

Curriculum vitae (CHEN, YONG)

PERSONAL DATA:

Business and mailing address:

218 Libby Hall
 School of Marine Sciences
 University of Maine
 Orono, Maine 04469
 Tel. (207) 581-4303, Fax: (207) 581-4388
 Email: ychen@maine.edu
 Chen Lab Website: <https://www.umaine.edu/chenlab/>

Current position:

Tenured Full Professor
Fellow of the Senator George J. Mitchell Center for
Sustainability Solutions

EDUCATION:

Doctor of Philosophy in Zoology with minor in Statistics, September 1991 – April 1995
 Department of Zoology, University of Toronto, Canada.
Supervisor: Professor J. E. Paloheimo.
Major: *Fisheries population dynamics*
Minor: *Statistics*.
Thesis title: *Parameter estimation and data analysis in fisheries*.

Master of Science in Zoology, January 1990 - November 1991 (degree awarded in Nov. 1991).
 Department of Zoology, University of Toronto, Canada.
Supervisor: Professor H. H. Harvey
Major: Fish Ecology
Thesis title: Growth comparisons and analysis on thirty-three white sucker, *Catostomus commersoni*, populations in Ontario with reference to environmental variables.

Bachelour of Agriculture in Fisheries Science, September 1979-July 1983.
 Department of Fisheries, Qingdao Ocean University
Specialist Program in Fishing Science
Thesis title: Design of 600 HP Pair Trawls.

GENERAL RESEARCH INTERESTS AND EXPERTISE:

Fisheries Population Dynamics, Fisheries Stock Assessment, Fisheries

Management, Fisheries Sampling/Survey Design, Fisheries Ecology, Ecosystem-based Management, Fish Life History, Harvest Control Rules and Management Strategy Evaluation, Statistical and Mathematical Modelling, Computer Simulations, Computation-intensive Methods, Multivariate Statistics, Spatial Statistics, Complex System Analysis, and Ecosystem Modelling.

AWARDS

- 1990: University of Toronto Open Fellowship.
- 1991: Jeanne F. Goulding Ecological Fellowship.
- 1992: Canadian Natural Sciences and Engineering Research Council Postgraduate Scholarship.
- 1992: Ontario Graduate Scholarship (**declined due to the NSERC scholarship**).
- 1993: Canadian Natural Sciences and Engineering Research Council Postgraduate Scholarship.
- 1994: Ontario Graduate Scholarship.
- 1995-96: Canadian Natural Sciences and Engineering Research Council (NSERC) Postdoctoral Fellowship (**declined due to the acceptance of a job in the New South Wales Fisheries Department in Australia**).
- 1997 – 2000: NSERC Associate Chair in Fisheries Conservation at the Memorial University of Newfoundland
- 1998-2000: Researcher of the Canadian Foundation for Innovation
- 2008: University of Maine Graduate Mentor Award**

SELECTED COMMITTEE AND SERVICE WORK SINCE YEAR 2000

- **Editor**, Canadian Journal of Fisheries and Aquatic Sciences (Feb. 1, 2013 –)
- **Associate Editor**, Canadian Journal of Fisheries and Aquatic Sciences (2007- Feb. 2013)
- **Member** of the New England Fisheries Management Council Scientific and Statistical (SSC) Committee (2011 – present)
- **Panelist**, Pacific Islands Fisheries Science Center Stock Assessment Science Program Review (May 19-23, 2014)
- **Coordinator** of the University of Maine Marine Policy Program (2009-2014)
- **Coordinator** of the UMaine Dual Master Degree program in Natural and Social Sciences (2009- 2014)
- **Member** of the SMS Peer Review Committee and Space Committee (2004 – 2006, 2009 - 2014)
- **Editorial board**, Journal of Ocean University of China (2011-present)
- **Center of Independent Expert (CIE) for reviewing NOAA Fisheries**

Stock Assessment (have done reviews for Caribbean blue tang and triggerfish, Gulf of Mexico tilefish and yellowedge grouper, Pacific cod, albacore, billfish, Alaska crab survey, rockfish,.....).

- **Member** of Peer-review Committee of New Jersey Offshore Wind Power Project Environmental Assessment (2008 – 2010)
- **Co-Chair** of the Atlantic States Marine Fisheries Commission Horseshoe Crab Stock Assessment Peer Review Committee (Dec. 2009)
- **Member** of the Review Panel of American Lobster Sampling/Scientific Survey Program of the Maine Department of Marine Resources (2009) and California spiny lobster stock assessment program (2011)
- **Member** of the Editorial Board of Chinese Journal of Fisheries Science (2008 – present)
- **Chair**, School of Marine Science (SMS) Graduate Admission Committee (2003- 2004)
- **Member** of the SMS Graduate Admission Committee (2001-2003, 2014-);
- **Member** of the Atlantic State Marine Fisheries Commission Lobster Model Development Committee (*the stock assessment framework developed in my lab has been used to assess the American lobster fisheries in the US*);
- **Fisheries Conservation Advisor** for the Kuwait Institute of Sciences (evaluating the impacts of the Gulf War on the Kuwait fisheries resources);
- NMFS Stock Assessment Review Committee 37,
- **More** fisheries stock assessment committee work in the US and Canada.....

WORK EXPERIENCE

School of Marine Sciences, University of Maine, Orono

- Professor (tenured, 9/1/2007 - present)
- Associate Professor (tenured, 9/1/2003 –8/31/2007)
- Assistant Professor (7/1/2000 – 8/31/2003)

Senator George J. Mitchell Center for Sustainability Solutions, University of Maine, Orono

- Fellow in the Senator George J. Mitchell Center for Sustainability Solutions

Memorial University of Newfoundland, Canada

- Adjunct Professor of Biology Department (May 2001 – present)
- Assistant Professor (July 1997 – August 2000), Fisheries and Marine Institute
- NSERC Associate Chair in Fisheries Conservation (July 1997 – August 2000)
- Cross-appointed to the Department of Biology (August 1997 – August 2000)
- Cross-appointed to the Department of Mathematics & Statistics (Sept. 1997 – Aug. 2000)
- Canada Foundation for Innovation Researcher (January 1999 - Aug. 2000)

New South Wales (NSW) Fisheries Research Institute, Cronulla, NSW, Australia

- Population Dynamicist (Scientific Officer, probation) January 1995 - January 1996
- Population Dynamicist (permanent NSW State civil servant) January 1996 - June 1996
- Senior Population Dynamicist (permanent NSW State civil servant) July 1996 - July 1997

OTHER WORK EXPERIENCE

Instructor, Training Class on Computer Simulations in Fisheries, Pacific Island Fisheries Science Center, May 2015.

Kuwait Institute of Scientific Research (Consultant)

- Fisheries Conservation Consultant (studied the impacts of the Gulf War on the area fisheries and provided the results to the UN War Compensation Committee (2000 - 2002).

National Institute of Waters and Atmospheric Research, Wellington, New Zealand

- NIWA Fisheries Stock Assessment Visiting Scientist April 1999 - May 1999

Department of Fisheries, Central China Agricultural University, Wuhan, China

- Adjunct Professor in Fisheries (Jan. 2005 – present)
- Teaching Assistant (July 1983 – Nov. 1988)

Shanghai Ocean University

- Adjunct Professor (2006 – present)
- Sabbatical Visiting Professor (Jan. – Dec. 2015)

National Taiwan University

- Visiting Professor March 2004, October 2005 (invited and paid by the National Research Council)
- Sabbatical Visiting Professor Oct. 2006 – January 2007 (Sabbatical, Invited and financially supported by the National Research Council)

Omani Ministry of Fisheries Wealth

- Scientific Consultant and Reviewer (March, July-August 2009)

Worldfish Center, Penang, Malaysia

- Visiting Scientist Sept. 2006 (Sabbatical, Invited and financially supported by the Worldfish Center)

Department of Zoology, University of Toronto:

1990-1994: BIO150Y Lab Instructor.

1991-1992: ZOO486H Teaching Assistant in Environmental Factor Lab Course.

1988-1994: Graduate Research Assistant.

TEACHING ACTIVITY

Courses lectured at the Memorial University of Newfoundland (September 1997- July 2000)

Graduate course:

MMS6002 Quantitative Methods in Fisheries for graduate students in Fisheries Resources Management Program (3 credits; every fall semester)

Undergraduate course:

STAT2500 Statistics for Business and Arts (3 credits; every fall semester)

Courses lectured at the University of Maine (since July 1, 2000; Research:Teaching - 75%:25%)

Graduate courses

SMS 562 Fisheries Population Dynamics (3 credits; every Fall semester, 100% responsibility)

SMS 598-05:Special topics in Marine Sciences (3 credits, spring 2001, 100% responsibility)

SMS 598-001: Special topics in Marine Science: Spatial dynamics of marine fisheries and its impacts on fisheries stock assessment and management (3 credits, spring 2002, 100% responsibility)

SMS 597: Independent study: Spatial analysis of fisheries data (3 credits, as needed, 100% responsibility)

SMS 597: Statistical Modelling (3 credit, as needed, 100% responsibility)

SMS 699. Graduate thesis (fall, summer, and spring semesters, 100% teaching responsibility): Each MS student takes about 9 thesis credit hours, and each PhD students take 18+ thesis credit hours.

Undergraduate course

SMS 321 Introduction to Fisheries Sciences (3 credits, every Spring semester, 100% responsibility)

SMS 400 Capstone Research Experience (3-4 credits, 100% responsibility)

COMPUTER PROGRAMMING LANGUAGES AND SOFTWARE

PROFICIENT:

AD Model Builder, C, C++, R, FORTRAN, SAS, Integrated Stock Assessment Toolbox software (e.g., Stock Synthesis), and NTSYS (for multivariate analysis)

MAJOR STOCK ASSESSMENT PROGRAM AND COMPUTER SOFTWARE DEVELOPED

- ✓ *Bayesian seasonal and sex-specific length-structured American Lobster Stock Assessment Model (Named as University of Maine Model), which has been used by Atlantic States Marine Fisheries Commission for the assessment of all the three lobster stocks in northeast*

USA (Gulf of Maine, Georges Bank and Southern New England stocks)

- ✓ *Sex-specific length-structured stock assessment model for northern shrimp stock in the Gulf of Maine (used by Atlantic States Marine Fisheries Commission).*

RESEARCH GRANTS

Research grants held at the Memorial University of Newfoundland (Canada)

- (1) "Assessing fish stocks using robust methods" Canadian Natural Science and Engineering Research Council (NSERC) operating grant - \$73,600, 1998-2001 (Chen)
- (2) "The dynamics of fish stocks and their ecosystems in Newfoundland and Labrador" Canadian Natural Science and Engineering Research Council (NSERC) — Industry Chair program - \$36,000 1997-2001 (Chen)
- (3) "Cod ecosystems" Canadian Natural Science and Engineering Research Council (NSERC) Chair in Fisheries Conservation — \$5,000,000 from 1997 to 2001 (excluding ship time) (Rose, Snelgrove, and Chen)
- (4) A New Initiative in Fisheries and Marine Science at the Memorial University of Newfoundland; Application of New Acoustic Technologies to the Newfoundland Marine Ecosystem - \$367,000 1998-1999 (Rose, Snelgrove, and Chen)

Grants held at the University of Maine since July 1, 2000

- 1) Start-up fund from the University of Maine \$73,000 (2000 - 2002) (Chen)
- 2) NOAA/Sea Grant program: Simulation study of the lobster egg-per-recruit model \$5,292 (Nov. 2000 – Jan. 2002) (Chen and C. Wilson)
- 3) National Science Foundation China: A risk analysis of aquaculture program on lake ecosystem in China, 400,000 Chinese Dollars (2000-2003) (Yong Chen of UMaine and L. Chen of East China Normal University). The grant is managed by East China Normal Univ. in Shanghai, China
- 4) Northeast Consortium/NOAA: Developing stock assessment methods for the New England deep-sea red crab fishery (part I) (2001-2003) (Wahle, Williams, and Chen). \$274,783
- 5) NOAA Saltonstall-Kennedy Program, Developing stock assessment methods for the New England deep-sea red crab fishery (part II) (2002) (Wahle, Williams, and Chen). \$85,302
- 6) Maine Marine Science Program (DMR): Study lobster and sea urchin population dynamics in Maine \$43,800 (2001-2002) (Chen)
- 7) Maine Department of Marine Resources: Lobster stock assessment and biological reference point \$50,000 (2001-2002) (Chen)
- 8) Maine Sea Urchin Zone Council: Developing a fishery-independent survey program for the Maine sea urchin population \$79,000 (2001-2002) (Russell, Hunter, and Chen)
- 9) Thistle Marine LLC. Spatial dynamics of the lobster fishery \$7,900 (2002) (Chen)
- 10) Northeast Consortium/NOAA: Developing a computer simulation framework for identifying an optimal fishery-independent survey program for the MS sea urchin population. \$23,920 (2001-2002) (Chen)
- 11) NOAA/Sea Grant: Developing a Bayesian framework for the American lobster stock assessment \$201,188 (Feb. 2002-Jan. 2004) (Chen and Wilson)

- 12) Maine Department of Environmental Protection/Sea Grant: Spatial dynamics of the lobster stock and fishing effort. \$70,000 (Feb. 2002-Jan. 2004) (Chen et al.)
- 13) Maine Sea Urchin Zone Council: Developing, evaluating, and refining stock assessment framework for the Maine sea urchin fishery \$39,038 (2002-2003) (Chen and Hunter)
- 14) Maine Sea Grant and MIT Sea Grant: a preliminary study of spatial dynamics of groundfish fisheries in the Gulf of Maine. \$18,710 (2002) (Chen)
- 15) NOAA Synthesis Program: Impacts of transport process on lobster fishery patterns. (2002-2004) Incze and other 10 PIs (\$69,847 for Chen)
- 16) Northeast Consortium/NOAA: Abundance, migration and recruitment of Northern shrimp in the Gulf of Maine: an industry-initiated verification survey and environmental monitoring pilot project. (2002-2003) Schick and other 11 PIs (\$3,000 for data analysis, Chen)
- 17) Northeast Consortium/NOAA: A preliminary study of Maine sea cucumber fishery (\$25,000) (Chen and Feindel)
- 18) National Marine Fisheries Services: Codend mesh selectivity in the Gulf of Maine: Multispecies trawl fishery. \$182,560 (He, Bouchard, and Chen)
- 19) Maine Department of Marine Resources: Studying the Jonah crab fishery in Maine. \$38,557 (2001-2004) (Chen)
- 20) Maine Lobster Advisory Committee and Department of Marine Resources: An assessment of American Lobster stock in the Gulf of Maine. \$33,409 (2003-2004) (Chen)
- 21) Maine Department of Marine Resources: Cooperative fisheries research. \$26,727 (2003-2004) (Chen)
- 22) Northeast Consortium/NOAA: An evaluation of the Maine sea cucumber resources and impacts of exploitation \$163,745. 2003-2007 (Chen et al.)
- 23) Maine Department of Marine Resources: cooperative fisheries research. \$33,409 (2004-2005) (Chen)
- 24) Atlantic State Marine Fisheries Commission: Lobster stock assessment. \$41,207 (2004-2006) (Chen)
- 25) Maine Department of Marine Resources: Study of marine baitworm in Maine. \$32,517 (2004-2005) (Chen)
- 26) Maine Lobster Advisory Committee: Testing biological reference point for the American lobster. \$29,600 (2004-2005) (Chen)
- 27) Maine Sea Grant /Northeast Consortium: Fisheries Research in Maine. \$40,000, Chen (2004 – 2005)
- 28) Sea Grant/NOAA: An agent-based model of the Maine lobster fishery. Wilson, Chen, and Hiebeler \$75,041 for Chen (2004-2007)
- 29) NOAA and National Sea Grant: Fisheries Population Dynamics PhD Fellowship program \$114,390 Chen (2005 – 2008)
- 30) NOAA/Maine Sea Grant: Developing and evaluating biological reference points for the American lobster (*Homarus americanus*) fishery management. \$219,959 Chen (2006 – 2008).
- 31) NOAA/Cape Cod Commercial Hook Fishermen's Association: Using Hook and Line to Minimize Cod Bycatch in a Directed Haddock Fishery on Georges Bank and in the Gulf of Maine. \$17,211 Chen (2006)

