled Ice-Ocean Model (CIOM). Jan 22-25, Marine Science Symposium, Anchorage.
4. Mizobata, K. and J. Wang, 2006: Summer chlorophyll distributions related to the runoff-ocean-ice interaction in the Beaufort/Chukchi Sea. Jan 22-25, Marine Science Symposium, Anchorage.
5. Wang, J. 2006: Modeling the 20th century Arctic climate using a global climate model. AGU Fall Meeting, San Francisco, Dec. 10-15, 2006.

Poster:

1. Deal, C.J., M. Jin, J. Wang and N. Tanaka, January 2006. An ecosystem model study of plankton and nutrient dynamics on the Bering Sea shelf with a focus on the nitrogen budget and water column nitrification, Exxon Valdez Marine Science Symposium, Anchorage, Alaska, poster presentation.
2. Jin, M., C. Deal, J. Wang, 2006: Controls of the landfast ice-ocean ecosystem offshore Barrow, Alaska. Ocean Science Meeting, Feb. 20-24, Honolulu.
3. Hu, H. and J. Wang, 2006: Modeling the Bering Sea Thermodynamic Characteristics Using an IARC Coupled Ice-Ocean Model (CIOM). Ocean Science Meeting, Feb. 20-24, Honolulu.
4. Mizobata, K. and J. Wang, 2006: Summer chlorophyll distributions related to the runoff-

ocean-ice interaction in the Beaufort/Chukchi Sea. Ocean Science Meeting, Feb. 20-24, Honolulu.

5. Zhang, S. and J. Wang, 2006: Coupling the CICE3.1 to ROMS. Ocean Science Meeting, Feb. 20-24, Honolulu.
6. Wang, J. and H. Hu, 2006: Downscaling ice-ocean characteristics in the Beaufort-Chukchi seas simulated by an IARC Coupled Ice-Ocean Model (CIOM). Ocean Science Meeting, Feb. 20-24, Honolulu.
7. Wang, J., H. Hu, K. Mizobata, M. Jin, 2006: Downscaling ice-ocean characteristics in the Beaufort-Chukchi seas simulated by an IARC Coupled Ice-Ocean Model (CIOM). ARCUS 18th Annual Arctic Forum, Washington D.C., May 25-26.
8. Modeling the 20th century Arctic climate using the CCSR/NIES/FRCGC global climate model. Workshop on Polar-Global Climate Modeling: Connection and Interplay. ARCUS 18th Annual Arctic Forum, Washington D.C., May 25-26.

2007:

Invited:

1. Sea ice-ocean-oil spill modeling system (SIOMS) for the nearshore Beaufort and Chukchi Seas: improvement and parameterization (Phase II). Feb 6, CMI/MMS Annual Research Review Meeting, Fairbanks, Alaska.
2. Wang, J. IARC Arctic modeling progress: Combination of large-scale and downscaling simulation. The JAMSTEC Annual Symposium. Yokohama, Japan, March 19-20, 2007.

Oral:

1. Wang, J., Arctic climate variability in the 20th century. Jan 21-24, Marine Science Symposium, Anchorage.
2. Jin, M. and J. Wang: Sea ice algae modeling in the Bering Sea. Jan 21-24, Marine Science Symposium, Anchorage.
3. Wang, J. Dipole Anomaly determined from the 20th century GCM simulation. GCCA7, Fairbanks, Feb. 19-20.
4. Modeling Ocean Circulation in the North Aleutian Basin. Sep 8, MMS Headquarters, Herndon, VA.

Poster:

1. Wang, J. and H. Hu, K. Mizobata: Downscaling ice-ocean characteristics in the Beaufort-Chukchi seas simulated by an IARC Coupled Ice-Ocean Model (CIOM). AYK-SSI Science Meeting, Feb 6-8, Anchorage.