- 32) Maine Department of Marine Resources: Monhegan project: closed area investigation of effort in the Maine lobster fishery. \$2,988 (2006) Chen
- 33) Maine Sea Grant: A preliminary study to develop and evaluate spatially-explicit stock assessment model for cod fisheries. \$4,000 (2006-2007) Chen
- 34) Maine Sea Grant: Analyzing Maine inshore groundfish trawl survey data. \$31,290 (2006-2007) Chen
- 35) Maine Department of Marine Resources Cooperative Agreement for Assessing the Maine Marine Resources, \$ 17,835, Chen (2006-2007)
- 36) Department of Marine Resources: Lobster Research, Education and Development: Developing, evaluating, and outreaching the Bayesian length-structure lobster stock assessment model, \$139,549, Chen and Wilson (2007-2008)
- 37) Department of Marine Resources: Lobster Research, Education and Development: Analyzing growth data of American lobster, \$70,000, Wahle, Chen and Lawson (2007-2008)
- 38) National Science Foundation (NSF): Collaborative Research: Direct and indirect coupling of fisheries through economic, regulatory, environmental and ecological linkages, Holland et al. (\$100,000 for Chen; 2007-2012).
- 39) Maine Department of Marine Resources: Cooperative fisheries research. \$14,998 (2007-2008) (Chen)
- 40) NOAA/ Sea Grant: Modeling ecosystem dynamics for American lobster (*Homarus americanus*) in the Gulf of Maine. \$205,880, Chen and Wilson (2008 - 2010)
- 41) NASA: Lobster settlement forecasting in the Gulf of Maine. \$500,000, Thomas, Xue, Chen, Wahle, and Pershing (2008 – 2010)
- 42) Maine Department of Marine Resources Cooperative Agreement for Assessing the Maine Marine Resources, \$ 14,222, Chen (2008-2009)
- 43) Maine Department of Marine Resources: Studying the northern shrimp trap fisheries in Maine. \$51,630, Chen, (2009-2011)
- 44) Maine Department of Marine Resources: Developing a sea scallop sampling program for their distribution and abundance in federal waters of the Gulf of Maine \$31,051, Chen, (2009-2010)
- 45) NSF/Gulf of Maine Research Institute: A study of the growth of juvenile American lobsters. \$106,017, Chen, (2009-2011)
- 46) NFS: Fine-scale Dynamics of Human Adaptation in Coupled Natural and Social Systems: An Integrated Computational Approach Applied to Three Fisheries \$1,021,289, Wilson, Acheson, Chen, and Johnson (2009-2013)
- 47) NOAA/Maine Sea Grant: A comparative study of monitoring programs for coherence in quantifying the dynamics of American lobster fisheries in the state of Maine. \$129,368, Chen and Wilson (2010-2013)
- 48) NOAA/Maine DMR: Retrospective problems in Atlantic herring stock assessment. \$178,547. Chen (2010-2013)
- 49) NOAA/CINAR: Incorporating Sediment and Hydrography Data in Assessments for Tilefish and Lobster. \$39,283 (Chen) 2010-2012
- 50) Penobscot East Resource Center. Developing a longline sentinel survey fishery. \$70,000 (Chen) 2011-2013.

- 51) National Sea Grant/NOAA: Spatial dynamics in fisheries stock assessment. \$115,500 (Chen and Hart) 2010-2013
- 52) Maine DMR: Update and maintenance of American lobster stock assessment model, \$29,116 (Chen) 2011
- 53) Maine Department of Marine Resources: Evaluating growth of scallop in Cobscook Bay (Chen) \$10,424 (2012)
- 54) Maine DMR: Extended study of trap bycatch in the shrimp fishery. \$10,933 (Chen) 2011
- 55) NOAA/Maine DMR: Retrospective problems in Atlantic herring stock assessment. (Chen) \$178,547 (Chen) 2010-2013
- 56) Maine Department of Marine Resources and Atlantic States Marine Fisheries Commission. Developing Bayesian stock assessment model for northern shrimp \$115,000 (Chen) (2012-2014)
- 57) Maine Department of Marine Resources: Scallop survey in federal waters of Gulf of Maine (Chen) \$71,218 (2012-2014)
- 58) Maine Department of Marine Resources and NOAA Cooperative Research Program: Spatio-Temporal Distribution of Cusk Bycatch in the Gulf Of Maine Lobster Fishery(Chen) \$52,930 (2012 – 2013)
- 59) NOAA Cooperative Research Program: develop a sentinel survey longline fishery in northern Gulf of Maine (Chen and Dority). \$207,930 (2012-2013)
- 60) California Department of Fish and Games: Develop management strategy evaluation for California spiny lobster. (Chen) \$106,296 (2012-2013)
- 61) NOAA: The Eastern Gulf of Maine sentinel jigging/longline survey/fishery in 2013. (Chen and Dority) \$212,027 (2013-2014)
- 62) Maine DMR: Update and maintenance of American lobster stock assessment model, \$25,000 (Chen) 2013-2014
- 63) NOAA NERO: Improving survivability of cusk bycatch in the GOM, \$10,000 (Chen) 2012-13.
- 64) NOAA: A preliminary study to develop an abundance index for cusk from their bycatch in the gulf of Maine lobster trap fishery, \$11,076 (Chen) 2013-2014.
- 65) NSF Coastal SEES: Collaborative Research: Resilience and Adaptation of a Coastal Ecological-Economic System in Response to Increasing Temperature. \$1,125,760 (Pershing, Chen, Wahle, Thomas) (2013-2017)
- 66) NOAA/Maine Sea Grant: Evaluate performance of length-structured models for the assessment of northern shrimp and Atlantic herring in the Gulf of Maine (Chen) \$143,778 (2014-2016)
- 67) Maine NSF EPSCoR SSI Program: Understanding Ecological, Social, and Economic Aspects of Bycatch and Building Stakeholder Alliances in the Gulf of Maine Lobster Fishery (Chen and Beitzl) \$62,117
- 68) NOAA SK Program: Improving survivability of cusk and Atlantic cod bycatch discarded in the Gulf of Maine lobster trap fishery. (Chen) \$226,542 (2014-2016)
- 69) NOAA: The Eastern Gulf of Maine sentinel jigging/longline survey/fishery in 2014 (Chen) \$213,027/year x 5 years = \$1,065,135 (2014-2019)

- 70) Penobscot East Resource Center: Sentinel Fish Survey in Eastern Gulf of Maine (Chen) \$31,000 (2015-16)
- 71) Marine Department of Marine Resources: Optimization of lobster sea sampling program (Chen) \$25,000 (2016 -)
- 72) Maine Department of Marine Resources: Scallop survey in federal waters of Gulf of Maine (Chen) \$75,000 (2016 - 2018)
- 73) NOAA FATE Program: Incorporating Environmental and Ecological Variables to Improve Stock Assessments: An Application to Northern Shrimp in the Gulf of Maine (Chen) \$174,404 (2015-2017)

Most of my funding from the Maine DMR supports data analysis, modeling, and stock assessment. The fieldwork components for some of the cooperative projects between my lab and DMR scientists listed above are conducted by the Maine Department of Marine Resources (e.g., their inshore trawl survey, sea urchin survey, sea cucumber survey, marine worm survey, lobster port and sea sampling programs, etc.) with the involvement of myself and my students in survey design and field implementation, and their costs were not included in my project funding listed above.

GRADUATE STUDENTS COMPLETED THEIR PROGRAMS UNDER MY ADVISE/CO-ADVISE

- Yingming Zhao (MS, started Sept. 1998, co-advised with Dr. Joe Brown) “Impacts of cod egg sizes on survival and growth rates of larvae” (at the Memorial University of Newfoundland, *completed May 2001, received PhD at U of Toronto in 2005*)
- Harshana Rajakaruna (MS, started Sept. 1999, co-advised with Dr. Paul Snelgrove) "Impacts of the quality of fisheries data on fish stock assessment and fisheries management" (at the Memorial University of Newfoundland, *completed May 2003, currently Natural Resources scientist in Sri Lanka*)
- Robert Grabowski (MS in Marine Biology, started Sept. 2001). Population dynamics and spatial analysis of the Maine green sea urchin (*Strongylocentrotus droebachiensis*) fishery (at the University of Maine, *completed in May 2003, currently PhD student at the Southern Florida University*)
- Kevin Scheirer (MS in Marine Policy, started January 2001). Spatial dynamics of lobster fishery and its impacts on the fishery management in Maine (at University of Maine, completed in Dec. 2003 currently Researcher at GOM Research Institute)
- Yan Jiao (Ph.D. in Marine Biology, started Sept. 2000) Fish Population Dynamics modeling” (at the Memorial University of Newfoundland, completed in Jan. 2004, currently Associate Professor at Virginia Tech)
- Yuying Zhang (MS in Oceanography, started Sept. 2003). Modeling the lobster ecosystem in the Gulf of Maine, completed in Aug. 2005)
- Sheril Kirshenbaum (Dual MS degrees in Marine Biology and Marine Policy, January 2003 – Nov.

- 2005). Assessment and management of sea cucumber fishery in Maine, Knauss Fellow (Legislative Intern in the US Senate) Currently Associate in Research for Ocean and Coastal Policy, Nicholas Institute for Environmental Policy Solutions, Duke University.
- Kate Jones (Dual MS degrees in Marine Biology and Marine Policy, Sept. 2002 - Dec. 2005). Sea urchin stock assessment and management in the State of Maine (Research associate at Memorial University of Newfoundland, Canada)
- Kathleen Reardon (Dual MS degrees in Marine Biology and Marine Policy, January 2003 – April 2006). Assessment, monitoring and management of Jonah crab in Maine (currently Marine Resource Scientist at the Maine Department of Marine Resources)
- Adrian Jordaan (PhD in Marine Biology, January 2003). Aquatic ecology and community in the Acadia National Park, Maine (Completed in Aug. 2006; currently Assistant Professor at UMASS Amherst)
- Darcie Couture (Dual MS candidate in Marine Biology and Marine Policy, Sept. 2002). The management and dynamics of the Maine lobster fishery (started her current position in April 2005 as the Director of Environment Monitoring Section in the Maine Department of Marine Resources)
- Yunkai Li (Visiting PhD student from the East China Normal University supported by the Ministry of Education of China and University of Maine, 2006-2007), Modeling ecosystem of East China Sea.
- Mike Errigo (PhD student in Marine Biology, Sept. 2004 – Nov. 2008). Structured errors in modelling fisheries population dynamics and stock assessment. (with the National Sea Grant-NOAA Fish Population Dynamics Fellowship)
- Danielle Brzezinski (Dual MS candidate in Marine Biology and Marine Policy, Sept. 2006- Sept. 2009). Groundfish and scallop spatial and temporal dynamics and their management implications. Knauss Fellow (Legislative Intern in the US Senate).
- Yi-Jay Chang (visiting PhD student from the National Taiwan University, supported by National Research Council of Taiwan), Lobster stock assessment and management 2007-2008.
- Yiping Ying (visiting PhD student from Ocean University of China, supported by NSF of China), Impacts of fish stock spatial structure on fisheries assessment and management 2009-2010.
- Yuying Zhang (PhD in the UMaine Interdisciplinary PhD program, started Sept. 2005 – May 2010). Lobster biological reference points. *Currently is a tenure-track Assistant Professor at Florida International University*)
- Cinamon Moffett (Dual MS program in Marine Biology and Policy, Sept. 2008), northern shrimp fisheries. Completed May 2011.
- Charlene Bergeron (MS in Marine Biology, Sept. 2007, co-advisor), Estimating growth of lobster from meta-analysis of tagging data. Completed Nov. 2011.
- Marissa McMahon (MS in Marine Biology, Jan. 2009, co-advisor) Lobster growth and environmental variables. Completed Dec. 2011.
- Alia Al-Humaidhi (Dual MS program in Marine Biology and Policy, Sept. 2007). Spatial dynamics of groundfish fisheries in the Gulf of Maine. Completed Feb. 2012.
- Bilin Liu (visiting PhD student from Shanghai Ocean University) 2012

Xuefang Wang (visiting PhD student from Shanghai Ocean University) 2012

Stefan Zahnd (Dual MS program in Marine Biology and Marine Policy, Sept. 2012) Lobster stock assessment.

Anna Henry (Dual MS program in Marine Biology and Policy, Sept. 2010). Developing a sentinel fishery in the eastern Gulf of Maine. Completed 2013.

Keri Stepanek (MS candidate in Marine Biology, started Sept. 2006) Inshore groundfish trawl survey in the Gulf of Maine. (arrangement has been made for Keri to keep her fulltime employment as a Marine Resource Scientist with the Maine Department of Marine Resources.

Timothy Bennett (MS in Marine Biology, Sept. 2010-). Wolffish population dynamics.

Michael Kersula (Dual MS program in Marine Biology and Policy, Jan. 2011- May 2014). Groundfish in Gulf of Maine.

Julia Beaty (Dual MS program in Marine Biology and Policy, Sept. 2011- May 2014). Atlantic Halibut fishery assessment and management

Sam Truesdell (PhD in Marine Biology and MS in Marine Policy, Jan. 2009 – Aug. 2014). Spatial dynamics in stock assessment for scallop fisheries (with the National Sea Grant-NOAA Fish Population Dynamics Fellowship)

Jui-han Chang (PhD in the UMaine interdisciplinary PhD program, Sept. 2007 – May 2015). Lobster fisheries in the Gulf of Maine

Jie Cao (PhD in Marine Biology Sept. 2010- May 2015). Evaluate lobster monitoring programs in Maine.

Errigo, Zhang and Brzezinski are recipients of the UMaine Provost Fellowship (the most prestigious scholarship for incoming graduate students at the UMaine) in 2004, 2005, and 2006, respectively.

I also co-advised three PhD students (Zaifu YANG, Bing SONG, and Qigen Liu) at the East China Normal University in Shanghai who were involved in a research project there funded by the Chinese National Science Foundation (NSFC oversea scholar project #30028018). They graduated with PhD degrees in 2003, 2004 and 2005, respectively.

GRADUATE STUDENTS CURRENTLY IN MY UMAINE LAB

Derek Olson (Dual MS program in Marine Biology and Policy, Sept. 2007), Sampling metapopulations.

Carl Wilson (PhD candidate in the UMaine interdisciplinary PhD program, Sept. 2008). Lobster fisheries.

Lisha Guan (PhD in Marine Biology, Sept. 2012-). Atlantic cod stock structure and stock assessment (co-advised with Dr. Jim Wilson)

Jocelyn Runnebaum (PhD in Marine Biology, Sept. 2012), Cusk bycatch in Maine lobster fisheries.

Kisei Tanaka (PhD student in Ecology and Environmental Sciences, Sept. 2013-) Climate changes and fish habitat modeling (NSF IGERT Fellow)

Kevin Staples (Dual MS student in Marine Biology and Policy, Sept. 2013-) Spatial and temporal variability of lobster molting

- Alexa Dayton (PhD student in interdisciplinary Program, Sept. 2013-) Lobster fishery and market.
- Bai Li (MS student in Marine Biology, Jan. 2014-) Evaluate performance of lobster management regulations using computer simulations
- James Becker (MS student in Marine Biology, Jan. 2014-). Temporal variability in life history traits for Atlantic herring in the Gulf of Maine.
- Mike Torre (PhD student in Marine Biology, Sept. 2014-), Scallop fishery and survey (NSF IGERT Fellow)
- Robert Boenish (PhD student in Marine Biology, Sept. 2014-), Atlantic cod discard mortality in lobster fishery.
- Mattie Rodrigue (MS student in Marine Biology, Sept. 2014-), Groundfish jigging and longline sentinel survey in northern Gulf of Maine
- Katherine Thompson (PhD student in Marine Biology, Jan. 2015-) Northern shrimp population dynamics under climate change.
- Mackenzie Mazur (MS student in Marine Biology, Sept. 2015 -) Evaluating lobster fishing efforts
- Max Ritchie (MS student in Marine Biology, Sept. 2015 -) Habitat modeling for green sea urchin and northern shrimp in Maine.

All my current graduate students are involved in one or more of my research projects, which become the topics of their research theses. My graduate students are funded by my research grants and scholarships.

GRADUATE STUDENTS I ADVISED or AM ADVISING AT SHANGHAI OCEAN UNIVERSITY, CHINA

- Jiangfeng Zhu, PhD, Tuna fishery and its bycatch assessment 2007-2010 (current work as a faculty member at SHOU)
- TONG, Yuhe. PhD. Management Strategy Evaluation of bigeye tuna in India Ocean 2008-2011 (currently work in the Hainan Fisheries Research Institute)
- LIU, Bilin. PhD Candidate. Oceanic squid ecology 2009-2012
- XU, Hailong. PhD Candidate. Impacts of stocking on fisheries resources. 2010 –2015
- Zhao, Jing. PhD Candidate. 2011-2015

POSTDOCTORAL AND VISITING RESEARCHERS IN MY LAB.

I have advised the following Postdoctoral Research Associates and they were all fully funded by my research grants:

- Dr. Minoru Kanaiwa (2002-2005, Green sea urchin and American lobster stock assessment): Dr. Kanaiwa become a tenure-track faculty member in Oct. 2005 at the Tokyo University of Agriculture in Japan
- Dr. Thomas Windholz (2002, Spatial statistics for the green sea urchin fishery): Dr. Windholz become a faculty member of the Idaho State University
- Dr. Ying Xue (2005-2006, Trophic dynamics of the GOM lobster ecosystem): Dr. Xue becomes a faculty member at the Ocean University of China, Qingdao, China.
- Dr. Shiquan Tian (2007 – 2008, 2010, fisheries stock assessment and management): Dr. Tian becomes a new faculty member of the Shanghai Fisheries University.
- Yong Liu (2008 - present): Visiting scientist from the East China Fisheries Research

- Institute, Fisheries stock assessment.
- Jiangfeng Zhu (Jan. 2009 -): Visiting scientist from the Shanghai Ocean University: fisheries stock assessment.
 - Dr. Murat Toplu (2010): Visiting scientist from Turkish Department of Fisheries
 - Dr. Nuri Celik (2010): Visiting scientist from Turkish Department of Fisheries.
 - Dr. Wenjing Guan (2011 - 2013): Postdoctoral Research Associate
 - Dr. Jie Cao (June 2015 -); Postdoctoral Research Associate
 - Dr. Jintao Wang (Sept. 2015 -): Postdoctoral Research Associate
 - XueHui Wang (Sept. 2015 – Aug. 2016): Visiting Scientist from South China Sea Fisheries Research Institute

UNDERGRADUATE STUDENT ADVISING (not updated after 2009: usually I advised 2-4 undergraduate students for their capstone projects per year)

The following students have completed their capstone/honor thesis research projects in my lab during the last 3 years:

- *Roberto Bongioanni (sea urchin fishery),*
- *John Speirs (Coastal Fisheries ecology),*
- *Glenn Chamberlain (American lobster fishery),*
- *Lindsay Hamlin (coastal fish community), and*
- *Chelsey Cronan (American lobster fishery)*
- *Mahima Jaini (Honor thesis, Maine green sea urchin biology and management policy)*
- *Jeremy Bander (Honor thesis, Shark habitat modelling in Florida)*
-

I am also the academic advisor of 3-5 undergraduate students per year.

Research Assistants and Research Associates who worked in my lab (paid from my research grants) (semesters and years indicated are the time when they work in my lab).

- Ms. Nichole Stenberg (undergraduate in Marine Biology, Spring 2002), part-time RA
- Ms. Kathryn Wisz (undergraduate in Marine Biology, Spring and Fall 2002, 2003), part-time RA
- Ms. Ellen Fortado (undergraduate in Marine Biology, Fall 2002), Part-time RA
- Mr. Adrian Jordaan (Graduate student in Marine Biology, Spring and Fall 2002)
- Ms. Xiemen Fang (Research Associate, 2002)
- Ms. Xiaowei Tian (Research Assistant, 2002)
- Mr. Bo Shi (High school student, summer 2002, attended MIT since Fall 2002)
- Ms. Erica He (High school student, summer 2002, attended Brown University since 2004)
- Ms. Liying Yan (Ph.D Candidate in computer sciences at University of Maine, summer 2003)
- Mr. Jared Carter (undergraduate student in Politics and Marine Biology, Fall 2003, Spring 2004) part-time RA
- Ms. Lindsay Hamlin (Student Research Assistant, 2004, 2005)
- Ms. Xiaoyan Liu (Student Research assistant, 2008-2010)
- Caitlin Losi (Lab Research Assistant, 2010- 2012)
- Amy Sherman, Sarah Conlin, and Bai Li (Lab Research Assistant, 2012)

PUBLICATIONS:

FULL PEER-REVIEWED JOURNAL PAPERS (names with * are my students or postdoc).

- (1) **Chen, Y.**, D. A. Jackson, H. H. Harvey. 1992. A comparison of von Bertalanffy and polynomial functions in modelling fish growth data. Canadian Journal of Fisheries and Aquatic Sciences 49:1228-1235.
- (2) Paloheimo, J. E. and **Y. Chen**. 1993. Estimation of effective effort from catch-at-age data. Canadian Journal of Fisheries and Aquatic Sciences 50:2421-2428.
- (3) **Chen, Y.**, D. A. Jackson, and J. E. Paloheimo. 1994. Robust regression approach to analyzing fisheries data. Canadian Journal of Fisheries and Aquatic Sciences 51:1420-1429.
- (4) **Chen, Y.** and J. E. Paloheimo. 1994. Robust regression approach to estimating fish mortality rates with a cohort-based model. Transactions of the American Fisheries Society 123:2421-2428.
- (5) **Chen, Y.** and J. E. Paloheimo. 1994. Estimation of fish length and age at 50% maturity using a logistic type model. Aquatic Sciences 56:206-219.
- (6) **Chen, Y.** and H. H. Harvey. 1994. Maturation of white sucker, *Catostomus commersoni*, populations in Ontario. Canadian Journal of Fisheries and Aquatic Sciences 51:2066-2076.
- (7) **Chen, Y.** and J. E. Paloheimo. 1995. A robust regression analysis of recruitment in fisheries. Canadian Journal of Fisheries and Aquatic Sciences 52: 993-1006.
- (8) **Chen, Y.** and H. H. Harvey. 1995. Growth, abundance, and food supply of white sucker, *Catostomus commersoni*. Transactions of the American Fisheries Society 124:262-271.
- (9) **Chen, Y.** and D. A. Jackson. 1995. Robust estimation of mean and variance in fisheries. Transactions of the American Fisheries Society 124:401-412.
- (10) **Chen, Y.** 1996. A Monte Carlo study on impacts of the size of subsample catch on estimation of fish stock parameters. Fisheries Research 26:207-223.
- (11) Paloheimo, J. E. and **Y. Chen**. 1996. Estimating fishing mortality and cohort sizes. Canadian Journal of Fisheries and Aquatic Sciences 53:1572-1579.
- (12) **Chen, Y.**, G. Liggins, K. Graham, and S. Kenelley. 1997. Modelling length-dependent offshore distribution of redbfish, *Centroberyx affinis*. Fisheries Research 29:39-54.
- (13) **Chen, Y.** and G. Gordon. 1997. Assessing at-sea discarding using a length-structured yield-per-recruit model. Fisheries Research 30:43-55.
- (14) Andrew, N. and **Y. Chen**. 1997. Optimal sampling for estimating the size structure and mean size of individuals caught in an abalone fishery. Fishery Bulletin 95:403-413.
- (15) **Chen, Y.** 1997. A comparison study of age- and length-structured yield-per-recruit models. Aquatic Living Resources 10:271-280.
- (16) **Chen, Y.** and N. Andrew. 1998. Parameter estimation in modelling the dynamics of fish stock biomass: are currently used observation-error estimators reliable? Canadian Journal of Fisheries and Aquatic Sciences 55:749-760.
- (17) **Chen, Y.**, G. Liggins, and R. West. 1998. A yield-per-recruit model for sequential fisheries and its application in evaluating the management strategy of changing incidental

- inshore fishing mortality. Aquatic Sciences 60:130-144.
- (18) **Chen, Y.** and J. E. Paloheimo. 1998. Can a more realistic model error structure improve parameter estimation in modelling the dynamics of fish populations? Fisheries Research 38:9-17.
- (19) **Chen, Y.** and S. Montgomery. 1999. Modelling the dynamics of rock lobster, *Jasus verreauxi*, stock in New South Wales, Australia. Fishery Bulletin 97:25-38.
- (20) **Chen, Y.** and S. Kennelly. 1999. Growth of spanner crab, *Ranina ranina*, off the east coast of Australia. Freshwater and Marine Research 50:319-325.
- (21) **Chen, Y.** and *G. S. Mello. 1999. Growth and maturation of cod (*Gadus morhua*) of different year classes in NAFO Subdivision 3Ps in Northwest Atlantic. Fisheries Research 42:87-101
- (22) **Chen, Y.** and D. Fournier. 1999. Impacts of atypical data on Bayesian inference and robust Bayesian approach in fisheries. Canadian Journal of Fisheries and Aquatic Sciences 56:1525-1533.
- (23) **Chen, Y.** and H. H. Harvey. 1999. Spatial structuring of length-at-age of the benthivorous white sucker (*Catostomus commersoni*) in relation to environmental variables. Aquatic Living Resources 12:351-362.
- (24) **Chen, Y.** and D. A. Jackson. 2000. An empirical study on estimators for linear regression analyses in fisheries and ecology. Fisheries Research 49:193-206
- (25) **Chen, Y.**, P. Breen, and N. Andrew. 2000. Impacts of outliers and mis-specification of priors on Bayesian fisheries stock assessment. Canadian Journal of Fisheries and Aquatic Sciences 57: 2293-2305
- (26) *Zhao, Y., **Y. Chen**, and J. Brown. 2001. Egg size, hatching temperature effects on size of Atlantic cod (*Gadus morhua*) larvae. Journal of Fish Biology 59:569-581.
- (27) **Chen, Y.** and M. Hunter. 2001. An application of robust Bayesian methods in fisheries stock assessment. Proceedings of the American Statistical Society Annual meeting, Aug. 6-9, 2001. Atlanta (CD publication).
- (28) **Chen, Y.** and C. Wilson. 2002. A simulation study to evaluate uncertainty associated with biological reference point F10% for the American lobster (*Homarus americanus*) fishery in the Gulf of Maine and some possible management implications. Canadian Journal of Fisheries and Aquatic Sciences 59: 1394-1403.
- (29) **Chen, Y.** and *H. Rajakaruna. 2002. Impacts of quantity and quality of fisheries data on stock assessment. Proceedings of the 3rd World Fisheries Congress, American Fisheries Society, Bethesda, MD (peer-reviewed).
- (30) *Zhao, Y., **Y. Chen**, and J. A. Brown. 2002. Impacts of egg size and hatching temperature on size, survival and growth of Atlantic cod larvae (*Gadus morhua*). Proceeding of the 3rd World Fisheries Congress, American Fisheries Society, Bethesda, MD (peer-reviewed)
- (31) **Chen, Y.** 2003. Quality of fisheries data and uncertainty in stock assessment. Scientia Marina 67:75-87.
- (32) **Chen, Y.** and M. Hunter. 2003. Assessing the green sea urchin (*Strongylocentrotus drobachiensis*) stock in Maine, USA. Fisheries Research 60:527-537.

- (33) **Chen, Y.**, L. Chen, and K. Stergiou. 2003. Quantity of fisheries data and uncertainty in stock assessment Aquatic Sciences 65:92-98.
- (34) **Chen, Y.**, *Y. Jiao, and L. Chen. 2003. A general approach to developing robust frequentist and Bayesian stock assessment methods in fisheries. Fish and Fisheries 4:105-120.
- (35) **Chen, Y.** and Y. Ye. 2003. Evaluation of changes in Kuwait fishery after the 1991 Gulf war. Aquatic Sciences 65:167-180.
- (36) **Chen, Y.**, M. Hunter, R. Vadas, B. Beal. 2003. Developing a growth transition matrix for the Maine sea urchin stock. Fishery Bulletin 101:737-744.
- (37) Jackson, D. A. and **Y. Chen**. 2003. Robust principal component analysis of ecological data. Environmetrics 14:1-11.
- (38) *Jiao, Y., D. Schneider, **Y. Chen**, and J. Wroblewski. 2004. An analysis of error structure in modeling stock-recruitment data of Gadus stocks using generalised linear models. Canadian Journal of Fisheries and Aquatic Sciences 61:134-146
- (39) *Jiao, Y., **Y. Chen**, D. Schneider and J. Wroblewski. 2004. A simulation study of impacts of error structure on modelling stock –recruitment data using generalised linear models. Canadian Journal of Fisheries and Aquatic Sciences 61:122-133.
- (40) *Scheirer, K., **Y. Chen**, and C. Wilson. 2004. Comparing two sampling programs for the Maine lobster fishery. Fisheries Research 68:343 – 350.
- (41) *Grabowski, R. and **Y. Chen**. 2004. Incorporating uncertainty into the development of biological reference points $F_{0.1}$ and F_{max} for the Maine green sea urchin (*Strongylocentrotus droebachiensis*) fishery. Fisheries Research 68:367-371.
- (42) * Jiao, Y. and **Y. Chen**. 2004. An application of generalized linear model in production model and sequential population analysis. Fisheries Research 70:367-376.
- (43) *Jiao, Y., **Y. Chen**, and J. Wroblewski. 2005. An application of composite risk assessment method in assessing fisheries stock status. Fisheries Research 72:173-183
- (44) *Grabowski, R., *T. Windholz, and **Y. Chen**. 2005. Estimating exploitable stock biomass for the Maine green sea urchin (*Strongylocentrotus droebachiensis*) fishery using a spatial statistics approach. Fishery Bulletin 103:320-330
- (45) **Chen, Y.**, *M. Kanaiwa, and C. Wilson. 2005. Developing a Bayesian stock assessment framework for the American lobster fishery in the Gulf of Maine. New Zealand Journal of Freshwater and Marine Sciences (Special issue on Lobster Biology and Management) 39:645-660.
- (46) *Kanaiwa, M., **Y. Chen**, and M. Hunter. 2005. An evaluation of a complex length-based fisheries stock assessment model for the green sea urchin fishery in Maine, USA. Fisheries Research 74:96-115.
- (47) *Rajakauna, H., **Y. Chen**, and P. Snelgrove. 2005. Is retrospective error a “true error”? mathematical basis of adaptive framework for virtual population analysis. Mathematical and Physical Fisheries Science 3:36-64.
- (48) *Kirshenbaum, S., Feindal, S., and **Y. Chen**. 2006. A study to tagging methods for the sea cucumber (*Cucumaria frondosa*) in waters off Maine. Fishery Bulletin 104:299-302.
- (49) **Chen, Y.**, S. Sherman, C. Wilson, J. Sowles, and *M. Kanaiwa. 2006. A comparison of two fishery-independent survey programs used to define the population structure of

- American lobster, *Homarus americanus*, in the Gulf of Maine. Fishery Bulletin 104:247-255.
- (50) Incze LS, Wahle RA, Wolff N, Wilson C, Steneck R, Annis E, Lawton P, Xue H, **Chen Y.** 2006. Early life history of lobster (*Homarus americanus*) populations in the Gulf of Maine. J Crustacean Biol 26: 555-564
- (51) Chang, Y. J., C. L. Sun, **Y. Chen**, S. Yeh, W. Chiang, and W. Su. 2007. Reproductive biology of the spiny lobster, *Panulirus Penicillatus*, in the southeastern coastal waters off Taiwan. Marine Biology 151:553-564.
- (52) **Chen, Y.**, L. Xu, X. Chen, and X. Dai. 2007. A simulation study of impacts of at-sea discarding and bycatch on the estimation of biological reference points $F_{0.1}$ and F_{max} . Fisheries Research 85:14-22.
- (53) *Liu, Q., **Y. Chen**, J. Li and L. Chen. 2007. The food web structure and ecosystem properties of a filter-feeding carps dominated deep reservoir ecosystem. Ecological Modeling 203:279-289.
- (54) *Zhang, Y. and **Y. Chen**. 2007. Modeling and evaluating ecosystem in 1980s and 1990s for American lobster (*Homarus americanus*) in the Gulf of Maine. Ecological Modeling 203:475-489.
- (55) Chen, X, X. Zhao, and **Y. Chen**. 2007. El Niño/La Niña Influence on the Western Winter- Spring Cohort of Neon Flying Squid (*Ommastrephes bartarmii*) in the Northwestern Pacific Ocean. ICES Journal of Marine Sciences 64:1152-1160.
- (56) Incze, L. S., H. Xue, N. Wolff, D. Xu, R. Wahle, C. Wilson, R. Steneck, E. Annis, P. Lawton and **Y. Chen**. 2007. Early Life History and a Modeling Framework for Lobster Populations in the Gulf of Maine. Journal of Crustacean Biology 26:555-564.
- (57) Hong, M., L. Chen, X. Sun, S. Gu, L. Zhang and **Y. Chen**. 2007. Metabolic and immune responses in Chinese mitten-handed crab (*Eriocheir sinensis*) juveniles exposed to elevated ambient ammonia. Comparative Biochemistry and Physiology: Toxicology & Pharmacology 145: 363-369. doi:10.1016/j.cbpc.2007.01.003.
- (58) **Chen, Y.**, X. Chen, and L. Xu. 2008. Developing a size indicator for fish populations. Scientia Marina 72: 221-229.
- (59) Chen, X J., Liu, B L., **Chen, Y.** 2008. A review of the development of Chinese distant-water squid jigging fisheries. Fisheries Research 89:211-221
- (60) *Kanaiwa, M., **Y. Chen**, and C. Wilson. 2008. Evaluating a seasonal, sex-specific size-structured stock assessment model for the American lobster, *Homarus americanus*. Freshwater and Marine Research 59:41-56.
- (61) Su, NJ, SZ Yeh, C.L. Sun, A. E. Punt, **Y. Chen**, S.P. Wang. 2008. Standardizing catch and effort data of the Taiwanese distant-water longline fishery in the western and central Pacific Ocean for bigeye tuna, *Thunnus obesus*. Fisheries Research 90:235-246.
- (62) **Chen, Y.**, C. L. Sun, and *M. Kanaiwa. 2008. Impacts of prior mis-specification on Bayesian fisheries stock assessment. Freshwater and Marine Research 59:145-156.
- (63) Wahle, R. A., C. *Bergeron, A. Chute, L. Jacobson and **Y. Chen**. 2008. The New

- England Deep Sea Red Crab Population Before and After the Onset of Harvesting. ICES Journal of Marine Sciences 65:862-872 doi:10.1093/icesjms/fsn058
- (64) Chen, X., **Y. Chen**, S. Tian, B. Liu, and W. Qian. 2008. An assessment of the west winter-spring cohort of neon flying squid (*Ommastrephes bartramii*) in the Northwest Pacific Ocean. Fisheries Research 92:221-230.
- (65) **Chen, Y.**, Y. Jiao, C. L. Sun, and X. Chen. 2008. Calibrating virtual population analysis for fisheries stock assessment. Aquatic Living Resources 21:89-97.
- (66) *Tian, S., X. Chen, **Y. Chen**, L. Xu and X. Dai. 2009. Evaluating habitat suitability index for *Ommastrephes bartramii* in the Northwestern Pacific Ocean. Fisheries Research 95:181-188.
- (67) *Li, Y., **Y. Chen**, B. Song, D. Olson, N. Yu, and L. Chen. 2009. Evaluating impacts of fisheries on ecosystem properties and developing optimal management strategies in a lake ecosystem. Fisheries Research 95: 309-324.
- (68) *Chang, Y. J., C.L. Sun, **Y. Chen**, S. Z. Yeh, W.C. Chiang. 2009. Incorporating uncertainty into the estimation of biological reference points for a spiny lobster (*Panulirus penicillatus*) fishery. New Zealand Journal of Freshwater and Marine Research 43:429-442.
- (69) Chiang, W.C., C.L. Sun, S.P. Wang, S.Z. Yeh, **Y. Chen**, W. Su, D.C. Liu, W.Y. Chen. 2009. Analysis of sex-specific spawning biomass per recruit of the sailfish, *Istiophorus platypterus*, in the waters off eastern Taiwan. Fishery Bulletin 107:265-277.
- (70) *Tian, S., X. Chen, **Y. Chen**, and X. Dai. 2009. Standardizing CPUE of *Ommastrephes bartramii* for Chinese squid-jigging fishery in the Northwest Pacific Ocean. Chinese Journal of Oceanology and Limnology 27:729-739. DOI: 10.1007/s00343-009-9199-7
- (71) *Cao, J., X. Chen, and **Y. Chen**. 2009. Influence of surface oceanographic variability on abundance of the western winter-spring stock of neon flying squid (*Ommastrephes bartramii*) in the northwest Pacific Ocean. Marine Ecological Progress Series 381:119-127.
- (72) *Liu, Y., **Y. Chen**, J. Cheng. 2009. A comparative study of optimization methods and conventional methods for sampling design in fishery-independent surveys. ICES Journal of Marine Sciences 66: doi:10.1093/icesjms/fsp157
- (73) *Liu, Y., J. Cheng, and **Y. Chen**. 2009. A spatial analysis of trophic composition: a case study of hairtail (*Trichiurus japonicus*) in the East-China Sea. Hydrobiologia: DOI 10.1007/s10750-009-9829-2.
- (74) *Tian, S., **Y. Chen**, X. Chen, L. Xu and X. Dai. 2009. Impacts of spatial scales of fisheries and environmental data on CPUE standardization. Freshwater and Marine Research 60:1273-1284.
- (75) *Li, Y., **Y. Chen**, *D. Olson, N. Yu, and L. Chen. 2009. Evaluating ecosystem structure and functioning of the East China Sea Shelf ecosystem, China. Hydrobiologia 636:331-351. DOI 10.1007/s10750-009-9964-9.
- (76) Incze, L. S., H. Xue, N. Wolff, D. Xu, C. Wilson, R., Steneck, R. Wahle, P. Lawton, N. Pettigrew, and **Y. Chen**. 2010. Connectivity of lobster populations in

- the Gulf of Maine Part II. Coupled biophysical dynamics. Fisheries Oceanography 19:1-20.
- (77) Chen, X., S. Tian, **Y. Chen**, and B. Liu. 2010. A modeling approach to identify optimal habitat and suitable fishing grounds for neon flying squid (*Ommastrephes bartramii*) in the Northwest Pacific Ocean. Fishery Bulletin 108:1-14.
- (78) *Jordaan, A., **Y. Chen**, D. W. Townsend and S. Sherman. 2010. Identification of ecological structure along an oceanographic gradient within the Gulf of Maine. Canadian Journal of Fisheries and Aquatic Sciences 67: 701-719
- (79) *Li, Y., *B. Song, **Y. Chen**, L. Chen, N. Yu, and *D. Olson. 2010. Changes in the trophic interactions and the community structure of Lake Taihu ecosystem from the 1960s to 1990s. Aquatic Ecology 44: 337-348
- (80) *Brzezinski, D., J. Wilson and **Y. Chen**. 2010. Voluntary participation in regional fisheries management council meetings. Ecology and Society 15(3): 2. [online] URL: <http://www.ecologyandsociety.org/vol15/iss3/art2/>
- (81) *Liu, B., X. Chen, H. Lu, **Y. Chen**, and W. Qian. 2010. Fishery biology of the jumbo flying squid *Dosidicus gigas* off the Exclusive Economic Zone of Chilean waters. Scientia Marina 74:687-695. doi: 10.3989/scimar.2010.74n4687
- (82) *Chang, J. H., **Y. Chen**, D. Holland, and J. Grabowski. 2010. Estimating spatial distribution of American lobster *Homarus americanus* using habitat variables. Marine Ecological Progress Series 420: 145–156.
- (83) *Zhu, J. X. Dai, L. Xu, X. Chen and **Y. Chen**. 2011. Reproductive biology of female blue shark *Prionace glauca* in the southeastern Pacific Ocean. Environmental Biology of Fishes 91 :95-102, DOI 10.1007/s10641-010-9763-1.
- (84) *Zhu, J., X. Dai, and **Y. Chen**. 2011. Species composition and diversity of pelagic fishes based on a longline fishery in the North Pacific Ocean. Chinese Journal of Oceanology and Limnology : 29 :261-269 DOI:10.1007/s00343-011-0122-7.
- (85) Chen, X., H. Lu, *B. Liu, and **Y. Chen**. 2011. Age, growth and population structure of jumbo flying squid, *Dosidicus gigas*, based on statolith microstructure off the EEZ of Chilean waters. Journal of the Marine Biological Association of the UK 91: 229–235.
- (86) *Chang, Y. J., C-L Sun, **Y. Chen**, *Y. Zhang, and S-Z Yeh. 2011. Incorporating climate changes into population dynamic modelling: an individual-based modelling approach for lobster. Canadian Journal of Fisheries and Aquatic Sciences 68:122-136.
- (87) *Jordaan, A., *J. Crocker, and **Y. Chen**. 2011. Linkages among physical and biological properties in tidepools on the Maine Coast. Environmental Biology of Fishes doi:10.1007/s10641-011-9812-4.
- (88) *Zhang, Y., **Y. Chen**, and *C. Wilson. 2011. Developing and evaluating harvest control rules with different biological reference points for the American lobster fishery in the Gulf of Maine. ICES Journal of Marine Sciences: doi :10.1093/icesjms/fsr071
- (89) *Zhang, Y., **Y. Chen**, and Y. Chang. 2011. Estimating biological reference points using individual-based per-recruit models for the Gulf of Maine American lobster, *Homarus americanus*, fishery. Fisheries Research 108: 385-392.

- (90) *Zhang, Y., *D. Brzezinski, *J. H. Chang, *K. Stepanek, and **Y. Chen**. 2011. Spatial structuring of fish community in association with environmental variables in the coastal Gulf of Maine. Journal of North Atlantic Fisheries Science 43 :47-64
- (91) Chen, X. S. Tian, *B. Liu, **Y. Chen**. 2011. Modelling of habitat suitability index for eastern fall cohort of *Ommastrephes bartramii* in the central North Pacific Ocean. Chinese Journal of Oceanology and Limnology 29:493-504
- (92) *Moffett, C., **Y. Chen**, and M. Hunter. 2011. Evaluating Port Monitoring Programs: a Case Study of the Northern Shrimp Fishery in the Gulf of Maine. Fisheries Research 108 :321-326.
- (93) *Liu, B., X. Chen, **Y. Chen**, H. Lu, W. Qian. 2011. Trace elements in the statoliths of jumbo flying squid off the Exclusive Economic Zones of Chile and Peru. Marine Ecological Progress Series 429:93-101
- (94) *Cao, J., X. Chen, **Y. Chen**, *B. Liu, J. Ma, S. Li. 2011. Generalized linear Bayesian models for standardizing CPUE: an application to a squid-jigging fishery in the northwest Pacific Ocean. Scientia Marina 75: 679-689 doi:0.3989/scimar.2011.75n4679
- (95) *Liu, Y., **Y. Chen**, J. Cheng, and J. Lu. 2011. An adaptive sampling method based on optimized sampling design for fishery-independent surveys with comparisons to conventional designs. Fisheries Science 77:467-478, DOI: 10.1007/s12562-011-0355-6
- (96) *Ying, Y., **Y. Chen**, L. Lin, and T. Gao. 2011. Risks of ignoring fish population spatial structure in fisheries management. Canadian Journal of Fisheries and Aquatic Sciences 68: 2101-2120.
- (97) Chen, X., H. Lu, *B. Liu, **Y. Chen**. 2012. Sexual dimorphism of statolith growth for *Illex argentinus* off the Exclusive Economic Zone of Argentinean waters. Bulletin of Marine Science. 88:353-362 DOI: <http://dx.doi.org/10.5343/bms>. 1082.
- (98) *Chang, Y.J., C.L. Sun, **Y. Chen**, S.Z. Yeh, and G. DiNardo, 2012. Habitat suitability analysis and identification of potential fishing grounds for swordfish, *Xiphias gladius*, in the South Atlantic Ocean. Int. J. Remote Sens. 33:23, 7523-7541.
- (99) *Chang, Y. J, C. L. Sun, **Y. Chen**, and S. Z. Yeh. 2012. Modelling the growth of crustacean species. Review in Fisheries Biology and Fisheries doi: 10.1007/s11160-011-9228-4.
- (100) *Zhu, J., L. Xu, X. Dai, X. Chen, **Y. Chen**. 2012. Comparative analysis of depth distribution for seventeen pelagic fish species captured in a longline fishery in the eastern Pacific Ocean. Scientia Marina 76(1): 149-157 doi: 10.3989/scimar.03379.16C
- (101) Chen, X., *J. Cao and **Y. Chen**, B. Liu, and S. Tian. 2012. Effect of Kuroshio Current on spatial distribution of *Ommastrephes bartramii* in the Northwest Pacific Ocean. Bulletin of Marine Science 88:63-72
- (102) *Zhu, J., **Y. Chen**, X. Dai, S. J. Harley, S. D. Hoyle, and M. N. Maunder, A. M. Aires-da-Silva. 2012. Implications of uncertainty in the spawner-recruitment relationship for fisheries management: an illustration using bigeye tuna (*Thunnus obesus*) in the eastern Pacific Ocean. Fisheries Research 119– 120: 89– 93
- (103) *McMahan, M. D. F. Cowan, G. D. Sherwood, J. H. Grabowski, **Y. Chen**. 2012. Evaluation of coded microwire tag retention in juvenile American lobster, *homarus americanus*. Journal of Crustacean Biology 32: 497-502.

- (104) Dai, X., *J. Zhu, X. Chen, L. Xu., **Y. Chen**. 2012. Biological observations on the crocodile shark *Pseudocarcharias kamoharai* from the tropical eastern Pacific Ocean. Journal of Fish Biology DOI: 10.1111/j.1095-8649.2011.03177.x
- (105) *Zhang, Y. and **Y. Chen**. 2012. Effectiveness of harvest control rules in managing American lobster fishery in the Gulf of Maine. North American Journal of Fisheries Management 32 : 984-999. <http://dx.doi.org/10.1080/02755947.2012.713891>
- (106) *Moffett, C., **Y. Chen**, and M. Hunter. 2012. Preliminary Study of Trap Bycatch in the Gulf of Maine's Northern Shrimp Fishery. North American Journal of Fisheries Management: 32:704-715. <http://dx.doi.org/10.1080/02755947.2012>.
- (107) Chen, X., H. Lu, *B. Liu, **Y. Chen**, S. Li, and M. Jin. 2012. Species identification of *Ommastrephes bartramii*, *Dosidicus gigas*, *Sthenoteuthis oualaniensis* and *Illex argentinus* (Ommastrephidae) using beak morphological variables. Scientia Marina 76:473-481.
- (108) Gong, C., X. Chen, F. Gao, **Y. Chen**. 2012. Importance of Weighting for Multi-Variable Habitat Suitability Index Model: A Case Study of Winter-Spring Cohort of *Ommastrephes bartramii* in the Northwestern Pacific Ocean. Journal of Ocean University of China DOI: 10.1007/s11802-012-1898-6.
- (109) *Wang, X., L. Xu, **Y. Chen**, G. Zhu, S. Tian, and J. Zhu. 2012. Impacts of fish aggregation devices on size structures of skipjack tuna *Katsuwonus pelamis*. Aquatic Ecology 46 : 343-352.
- (110) Wilson, J., Hill, J., Kersula, M., Wilson, C.L., Whitsel, L., Yan, L., Acheson, J., **Chen, Y.**, Cleaver, C., Congdon, C., Hayden, A., Hayes, P., Johnson, T., Morehead, G., Steneck, R.S., Turner, R., Vadas, R., & Wilson, C.J. 2012. Costly information and the evolution of selforganization in a small, complex economy. Journal of Economic Behavior and Organization, 90:S76-S93. doi:10.1016/j.jebo.2012.12.019.
- (111) *Zhang, Y., *Y. Li, and **Y. Chen**. 2012. Modeling the dynamics of ecosystem for the American lobster in the Gulf of Maine. Aquatic Ecology 46:451–464, DOI 10.1007/s10452-012-9414-z
- (112) Chen, X., H. Lu, *B. Liu, **Y. Chen**, G. Li, Z. Fang, and S. Tian. 2013. Age, growth and population structure of Jumbo flying squid, *Dosidicus gigas*, off the Costa Rica Dome. Journal of the Marine Biological Association of the UK 93: 567 - 573
- (113) *Zhang, Y., **Y. Chen**, *J. Zhu, *S. Tian, and X. Chen. 2013. Evaluating harvest control rules for bigeye tuna (*Thunnus obesus*) and yellowfin tuna (*Thunnus albacares*) fisheries in the Indian Ocean. Fisheries Research 137:1– 8. <http://dx.doi.org/10.1016/j.fishres.2012.08.013>
- (114) Jordaan, A., M. G. Frisk, L. S. Incze, N. H. Wolff, L. Hamlin and **Y. Chen**. 2013. Multivariate dissemination of species relationships for use in marine spatial planning. Canadian Journal of Fisheries and Aquatic Sciences 70: 316-329, 10.1139/cjfas-2011-0516
- (115) Liu B., X. Chen, **Y. Chen**, S. Tian, J. Li, Z. Fang, and M. Yang. 2013. Age, maturation, and population structure of the Humboldt squid *Dosidicus gigas* off the Peruvian Exclusive Economic Zones. Chinese Journal of Oceanology and Limnology : Chinese Journal of Oceanology and Limnology 31 : 81-91. <http://dx.doi.org/10.1007/s00343-013-2036-z>

- (116) Chang, Y. C. Sun, **Y. Chen**, S. Yeh, G. DiNardo, and N. Su. 2013. Modelling the impacts of environmental variation on the habitat suitability of swordfish, *Xiphias gladius*, in the equatorial Atlantic Ocean. ICES Journal of Marine Sciences. ICES Journal of Marine Science 70: 1000-1012; doi:10.1093/icesjms/fss190.
- (117) *Guan, W., *J. Cao, **Y. Chen** and M. Cieri. 2013. Impacts of population and fishery spatial structures on fishery stock assessment. Canadian Journal of Fisheries and Aquatic Sciences 70: 1178–1189. dx.doi.org/10.1139/cjfas-2012-0364
- (118) *Tong, Y, X. Chen, and Y. Chen. 2013. Evaluating alternative management strategies for bigeye tuna, *Thunnus obesus*, in the Indian Ocean. Scientia Marina 77:449-460 doi:10.3989/scimar.03823.11A
- (119) Tian, S., H. Chan, **Y. Chen**, and X. Chen. 2013. Evaluating impacts of spatio-temporal scales on CPUE standardization. Chinese Journal of Oceanology and Limnology 31: 935 - 948.
- (120) Mills, K.E., A.J. Pershing, C.J. Brown, **Y. Chen**, F.-S. Chiang, D.S. Holland, S. Lehuta, J.A. Nye, J.C. Sun, A.C. Thomas, and R.A. Wahle. 2013. Fisheries management in a changing climate: Lessons from the 2012 ocean heat wave in the Northwest Atlantic. Oceanography 26(2), <http://dx.doi.org/10.5670/oceanog.2013.27>.
- (121) Liu, B., X. Chen, **Y. Chen**, S. Tian. 2013. Geographic variation in statolith trace elements of the Humboldt squid, *Dosidicus gigas*, in high seas of Eastern Pacific Ocean. Marine Biology 160(11), 2853-2862. DOI 10.1007/s00227-013-2276-7.
- (122) *Tong, Y., X. Chen, L. Xu, and **Y. Chen**. 2013. Evaluation of FAD-associated purse seine fishery reduction strategies for bigeye tuna (*Thunnus obesus*) in the Indian Ocean. Chinese Journal of Oceanology and Limnology 31: 724-736
- (123) Chen, X., B. Liu, and **Y. Chen**. 2013. *Sthenoteuthis oualaniensis*, Purpleback Flying Squid. pp 207-223 In: Rosa et al. *Advances in Squid Biology, Ecology, and Fisheries Part II – Oegopsid Squids*. Nova Science Publication Inc. New York City, New York.
- (124) *Wang, X., **Y. Chen**, *S. Truesdell, L. Xu, *J. Cao, W. Guan. 2014. The large-scale deployment of fish aggregation devices alters environmentally-based migratory behavior of skipjack tuna in the western Pacific Ocean. PLoS ONE 9(5): e98226. doi:10.1371/journal.pone.0098226
- (125) *Cao, J., *S. Truesdell, **Y. Chen**. 2014. Impacts of stock mixing arising from seasonal migration on the assessment of Atlantic cod in the Gulf of Maine. ICES Journal of Marine Sciences; doi:10.1093/icesjms/fsu066
- (126) Chen X , S. Tian, **Y. Chen**, W. J. Guan. 2014. Variation of oceanic fronts and their influence on fishing grounds of *Ommastrephes bartramii* in the Northwestern Pacific. Acta Oceanologica Sinica. 33(4): 45-54
- (127) *Zhao, J,*J. Cao, S. Tian, **Y. Chen**, S. Zhang, Z. Wang, X. Zhou. 2014. A comparison of two GAM models in quantifying relationships of environmental variables and fish richness and diversity indices. Aquatic Ecology 48:297–312
- (128) *Cao, J., **Y. Chen**, *J. Chang, X. Chen. 2014. An evaluation of an inshore bottom trawl survey design for American lobster (*Homarus americanus*) using computer simulations. Journal of North Atlantic Fisheries Science 46: 27–39

- (129) Wang, Z., **Y. Chen**, S. Zhang, K. Wang, J. Zhao, Q. Xu. 2015. A comparative study of fish assemblages near aquaculture, artificial and natural habitats. Journal of Ocean University of China 14:149-160.
- (130) Liu, B., *Z. Fang, X. Chen, **Y. Chen**. 2015. Spatial variations in beaks structure to identify potentially geographic populations of *Dosidicus gigas* in the Eastern Pacific Ocean. Fisheries Research 164:185–192
- (131) *Fang, Z., J. Li, *K. Thompson, F. Hu, X. Chen, B. Liu and **Y. Chen**. 2015. Age, growth and population structure of neon flying squid (*Ommastrephes bartramii*) in the North Pacific Ocean based on beak microstructure Fishery Bulletin (in press)
- (132) *Lin, D., X. Chen, **Y. Chen**, Z. Fang. 2015. Sex-specific reproductive investment of summer spawners of *Illex argentinus* in the southwest Atlantic. Invertebrate Biology (in press)
- (133) Yu, W, X. Chen, Q. Yi, **Y. Chen**, Y. Zhang. 2015. Variability of suitable habitat of western winter-spring cohort for neon flying squid in the Northwest Pacific under abnormal environments. PLoS ONE 10(4): e0122997. doi:10.1371/journal.pone.0122997
- (134) *Li, B., *J. Cao, *J. Chang, C. Wilson, **Y. Chen**. 2015. Evaluation of effectiveness of fixed-station sampling for monitoring American Lobster settlement. North American Journal of Fisheries Management 35(5): 942-957
- (135) *Wang J., W. Yu, X. Chen, L. Lei, **Y. Chen**. 2015. Detection of potential fishing zones for neon flying squid based on remote sensing data in the Northwest Pacific Ocean using an artificial neural network. International Journal of Remote Sensing 36(13):3317-3330
- (136) *Zhang, C, **Y. Chen**. 2015. Development of abundance indices for Atlantic Cod and Cusk in the coastal Gulf of Maine from their bycatch in the lobster fishery. North American Journal of Fisheries Management 35(4):708-719, DOI: 10.1080/02755947.2015.1043413
- (137) *Xu, B, * C. Zhang, Y. Xue, Y. Ren, **Y. Chen**. 2015. Optimization of sampling effort for a fishery-independent survey with multiple goals. Environmental Monitoring and Assessment 187(5):4483. DOI:10.1007/s10661-015-4483-9
- (138) *Zhang, C, **Y. Chen**, Y. Ren. 2015. Assessing uncertainty of a multispecies size-spectrum model resulting from process and observation errors. ICES Journal of Marine Sciences doi: 10.1093/icesjms/fsv086
- (139) *Fang, Z., L. Xu, X. Chen, B. Liu, J. Li, and **Y. Chen**. 2015. Beak growth pattern of purpleback flying squid *Sthenoteuthis oualaniensis* in the eastern tropical Pacific equatorial waters. Fisheries Science 81:443–452 DOI 10.1007/s12562-015-0857-8
- (140) Liu, B., X. Chen, **Y. Chen**, G. Hu. 2015. Determination of squid age using upper beak rostrum sections: technique improvement and comparison with statolith. Marine Biology 10.1007/s00227-015-2702-0
- (141) *Tanaka, K. and **Y. Chen**. 2015. Spatio-temporal variability of suitable habitat for American lobster (*Homarus americanus*) in Long Island Sound. Journal of Shellfish Research 34(2), 531-543.
- (142) Yu, W., Chen, X. J., **Chen, Y.**, Yi, Q., Zhang, Y. 2015. Effects of environmental variations on the abundance of western winter-spring cohort of neon flying squid

- (*Ommastrephes bartramii*) in the Northwest Pacific Ocean. Acta Oceanologica Sinica, 34(8): 43-51.
- (143) Zhuang, P., F Zhao, T. Zhang, **Y. Chen**, J. Liu, L. Zhang, B. Kynard. 2016. New evidence may support the persistence and adaptability of the near-extinct Chinese sturgeon. Biological Conservation 193: 66–69.
- (144) *Truesdell, S., D. Hart and **Y. Chen**. 2016. Effects of spatial heterogeneity in growth and fishing effort on yield-per-recruit. ICES Journal of Marine Sciences (in press)
- (145) Liu, B., X. Chen, and **Y. Chen**. 2016. Spatial difference in elemental signatures within early ontogenetic statolith for identifying Jumbo flying squid natal origins. Fisheries Oceanography (in press)
- (146) Yu, W., X. Chen, Q. Yi, **Y. Chen**. 2016. Spatio-temporal distributions and habitat hotspots of the winter-spring cohort of neon flying squid *Ommastrephes bartramii* in relation to oceanographic conditions in the Northwest Pacific Ocean. Fisheries Research 175:103–115
- (147) Xu, B., Y. Ren, **Y. Chen**, Y. Xue, *C. Zhang, and R. Wan. 2016. Optimization of stratification scheme for a fishery-independent survey with multiple objectives. Acta Oceanologica Sinica (in press)
- (148) Liu, B., X. Chen, J Li, and **Y. Chen**. 2016. Age, growth and maturation of *Sthenoteuthis oualaniensis* in the Eastern Tropical Pacific Ocean by statolith analysis. Marine and Freshwater Research (in press)
- (149) *Chang, J., **Y. Chen**, W. Halteman, and C. Wilson. 2016. Roles of spatial scale in quantifying stock-recruitment relationships for American lobsters in the inshore Gulf of Maine. Canadian Journal of Fisheries and Aquatic Sciences (in press)
- (150) *Zhang, C., **Y. Chen**, Y. Ren. 2016. An evaluation of implementing long-term MSY in ecosystem-based fisheries management. Fisheries Research (in press)
- (151) *Zhang, C., **Y. Chen**, *K. Thompson, Y. Ren. 2016. Developing a multispecies size-spectrum model in a data-poor ecosystem. Acta Oceanologica Sinica (in press)
- (152) *Zhang C, **Y. Chen**, Y. Ren, R. Wan. 2016. Evaluating the performances of ecological indicators in fisheries management with a perspective of temporal scales. Canadian Journal of Fisheries and Aquatic Sciences (in press)
- (153) *Fang, Z., Liu, B. L., Chen, X. J., Jin, Y., Li, J. H., **Chen, Y.** 2016. Sexual asynchronous of beak pigmentation development for neon flying squid (*Ommastrephes bartramii*) in North Pacific Ocean. Fisheries Science (In press)
- (154) *Wang, J., W. Yu, X. Chen, **Y. Chen**. 2016. Stock assessment for the western winter-spring cohort of neon flying squid (*Ommastrephes bartramii*) by using environmentally dependent surplus production models. Scientia Marina 80(1): 000-000. doi: <http://dx.doi.org/10.3989/scimar.04205.11A>
- (155) Yu, W. Q. Yi, X. Chen, **Y. Chen**. 2016. Modelling the effects of climate variability on habitat suitability of jumbo flying squid, *Dosidicus gigas*, in the Southeast Pacific Ocean off Peru. ICES Journal of Marine Sciences doi:10.1093/icesjms/fsv223
- (156) Zhu, J., M.N. Maunder, A.M. Aires-da-Silva, **Y. Chen**. 2016. Estimation of growth within Stock Synthesis models: Management implications when using length-composition data. Fisheries Research (in press).

- (157) *Tanaka, K. and **Y. Chen**. 2016. Modeling spatiotemporal variability of the bioclimate envelope of *Homarus americanus* in the coastal waters of Maine and New Hampshire. Fisheries Research (in press)
- (158) *Fang, Z., *K. Thompson, J. Yue, X. Chen, **Y. Chen**. 2016. Preliminary analysis of beak stable isotopes ($\delta^{13}\text{C}$ and $\delta^{15}\text{N}$) stock variation of neon flying squid, *Ommastrephes bartramii*, in the North Pacific Ocean. Fisheries Research (in press)
- (159) Yu, W., Chen, X. J., Yi, Q., Gao, G. P., **Chen, Y.** 2016. Impacts of climatic and marine environmental variations on the spatial distribution of *Ommastrephes bartramii* in the Northwest Pacific Ocean. Acta Oceanologica Sinica (In press).

Manuscripts under review and revisions

Ding, Q., X. Chen, W. Yu, S. Tian, and Y. Chen. 2015. 'Fishing Down Marine Food Webs' is not a simple question. Fish and Fisheries (submitted)

Ding, Q., X. Chen, W. Yu, Y. Chen. 2015. An assessment of 'fishing down the marine food web' along in global coastal countries during 1950-2010 (submitted)

*Beaty, J. and **Y. Chen**. 2015. Assessing growth of Atlantic halibut in the Gulf of Maine using otolith measurements.

Fang, Z., Thompson. K., Jin, Y., Chen, X. J., Chen, Y. Ontogenetic and stock variation of beak stable isotope $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ of neon flying squid, *Ommastrephes bartramii*, in North Pacific Ocean. Marine Ecology Progress Series. (Under review)

Chen, X. J., Su, H., Fang, Z., Yang, D., Chen, Y., Lin, C. Q. Beak shape comparison and identification of neon flying squid, *Ommastrephes bartramii* and jumbo flying squid, *Dosidicus gigas* based on geometric morphometrics. Acta Oceanologica Sinica. (Under review)

Fang, Z., Thompson. K., Chen, X. J., Su, H., Chen, Y. Stock variation and sexual dimorphism of beak shape of neon flying squid, *Ommastrephes bartramii* based on geometric morphometrics (in draft).

Hu, G. Y., Liu, B. L., Fang, Z., Yang, D., Chen, X. J., Chen, Y. Age, growth and population structure of jumbo flying squid (*Dosidicus gigas*) off the Peruvian Exclusive Economic Zone based on beak microstructure. Bulletin of Marine Science. (submitted).

Yu, W., Chen, X. J., Yi, Q., Chen, Y. 2016. Influence of oceanic-climate variability on stock level of western winter-spring cohort of *Ommastrephes bartramii* in the Northwest Pacific Ocean. International Journal of Remote Sensing (In review).

(b) CENTER FOR INDEPENDENT (CIE) REVIEW REPORT SINCE 2010

- (1) **Chen, Y.** 2010. CIE Independent Peer Review Report : SEDAR 22 Gulf of Mexico Yellowedge Grouper and Tilefish Data Workshop. March 30, 2010, 41pp
- (2) **Chen, Y.** 2011. CIE Independent Peer Review Report: Stock Assessment of the Main Hawaiian Islands Deep7 Bottomfish Complex Through 2010, Feb. 7, 2011, 26 pp
- (3) **Chen, Y.** 2011. CIE Independent Peer Review Report : BSAI and GOA Pacific Cod Stock Assessment Review. April 1, 2011, 41pp
- (4) **Chen, Y.** 2011. CIE Independent Peer Review Report : Petrale Sole and Pacific Ocean Perch STAR Review. July 10, 2011, 44 pp
- (5) **Chen, Y.** 2011. CIE Independent Peer Review Report : Stock assessment of albacore tuna, *Thunnus alalunga*, in the North Pacific Ocean. Dec. 11, 2011, 29 pp
- (6) **Chen, Y.** 2012. CIE Independent Peer Review Report: Eastern Bering Sea Crab and Groundfish Bottom Trawl Surveys April 20, 2012, pp29
- (7) **Chen, Y.** 2012. CIE Independent Peer Review Report : Stock Assessment of Striped Marlin, *Kajikia audax*, in the Western and Central North Pacific Ocean. Dec. 3, 2012. 28pp
- (8) **Chen, Y.** 2013. CIE Independent Peer Review Report : SEDAR 30 Caribbean blue tang and queen triggerfish assessment review. February 18, 2013. 35pp

(c) PUBLISHED PEER-REVIEWED STOCK ASSESSMENT REPORTS (incomplete list, stop updating after 2006)

- (1) **Chen, Y.** and S. Montgomery. 1996. Stock assessment of rock lobster, *Jasus verreauxi*, in New South Wales using a biomass dynamic model. In: An Assessment of the NSW Eastern Rock Lobster Fishery for 1995/96 (by S. Montgomery and **Y. Chen**). NSW Fisheries Research Institute, PO Box 21, Cronulla, NSW 2230, Australia.
- (2) **Chen, Y.** and N. L. Andrew. 1997. A biomass-dynamic model for NSW abalone fishery. In N.L. Andrew, D.G. Worthington, R.C. Chick, P.A. Brett, and **Y. Chen**: An assessment of the NSW abalone fishery in 1996. PP:42-45. NSW Fisheries Research Institute, PO Box 21, Cronulla, NSW 2230.
- (3) **Chen, Y.** and S. Montgomery. 1997. A biomass dynamic model for NSW rock lobster fishery. In: S. Montgomery, J. Craig, M. Tanner, and **Y. Chen**: An Assessment of the NSW Eastern Rock Lobster Fishery for 1996/97. PP. 42-69. NSW Fisheries Research Institute, PO Box 21, Cronulla, NSW 2230.
- (4) **Chen, Y.** and L. G. S. Mello. 1999. Developing an overall indicator for monitoring temporal variation in fish size at age and its application to cod in the Northwest Atlantic, NAFO subdivision 3Ps. Canadian Stock Assessment Secretariat Research Document 99/115.
- (5) **Chen, Y.**, M. *Kanaiwa, and C. Wilson. 2004. Developing and testing an individual-based simulator for the American lobster. In: American Lobster Stock Assessment Model Technical Review, Terms of Reference and Panel Report, Atlantic States Marine Fisheries Commission). 2004. Special Report No. 82, Washington D.C.
- (6) **Chen, Y.** , M. *Kanaiwa, and C. Wilson. 2004. Developing and testing a size-structured

stock assessment model for the American lobster. In: American Lobster Stock Assessment Model Technical Review, Terms of Reference and Panel Report, Atlantic States Marine Fisheries Commission. Special Report No. 82, Washington D.C.

- (7) **Chen, Y.**, M. *Kanaiwa, and C. Wilson. 2006. Developing, testing, and applying a size-structured stock assessment model for the American lobster, *Homarus americanus*. pp179-292 In: Atlantic States Marine Fisheries Commission Lobster Stock Assessment Report 06-03, Washington D. C.

(d) PROJECT REPORTS RECENTLY SUBMITTED (NAMES WITH * ARE MY STUDENTS OR POSTDOC; INCOMPLETE list)

- (1) **Chen, Y.**, C. Wilson, M. Kanaiwa. 2003. Developing a Bayesian stock assessment framework for the American lobster fishery. Report submitted to Maine Department of Marine Resources
- (2) *Scheirer, K., **Y. Chen**, and C. Wilson. 2003. A comparative study of American lobster sea and port sampling programs in Maine. Report submitted to Maine Department of Marine Resources
- (3) *Scheirer, K., **Y. Chen**, and C. Wilson. 2003. An analysis of spatial dynamics of the Maine lobster fishery. Report submitted to Maine Department of Marine Resources.
- (4) *Grabowski, R. and **Y. Chen**. 2003. The development of biological reference points and estimation of their uncertainties for the Maine sea urchin fishery. Report submitted to Maine Department of Marine Resources.
- (5) *Grabowski, R. R. Russell, and **Y. Chen**. 2003. A simulation framework for developing optimal sampling strategies for the Maine sea urchin stock. Report submitted to Maine Department of Marine Resources.
- (6) *Grabowski, R. and **Y. Chen**. 2003. Estimating Maine sea urchin stock biomass using a spatial statistic approach. Report submitted to Maine Department of Marine Resources.
- (7) **Chen, Y.**, M. Hunter, and M. Kanaiwa. 2003. Development and evaluation of a Bayesian stock assessment framework for the Maine sea urchin fishery. Report submitted to the Maine Department of Marine Resources.
- (8) **Chen, Y.** 2004. Assessing the American lobster stock in the Gulf of Maine. A report submitted to the Maine Lobster Advisory Committee and Department of Marine Resources.
- (9) **Chen, Y.** Minoru Kanaiwa, and Carl Wilson. 2004. Development and assessment of a size-structured stock assessment model for the American lobster, *Homarus americanus*. Report submitted to the ASMFC Lobster Model Review Committee.
- (10) **Chen, Y.** Minoru Kanaiwa, and Carl Wilson. 2004. Developing an individual-based fishery simulator for the American lobster, *Homarus americanus*. Report submitted to the ASMFC Lobster Model Review Committee.
- (11) **Chen, Y.**, S. Feindel, and Sheril Kirshenbaum. 2005. A preliminary study of Maine sea cucumber fishery. Report submitted to the Northeast Consortium.
- (12) **Chen, Y.** 2005. An evaluation of the Maine sea cucumber resources and impacts of exploitation . A report to the Northeast Consortium.

- (13) **Chen, Y.**, C. Wilson, and J. Wilson. 2005. Spatial dynamics of the lobster fishery and oil spills in the Gulf of Maine, a risk analysis of oil spills on the lobster fishery. Report to the Maine Department of Environment Protection. 107 pp
- (14) **Chen, Y.**, M. Kanaiwa and C. Wilson. 2005. Developing a Bayesian stock assessment framework for the American lobster, *Homarus americanus*. A report to the Maine Sea Grant College Program. 71pp.
- (15) **Chen, Y.** 2006. An analysis of impacts of a fabricated bait on catch rates of haddock and Atlantic cod in a longline fishery. A report submitted to Cape Cod Commercial Hook Fishermen's Association. 39 pp.
- (16) **Chen, Y.** et al. 2007. An evaluation of the Maine sea cucumber resources and impacts of exploitation. A report submitted to Northeast Consortium 67pp

(e) PUBLISHED CONFERENCE ABSTRACTS (an incomplete list)

- (1) **Chen, Y.** and H. H. Harvey. 1990. Growth analysis of the white suckers from nineteen Ontario lakes. American Fisheries Society Annual Meeting, Pittsburgh, PA., U.S.A., August 1990.
- (2) Harvey, H. H., E. A. Trippel, and **Y. Chen**. 1990. The effects of reduced intraspecific competition on a low-density white sucker population. American Fisheries Society Annual Meeting, Pittsburgh, PA., U. S. A., August 1990.
- (3) **Chen, Y.**, D. A. Jackson, and H. H. Harvey. 1991. Comparison of mathematical models of fish growth. Canadian Conference for Fisheries Research (CCFFR) Annual Meeting, Gulph, Ontario, January 1991.
- (4) **Chen, Y.** and J. E. Paloheimo. 1992. Robust regression analysis of fisheries data. The 54th Midwest Fish & Wildlife Conference, Toronto, Canada, December 1992.
- (5) **Chen, Y.** and H. H. Harvey. 1993. Growth of white sucker, Catostomus commersoni, in relation to food supply and population density. American Fisheries Society Annual Meeting, Portland, OR., U.S.A., August 1993.
- (6) Jackson, D. A. and **Y. Chen**. 1994. Robust multivariate analysis: principal components analysis with outliers. International Environmetrics Society, Burlington, Ontario, August 1994.
- (7) Harvey, H. H., D. A. Jackson, and **Y. Chen**. 1994. Dynamics of a white sucker, Catostomus commersoni, population with a gradual reduction from high to low density. American Fisheries Society Annual Meeting, Halifax, August 1994.
- (8) **Chen, Y.**, G. Liggins, and K. Graham. 1995. Modelling length-dependent offshore distribution of redfish, Centroberyx affinis. Annual Conference of the Australian Society for Fish Biology, University of Sydney, NSW, Australia, July 1, 1995.
- (9) **Chen, Y.** and L. Mello. 1999. Developing an overall indicator for monitoring temporal variation in fish size at age and its application to cod (*Gadus morhua*) in the Northwest Atlantic, NAFO subdivision 3Ps. Working paper 99/11. DFO Newfoundland Region Stock assessment meeting. Feb. 15-19. St. John's, NF.
- (10) **Chen, Y.** 1999. Bayesian inference in ecology. Ecology Seminar Series, Department of Zoology, University of Toronto, Toronto, March 29, 1999
- (11) **Chen, Y.** 1999. Impacts of atypical data on natural resources modelling. The World

- Conference for Natural Resources Modelling, June 22-25, Halifax, NS.
- (12) **Chen, Y.** 1999. Impacts of atypical data on Bayesian stock assessment and robust Bayesian methods. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 2, 1999.
 - (13) **Chen, Y.** 1999. Growth and maturation of cod in NAFO subdivision 3Ps. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 1, 1999
 - (14) *Rajakaruna, H. and **Y. Chen.** 1999. Impacts of at-sea discarding on virtual population analysis. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 1, 1999
 - (15) *Rajakaruna, H. and **Y. Chen.** 1999. Impacts of excluding discarded catch on VPA in cod stock assessment in Newfoundland. Regional stock assessment meeting for 3Ps cod. St. John's, NF, October 19, 1999.
 - (16) **Chen, Y.** 2000. Impacts of quantity and quality of fisheries data on stock assessment. 3rd World Fisheries Congress, Beijing, China. October 31 – November 3, 2000
 - (17) **Chen, Y.** 2000. Quality of fisheries data and fisheries stock assessment. Fisheries Stock Assessment Symposium, the University of Bergen, Bergen, Norway. December 4-6, 2000.
 - (18) Y. Zhao, **Y. Chen,** and J. A. Brown. 2000. Impacts of egg size and hatching temperature on size, survival and growth of Atlantic cod larvae (*Gadus morhua*). 3rd World Fisheries Congress, Beijing, China. October 31 – November 3, 2000
 - (19) **Chen, Y.** 2001. Quantity of fisheries data and uncertainty in stock assessment. Canadian Conference for Fisheries Research Annual Meeting, Toronot, January 4-6, 2001.
 - (20) **Chen, Y.** and M. Hunter. 2001. Application of robust Bayesian methods in fisheries stock assessment. Invited session “Application of Bayes Methodology in Statistical Consulting”, American Statistical Association Annual Meeting, Atlanta, August 2001, Abstracts 2001:54.
 - (21) Grabowski, R.C., **Y. Chen,** R. Russell, and M. Hunter. 2002. Analysis of the spatial distribution of green sea urchin along the coast of Maine. American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 19, 2002
 - (22) Scheirer, K, **Y. Chen,** and C. Wilson. 2002. Comparing two sampling programs for the Maine lobster fishery. American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 20, 2002
 - (23) Yan, J., **Y. Chen,** and J. Wroblewski. 2002. Impacts of stock mixing on the estimation of fish growth. American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 21, 2002
 - (24) **Chen, Y.** 2002. Robust statistical methods: how can we develop and use them for analyzing fisheries data? American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 19, 2002
 - (25) Zhao, Y., **Y. Chen,** and J. Brown. 2002. Size-dependent survival and growth of Atlantic cod (*Gadus morhua*) larvae under different feeding conditions. American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 21, 2002
 - (26) Grabowski, R., **Y. Chen,** and T. Windholz. 2002. Developing a computer simulation program to determine optimal sampling strategies: a case study of the Maine sea urchin fishery. 2nd International Symposium on GIS/Spatial Analyses in Fishery and Aquatic Sciences. Brighton, England. 3-6 September, 2002.
 - (27) **Chen, Y.** 2002. Spatial dynamics of the lobster fishery and oil spills in the Gulf of

- Maine, a risk analysis of oil spills on the lobster fishery. Darling Marine Center, September 9, 2002. NOAA Oil Spills Training Workshop.
- (28) **Chen, Y.**, M. Kanaiwa, and C. Wilson. 2003. Developing an individual-based stock assessment framework using random Bernoulli trials. American Fisheries Society 133 Annual Meeting, Quebec City, Canada, Aug. 10-14.
- (29) *Kanaiwa, M., **Y. Chen**, and C. Wilson. 2003. Developing a Bayesian stock assessment framework for the American lobster fishery. American Fisheries Society 133 Annual Meeting, Quebec City, Canada, Aug. 10-14.
- (30) *Jones, K., **Y. Chen**, R. Russell, and M. Hunter. 2003. Developing an abundance index for the Maine sea urchin stock. American Fisheries Society 133 Annual Meeting, Quebec City, Canada, Aug. 10-14.
- (31) *Jiao, Y., **Y. Chen**, and J. Wroblewski. 2003. Evaluating the northern cod (*Gadus morhua*) fishery status using a composite risk assessment method. American Fisheries Society 133 Annual Meeting, Quebec City, Canada, Aug. 10-14.
- (32) **Chen, Y.**, S. Sherman, C. Wilson, and J. Sowles. 2004. An evaluation of consistency of two fishery-independent survey programs in indexing lobster abundance in Maine. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (33) **Chen, Y.**, *Kanaiwa, M., and C. Wilson. 2004. Evaluating a Bayesian stock assessment framework for the American lobster fishery. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (34) *Couture, D. and **Y. Chen**. 2004. A mail survey program for better understanding the dynamics of the American lobster fishery in Maine. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (35) *Sherier, K., C. Wilson, and **Y. Chen**. 2004. Spatial dynamics of the lobster fishery in Maine, USA. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (36) Incze, L, H. Xue, N. Pettigret, **Y. Chen**, R. Steneck, C. Wilson, P. Lawton, and D. Greenberg. 2004. Data assimilation and modeling of source-sink relationships and fishery production of *Homarus Americanus* in the Gulf of Maine. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (37) *Reardon, K. and **Y. Chen**. 2004. Estimation of key fishery parameters for managing Jonah crab fishery in Maine. 134th American Fisheries Society Annual meeting, Madison, WI, Aug. 23-27. 2004.
- (38) *Jones, K. and **Y. Chen**. 2004. A comparative study of a population model and a spatial statistics model in assessing the green sea urchin stock in Maine. 134th American Fisheries Society Annual meeting, Madison, WI, Aug. 23-27. 2004.
- (39) *Kirshenbaum, S. and **Y. Chen**. 2004. A fecundity study of the Maine sea cucumber population. 134th American Fisheries Society Annual meeting, Madison, WI, Aug. 23-27. 2004.
- (40) *Zhang, Y. and **Y. Chen**. 2004. A study of the lobster ecosystem in the Gulf of Maine. 134th American Fisheries Society Annual meeting, Madison, WI, Aug. 23-27. 2004.
- (41) **Chen, Y.** and P. He. 2005. Estimating and comparing gear selectivity (fishing gear symposium). 135th American Fisheries Society Annual meeting, Anchorage, Alaska, Sept. 2005.
- (42) *Jones, K. and **Y. Chen**. 2005. Identifying key ecological variables for the green sea urchin population in Maine. 135th American Fisheries Society Annual meeting,

- Anchorage, Alaska, Sept. 2005.
- (43) *Reardon, K., C. Wilson, R. Russell and **Y. Chen**. 2005. An experimental video survey for Jonah crabs in the Gulf of Maine. 135th American Fisheries Society Annual meeting, Anchorage, Alaska, Sept. 2005.
- (44) *Jordaan, A., **Y. Chen**, and D. Townsend. 2005. Developing diagnostic tools for ecosystem-based fisheries management. 135th American Fisheries Society Annual meeting, Anchorage, Alaska, Sept. 2005.
- (45) *Errigo, M. and **Y. Chen**. 2006. Evaluating normal and fat-tailed likelihood functions in Bayesian stock assessment. 136th American Fisheries Society Annual meeting, Lake Placid, NY, Sept. 10-14, 2006
- (46) *Zhang, Y. and **Y. Chen**. 2006. Developing and evaluating biological reference points for the American lobster fishery management. 136th American Fisheries Society Annual meeting, Lake Placid, NY, Sept. 10-14, 2006
- (47) *Zhang, Y. and **Y. Chen**. 2006. Ecological modeling of American lobster population in the Gulf of Maine. 136th American Fisheries Society Annual meeting, Lake Placid, NY, Sept. 10-14, 2006.
- (48) *Brzezinski, D. J. Wilson, and **Y. Chen**. 2007. Having a Pee in the Sea- Voluntary participation in the New England Fishery Management Council meetings. 137th American Fisheries Society Annual Meeting, San Francisco, CA. Sept. 2-6, 2007.
- (49) *Errigo, M., M. Kanaiwa, and **Y. Chen**. 2007. The effects of random errors and outliers on the performance of a Bayesian size-structured stock assessment model. 137th American Fisheries Society Annual Meeting, San Francisco, CA. Sept. 2-6, 2007.
- (50) *Zhang, Y., **Y. Chen**, and M. Kanaiwa. 2007. Developing and evaluating biological reference points for the American lobster fishery management. 137th American Fisheries Society Annual Meeting, San Francisco, CA. Sept. 2-6, 2007.
- (51) *Brzezinski, D., **Y. Chen**, and J. Wilson. 2007. Analysis of the habitat effects of scallop dredging on Georges Bank using video photography data. 137th American Fisheries Society Annual Meeting, San Francisco, CA. Sept. 2-6, 2007.
- (52) *Stepanek, K., S. Sherman, and **Y. Chen**. An analysis of groundfish abundance and distribution in the coastal Gulf of Maine. 137th American Fisheries Society Annual Meeting, San Francisco, CA. Sept. 2-6, 2007.
- (53) **Chen, Y.**, M. Kanaiwa, and C. Wilson. 2007. Develop and evaluate a seasonal, sex-specific size-structured stock assessment model for the American lobster. 8th International Conference and Workshop on Lobster Biology and Management. Charlottetown, PEI, Canada. Sept. 23 – 28, 2007.
- (54) **Chen, Y.**, Mike Errigo, et al. 2008. Evaluating stock assessment model for the GOM stock assessment. National Shellfish Association Annual Meeting, Rhode Island April 7-10, 2008.

My students and I have co-authored 8 abstracts in national and international meetings in 2008, and 10 abstracts in national and international meetings in 2009. Because of length of the CV, they are not listed here.

(f) PROFESSIONAL PRESENTATIONS (*an incomplete list*, stop updating after 2008, authors with * are my students or postdocs)

- (1) **Chen, Y.** and H. H. Harvey. Growth analysis of the white suckers from nineteen

- Ontario lakes. American Fisheries Society Annual Meeting, Pittsburgh, PA., U.S.A., August 1990.
- (2) **Chen, Y.**, D. A. Jackson, and H. H. Harvey. Comparison of mathematical models of fish growth. Canadian Conference for Fisheries Research Annual Meeting, Gulph, Ontario, January 1991.
 - (3) **Chen, Y.** and J. E. Paloheimo. Robust regression analysis of fisheries data. The 54th Midwest Fish & Wildlife Conference, Toronto, Canada, December 1992.
 - (4) **Chen, Y.** and H. H. Harvey. Growth of white sucker, Catostomus commersoni, in relation to food supply and population density. American Fisheries Society Annual Meeting, Portland, OR., U.S.A., August 1993.
 - (5) Harvey, H. H., E. A. Trippel, and **Y. Chen**. The effects of reduced intraspecific competition on a low-density white sucker population. American Fisheries Society Annual Meeting, Pittsburgh, PA., U. S. A., August 1990.
 - (6) Jackson, D. A. and **Y. Chen**. Robust multivariate analysis: principal components analysis with outliers. International Environmetrics Society, Burlington, Ontario, August 1994.
 - (7) Harvey, H. H., D. A. Jackson, and **Y. Chen**. Dynamics of a white sucker, Catostomus commersoni, population with a gradual reduction from high to low density. American Fisheries Society Annual Meeting, Halifax, August 1994.
 - (8) **Chen, Y.**, G. Liggins, and K. Graham. 1995. Modelling length-dependent offshore distribution of redfish, Centroberyx affinis. Annual Conference of the Australian Society for Fish Biology, University of Sydney, NSW, Australia, July 1, 1995.
 - (9) **Chen, Y.** 1995. Identification and interpretation of outliers in analyzing fisheries data. Seminar Series in NSW Fisheries Research Institute, Cronulla, NSW. August 17, 1995.
 - (10) **Chen, Y.** 1995. Parameter estimation and data analysis in fisheries. Chesapeake Biological Laboratory, Center for Environmental and Estuarine Studies, University of Maryland, U. S. A. November 23, 1995.
 - (11) **Chen, Y.** 1996. Stock assessment in New South Wales - a population dynamicist's perspective. Seminar Series in NSW Fisheries Research Institute, Cronulla, NSW. May 23, 1996.
 - (12) **Chen, Y.** 1996. The influence of error on modelling the dynamics of fish population. Fisheries and Marine Institute, Memorial University of Newfoundland, St. John's, Newfoundland, Canada, November 24, 1996.
 - (13) **Chen, Y.** and L. Mello. 1999. Developing an overall indicator for monitoring temporal variation in fish size at age and its application to cod (*Gadus morhua*) in the Northwest Atlantic, NAFO subdivision 3Ps. Working paper 99/11. DFO Newfoundland Region Stock assessment meeting. Feb. 15-19. St. John's, NF.
 - (14) **Chen, Y.** 1999. Bayesian inference in ecology. Ecology Seminar Series, Department of Zoology, University of Toronto, Toronto, March 29, 1999
 - (15) **Chen, Y.** 1999. Impacts of atypical data on natural resources modelling. The World Conference for Natural Resources Modelling, June 22-25, Halifax, NS.
 - (16) **Chen, Y.** 1999. Uncertainties in fish stock assessment. Darling Marine Center, University

- of Maine, August 16, 1999.
- (17) **Chen, Y.** 1999. Impacts of atypical data on Bayesian stock assessment and robust Bayesian methods. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 2, 1999.
- (18) **Chen, Y.** 1999. Growth and maturation of cod in NAFO subdivision 3Ps. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 1, 1999
- (19) *Rajakaruna, H. and **Y. Chen.** 1999. Impacts of at-sea discarding on virtual population analysis. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 1, 1999
- (20) *Rajakaruna, H. and **Y. Chen.** 1999. Impacts of excluding discarded catch on VPA in cod stock assessment in Newfoundland. Regional stock assessment meeting for 3Ps cod. St. John's, NF, October 19, 1999.
- (21) **Chen, Y.** 1999. Impacts of atypical data on natural resources modelling. The World Conference for Natural Resources Modelling, June 22-25, Halifax, NS.
- (22) **Chen, Y.** 1999. Bayesian inference in ecology. Ecology Seminar Series, Zoology, University of Toronto March 1999.
- (23) **Chen, Y.** 1999. Developing an overall indicator for monitoring temporal variation in fish size at age and its application to cod in the Northwest Atlantic, NAFO subdivision 3Ps. Canadian Stock Assessment Regional meeting, Feb., 1999.
- (24) **Chen, Y.** 1999. Uncertainties in fisheries stock assessment. Darling Marine Center, University of Maine. August 1999.
- (25) *Rajakaruna, H., and **Y. Chen.** 1999. Impacts of excluding discarded catch on VPA in cod stock assessment in Newfoundland. Canadian Dept. of Fisheries and Oceans Regional Stock assessment for 3Ps cod, St. John's, Newfoundland, October 1999.
- (26) **Chen, Y.** 1999. Impacts of atypical data on Bayesian stock assessment and robust Bayesian methods. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 2, 1999.
- (27) **Chen, Y.** 1999. Growth and maturation of cod in NAFO subdivision 3Ps. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 1, 1999
- (28) Rajakaruna, H. and **Y. Chen.** 1999. Impacts of at-sea discarding on virtual population analysis. American Fisheries Society 129th Annual Meeting, Charlotte, NC, September 1, 1999
- (29) **Chen, Y.** 2000. Impacts of quantity and quality of fisheries data on stock assessment. 3rd World Fisheries Congress, Beijing, China. October 31 – November 3, 2000
- (30) **Chen, Y.** 2000. Quality of fisheries data and fisheries stock assessment. Fisheries Stock Assessment Symposium, the University of Bergen, Bergen, Norway. December 4-6, 2000.
- (31) *Zhao, Y., **Y. Chen,** and J. A. Brown. 2000. Impacts of egg size and hatching temperature on size, survival and growth of Atlantic cod larvae (*Gadus morhua*). 3rd World Fisheries Congress, Beijing, China. October 31 – November 3, 2000
- (32) **Chen, Y.** 2001. Quantity of fisheries data and uncertainty in stock assessment. Canadian Conference for Fisheries Research Annual Meeting, Toronot, January 4-6, 2001.
- (33) **Chen, Y.** 2001. Assessment of the Maine sea urchin stock. Sea urchin summit, Ellsworth,

- ME, April 2001.
- (34) **Chen, Y.** 2001. Developing alternative stock assessment for the American lobster. Lobster Institute Board of Advisors Meeting, Orono, ME, May 2001.
- (35) **Chen, Y.** 2001. A preliminary assessment of Maine sea urchin stock. School of Marine Sciences Spring Seminar Series, University of Maine, Orono, ME, May 2001.
- (36) **Chen, Y.** and C. Wilson. 2001. Evaluating F10%. Lobster Model Development Subcommittee. Portsmouth, NH, July 2001
- (37) **Chen, Y.** 2001. Sea Urchin Zone Council meeting. Maine Sea Urchin Stock Assessment. Orland, ME, July 2001
- (38) **Chen, Y.** and M. Hunter. 2001. Application of robust Bayesian methods in fisheries stock assessment. Invited session "Application of Bayes Methodology in Statistical Consulting", American Statistical Association Annual Meeting, Atlanta, August 2001.
- (39) **Chen, Y.** 2001. Fisheries Stock Assessment. Portland, Gulf of Maine Aquarium, Dec. 2001
- (40) **Chen, Y.** 2001. Developing, evaluating, and refining stock assessment framework for the Maine sea urchin fishery. Orland, ME, Maine Sea Urchin Zone Council, Dec. 2001.
- (41) **Chen, Y.** 2002. Uncertainty in biological reference points for the American lobster fishery. Maine Fishermen's Forum, Rockland, ME, April 2002.
- (42) **Chen, Y.** 2002. Fisheries stock assessment and management in the United States. East China Normal University, Shanghai, China. May 2002
- (43) **Chen, Y.** 2002. High educations in Australia, Canada, and US. East China Normal University, Shanghai, China, May 2002.
- (44) *Grabowski, R.C., **Y. Chen**, R. Russell, and M. Hunter. 2002. Analysis of the spatial distribution of green sea urchin along the coast of Maine. American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 19, 2002
- (45) *Scheirer, K, **Y. Chen**, and C. Wilson. 2002. Comparing two sampling programs for the Maine lobster fishery. American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 20, 2002
- (46) *Yan, J., **Y. Chen**, and J. Wroblewski. 2002. Impacts of stock mixing on the estimation of fish growth. American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 21, 2002
- (47) **Chen, Y.** 2002. Robust statistical methods: how can we develop and use them for analyzing fisheries data? American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 19, 2002
- (48) *Zhao, Y., **Y. Chen**, and J. Brown. 2002. Size-dependent survival and growth of Atlantic cod (*Gadus morhua*) larvae under different feeding conditions. American Fisheries Society 132th Annual Meeting, Baltimore, Maryland, Aug. 21, 2002
- (49) *Grabowski, R., **Y. Chen**, and T. Windholz. 2002. Developing a computer simulation program to determine optimal sampling strategies: a case study of the Maine sea urchin fishery. 2nd International Symposium on GIS/Spatial Analyses in Fishery and Aquatic Sciences. Brighton, England. 3-6 September, 2002.
- (50) **Chen, Y.** 2002. Spatial dynamics of the lobster fishery and oil spills in the Gulf of Maine, a risk analysis of oil spills on the lobster fishery. Darling Marine Center, September 9, 2002. NOAA Oil Spills Training Workshop.
- (51) **Chen, Y.**, *R. Grabowski, and *K. Jones. 2002. Maine sea urchin stock assessment. Maine Sea Urchin Zone Council, Orland, ME. Nov. 14, 2002.

- (52) **Chen, Y.** 2002. Uncertainty in fisheries stock assessment. School of Marine Sciences and Technology, University of Massachusetts at Dartmouth, New Bedford, MA, Nov. 21, 2002.
- (53) **Chen, Y.** 2002. Stock assessment of the American lobster fishery. Joint seminar by School of Marine Science and Department of Biology, University of Maine at Orono. Dec 13, 2002
- (54) **Chen, Y.** and *K. Jones. 2003. Maine sea urchin stock assessment. Maine Fishermen's Forum, March 30, Rockland, ME.
- (55) **Chen, Y.** 2003. Modeling spatial dynamics of the Maine lobster fishery and possible implications with oil spills in the Gulf of Maine. Maine Oil Spill Committee (MOSAC) and Maine Sea Grant, May 22, Portland, ME.
- (57) **Chen, Y.** 2003. The assessment of the American lobster fishery in the Gulf of Maine. Atlantic State Marine Fisheries Commission Lobster Model Development Committee, New York, NY. Aug. 4-5, 2003.
- (58) **Chen, Y.**, *M. Kanaiwa, and C. Wilson. 2003. Developing an individual-based stock assessment framework using random Bernoulli trials. American Fisheries Society 133 Annual Meeting, Quebec City, Canada, Aug. 10-14.
- (59) *Kanaiwa, M., **Y. Chen**, and C. Wilson. 2003. Developing a Bayesian stock assessment framework for the American lobster fishery. American Fisheries Society 133 Annual Meeting, Quebec City, Canada, Aug. 10-14.
- (60) *Jones, K., **Y. Chen**, R. Russell, and M. Hunter. 2003. Developing an abundance index for the Maine sea urchin stock. American Fisheries Society 133 Annual Meeting, Quebec City, Canada, Aug. 10-14.
- (61) *Jiao, Y., **Y. Chen**, and J. Wroblewski. 2003. Evaluating the northern cod (*Gadus morhua*) fishery status using a composite risk assessment method. American Fisheries Society 133 Annual Meeting, Quebec City, Canada, Aug. 10-14.
- (62) **Chen, Y.** and *S. Kirshenbaum. 2003. Assessing the Maine sea cucumber fishery. Northeast Consortium Annual meeting, Portsmouth, NH. Dec. 9, 2003.
- (63) **Chen, Y.**, S. Sherman, C. Wilson, and J. Sowles. 2004. An evaluation of consistency of two fishery-independent survey programs in indexing lobster abundance in Maine. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (64) **Chen, Y.**, *Kanaiwa, M., and C. Wilson. 2004. Evaluating a Bayesian stock assessment framework for the American lobster fishery. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (65) *Couture, D. and **Y. Chen**. 2004. (Poster) A mail survey program for better understanding the dynamics of the American lobster fishery in Maine. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (66) *Sherier, K., C. Wilson, and **Y. Chen**. 2004. Spatial dynamics of the lobster fishery in Maine, USA. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (67) Incze, L, H. Xue, N. Pettigret, **Y. Chen**, R. Stneck, C. Wilson, P. Lawton, and D. Greenberg. 2004. Data assimilation and modeling of source-sink relationships and fishery production of *Homarus Americanus* in the Gulf of Maine. The 7th International Conference and Workshop on Lobster Biology and Management, Hobart, Australia, Feb. 9 – 13, 2004.
- (68) **Chen, Y.** 2004. Uncertainties in fisheries stock assessment. National Taiwan University, Taipei, March 11, 2004.
- (69) **Chen, Y.** 2004. Fisheries stock assessment and management in Maine, USA. Taiwan Fisheries Research Institute, Taiwan, March 10, 2004.

- (70) **Chen, Y.** 2004. Ecosystem-based management in fisheries. Central China Agricultural University, Wuhan, China, June 4, 2004.
- (71) **Chen, Y.** 2004. Fisheries management strategies. Central China Agricultural University, Wuhan, China, June 3, 2004..
- (72) **Chen, Y.** 2004. Graduate Studies in the United States. 2004. East China Normal University, Shanghai, June 8, 2004.
- (73) **Chen, Y.** 2004. Bayesian stock assessment for the American lobster fishery in the Gulf of Maine. Atlantic State marine Fisheries Commission Lobster Stock Assessment and Model Development subcommittee, Long Island, NY, June 17, 2004.
- (74) *Reardon, K. and **Y. Chen.** 2004. Estimation of key fishery parameters for managing Jonah crab fishery in Maine. 134th American Fisheries Society Annual meeting, Madison, WI, Aug. 23-27. 2004.
- (75) *Jones, K. and **Y. Chen.** 2004. A comparative study of a population model and a spatial statistics model in assessing the green sea urchin stock in Maine. 134th American Fisheries Society Annual meeting, Madison, WI, Aug. 23-27. 2004.
- (76) *Kirshenbaum, S. and **Y. Chen.** 2004. A fecundity study of the Maine sea cucumber population. 134th American Fisheries Society Annual meeting, Madison, WI, Aug. 23-27. 2004.
- (77) *Zhang, Y. and **Y. Chen.** 2004. A study of the lobster ecosystem in the Gulf of Maine. 134th American Fisheries Society Annual meeting, Madison, WI, Aug. 23-27. 2004.
- (78) **Chen, Y., M. *Kanaiwa,** and C. Wilson. 2004. Developing and testing a simulation model for the American lobster. ASMFC Lobster Model Peer Review, Boston, Oct. 26-28, 2004.
- (79) **Chen, Y. , M. *Kanaiwa,** and C. Wilson. 2004. Developing and testing a size-structured stock assessment model for the American lobster. ASMFC Lobster Model Peer Review, Boston, Oct. 26-28, 2004.
- (80) **Chen, Y.** 2005. Assessing deep-sea red crab stock in the new England. Deep-sea red crab ad hoc stock assessment group meeting. Bigelow Lab, West Boothbay Harbor, Maine, March 8, 2005
- (81) **Chen, Y.** 2005. Biological reference points in fisheries management. China Yellow Sea Fisheries Research Institute, Qingdao, China, June 8, 2005.
- (82) **Chen, Y.** 2005. Statistical methods in fisheries stock assessment. Ocean University of China, Qingdao, China, June 15, 2005.
- (83) **Chen, Y.** 2005. Fisheries stock assessment and management in the United States. Shanghai Fisheries University, China, June 18, 2005.
- (84) **Chen, Y.** 2005. Developing a seasonal length-structured sex-specific stock assessment model for the American lobster. Atlantic States Marine Fisheries commission Lobster Stock Assessment Peer-review Committee, Boston, Aug. 2005.
- (85) **Chen, Y.** 2005. Estimating and comparing gear selectivity (fishing gear symposium). American Fisheries Society Annual meeting, Anchorage, Alaska, Sept. 2005.
- (86) **Chen, Y.** 2005. Biological reference points for fisheries management. Taiwan Fisheries Research Institute, Oct. 17, 2005.
- (87) **Chen, Y.** 2005. Assessing American lobster stock in the northeastern United States. National Taiwan University, Taipei, Oct. 18, 2005.

- (88)* Kirshenbaum, S. and **Y. Chen**. 2006. Workshop for new fisheries in Atlantic Canada. Department of Fisheries and Oceans, Halifax, NS, Canada, January, 2006.
- (89) **Chen, Y.** 2006. Assessing the Maine green sea urchin fishery. School of Marine Sci Sciences and Technology, University of Massachusetts at Dartmouth, March 8, 2006
- (90) **Chen, Y.** 2006. ASMFC Lobster Stock Assessment Committee, Providence, RI. June 22, 2006.
- (91) **Chen, Y.** 2006. An analysis of impacts of artificial baits on cod bycatch. A presentation to the Cape Cod Commercial Hook Fishermen's Association, Gulf of Maine Research Institute, July 20, 2006.
- (92) **Chen, Y.** 2006. Assessing American lobster stocks. National Sea Grant Review of the Maine Sea Grant College Program, Orono, ME. March 2006.
- (93) *Errigo, M. and **Y. Chen**. 2006. Evaluating normal and fat-tailed likelihood functions in Bayesian stock assessment. 136th American Fisheries Society Annual meeting, Lake Placid, NY, Sept. 10-14, 2006
- (94) *Zhang, Y. and **Y. Chen**. 2006. Developing and evaluating biological reference points for the American lobster fishery management. 136th American Fisheries Society Annual meeting, Lake Placid, NY, Sept. 10-14, 2006
- (95) *Zhang, Y. and **Y. Chen**. 2006. Ecological modeling of American lobster population in the Gulf of Maine. 136th American Fisheries Society Annual meeting, Lake Placid, NY, Sept. 10-14, 2006.
- (96) **Chen, Y.** 2006. Evaluating impacts of Gulf War on the Kuwait prawn fisheries. Taiwan Fisheries Research Institute, Dec. 20, 2006.
- (97) **Chen, Y.** 2006. Assessing American lobster in the northeastern United States. National Taiwan Ocean University, Nov. 29, 2006.
- (98) **Chen, Y.** 2007. Impacts of prior misspecification on fisheries stock assessment. March 12-14, 2007. The International Symposium on tuna and pelagic fish stock assessment and management. Shanghai Fisheries University, Shanghai, China.
- (99) **Chen, Y.** 2008. Developing stock assessment framework for the American lobster. School of Marine Sciences Seminar Series, University of Maine, Orono, ME.
- (100) **Chen, Y.**, Mike Errigo, et al. 2008. Evaluating stock assessment model for the GOM stock assessment. National Shellfish Association Annual Meeting, Rhode Island April 7-10, 2008.
- (101) Danielle Brzezinski*, **Y. Chen**, and J. Wilson An analysis of habitat and benthic community effects of scallop dredging on Georges Bank using video photography data

I have authored or co-authored 11 talks in national and international meetings in 2008, and 14 talks in national and international meetings in 2009. Because of length of the CV, they are not listed here.

PEER REVIEW

(a) I HAVE REFEREED MANUSCRIPTS FOR THE FOLLOWING JOURNALS (incomplete list):

- (1) Fishery Bulletin
- (2) ICES Journal of Marine Sciences

- (3) Canadian Journal of Fisheries and Aquatic Sciences (currently serve as Associate Editor)
- (4) Aquatic Living Resources
- (5) Fisheries Research
- (6) Ecological Modeling
- (7) Transactions of American Fisheries Society
- (8) North American Journal of Fisheries Management
- (9) Ecological Applications
- (10) Scientia Marina
- (11) Freshwater and Marine Research
- (12) New Zealand Journal of Freshwater and Marine Research
- (13) Marine Biology
- (14) Ecosystems
- (15) Environmental Monitoring and Assessment
- (16) Chinese Journal of Oceanology and Limnology
- (17) Journal of Experimental Marine Biology and Ecology
- (18) Raffles Bulletin of Zoology
- (19) Chinese Journal of Fisheries
- (20) The Proceedings of the Third World Fisheries Congress
- (21) Publications by the American Fisheries Society
- (22) Great Lake Research
- (23) Journal of Sea Research
- (24) Ocean Modeling
- (25) Fish and Fisheries
- (26) Review papers for other scientists at the UMaine, University of Toronto, Memorial University of Newfoundland, East China Normal University, Central China Agricultural University, Shanghai Fisheries University, etc.

(b) REVIEW PANELS AND REVIEW RESEARCH PROPOSALS AND GRANTS FOR THE FOLLOWING FUNDING AGENCIES (incomplete list, stop updating after 2010)

- (1) Nature Sciences and Engineering Council of Canada (NSERC)
- (2) National Science Foundation (NSF)
- (3) National Science Foundation of China (NSFC)
- (4) Alaska Sea Grant College Program
- (5) RI Sea Grant program
- (6) Maryland Sea Grant College Program
- (7) North Pacific Research Board
- (8) New Hampshire Sea Grant Program
- (9) Exxon Valdez Oil Spill Trustee Council
- (10) National Research Foundation (NRF), South Africa
- (11) Saltonstall-Kennedy Program

OTHER SCHOLARLY ACTIVITY

- Invited by the Transactions of American Fisheries Society to review the book “Incorporating Uncertainty into Fishery Models”.

- Appointed on the Northeast Regional Stock Assessment Review Committee, 2003
- Hired as fisheries modeling consultant in the NOAA and Northeast Consortium funded deep-sea red crab stock assessment project (Dr. Rick Wahle, Biglowe Lab);
- Hired as statistical consultant in the NOAA-funded trawl selectivity research project (Dr. P. He, University of NH);
- Regularly consulted for statistical analyses, modeling, and stock assessment by scientists of the Maine Sea Grant Extension and Maine Department of Marine Sciences;
- In 1999, I applied for a Chinese National Science Foundation (CNSF) research fund, which is specifically designed for those overseas scholars who want to conduct research in China, to study impacts of aquaculture on lake ecosystem in China, in collaboration with Dr. Liqiao Chen (Co-PI) of the East China Normal University. (CNSF overseas scholar project #30028018). This three-year project (400,000 Chinese dollars with no indirect costs; 200-2003) has been completed.

AREAS OF RESEARCH INTERESTS (in details)

1. Development of models of various complexities for marine and freshwater fisheries resources assessment and management.
2. Computer simulations in fisheries including design various computer stimulation studies to evaluate performance of stock assessment models of various complexities, survey/sampling designs, and harvest control rules.
3. Development of methods, tools and computer programs for management strategies evaluation.
4. Fish communities and community compositions and dynamics; modelling distributions of fishes and fish communities in relation to environmental variables; fish community and population regulation.
5. Fish life histories, ecology, and population dynamics; maturation of fishes and its relationships with environmental variables; spawning seasonality, distribution, and regulation; recruitment of fishes and its relationship with environmental variables; age determination and back calculation of fish growth; estimation of fisheries parameters (e.g. growth rates, mortality rates, abundance, maturation parameters); estimation of uncertainties associated with estimated fisheries parameters.
6. Stock assessments and yield modelling; assessment and modelling of effects of fishing on stock; stock-recruitment relationship; evaluation of effects of uncertainties associated with estimated fisheries parameters on stock assessment; fisheries management strategies and tactics; biological reference points; quantification and interpretation of uncertainty in stock assessment; quality and quantity of fisheries data for stock assessment; risk estimation and analysis for alternative fisheries management strategies.
7. Computer-intensive statistical approaches; error structure in regression analysis; robust regression analysis; identification and interpretation of outliers in analyzing fisheries data; experimental and survey design; computer simulations.
8. Bayesian inference; robust Bayesian inference in fisheries and Bayesian stock assessment framework; impacts of quality of fisheries data on Bayesian inference; statistical decision-making theory.

9. Spatial analysis of fisheries data; spatial dynamics of fisheries; optimal experiment and survey designs based on computer simulations, spatial statistics.
10. Fisheries ecological modelling and multi-species fisheries stock assessment modelling, and ecosystem-based fisheries stock assessment and management.
11. Fisheries management policy, fleet dynamics, ecosystem-based management, scales of fisheries management, development and evaluation of fisheries ecosystem indicators and management reference points.
12. Fisheries and scientific survey and experiment designs and data analyses.