



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center
7600 Sand Point Way N.E.
Seattle, Washington 98115-6349

Angel Drobnic, Chair
North Pacific Fishery Management Council
1007 W. 3rd Avenue
Anchorage, AK 99501

August 27, 2024

Dear Ms. Drobnic,

I am pleased to recommend the appointment of Dr. James Thorson as a member of the Gulf of Alaska (GOA) Groundfish Plan Team (GPT).


Dr. Thorson is a Research Fish Biologist in the Resource Ecology and Fisheries Management Division at the Alaska Fisheries Science Center (AFSC). Dr. Thorson is qualified to serve on the Plan Team due to his background in spatial statistics, quantitative ecology, stock assessment, and resource management. Jim has been working with multiple AFSC programs as co-lead of the Arctic IERP synthesis project, and has been maintaining, updating, and improving operational software that is used across NMFS for spatio-temporal analysis. He has also developed statistical methods for ecosystem synthesis, including multivariate spatio-temporal models, ecosystem time-series models, and state-space mass-balance models. Dr. Thorson has contributed to improvements in existing software used for stock assessment, including the development, testing, and distribution of new methods to model time-varying parameters, how data are fitted, and how demographic processes (e.g., animal movement) is represented. Jim has also developed new products for use in stock assessments, e.g., estimates of movement resulting from analysis of data from tagged animals, new products operating at an expanded spatial scale that is appropriate given climate-driven distribution shifts, and new survey products for use in Ecosystem Status Reports. All of these skills should be of use to plan team members.

Previously, Jim worked as an operations research analyst in the Population Ecology Program at the Northwest Fisheries Science Center. He led the stock assessment for canary rockfish in 2017/2019, and collaborated on the sablefish stock assessment previously. He also led research regarding life-history meta-analysis, spatial statistics, index standardization, and assessment modelling methods.

Jim received his PhD from the University of Washington in in 2011 in the School of Aquatic and Fisheries Sciences (supervised by Dr. Andre Punt), and a M.S. in Fisheries and Aquatic Sciences from Virginia Tech in 2009 (supervised by Dr. Jim Berkson). He received a Presidential Early Career award in 2013, the Staff Member of the year award in 2014, and a NOAA Bronze medal in 2021.

Dr. Thorson's combination of skills in stock assessment methods, spatial statistics, life-history theory, and ecosystem modelling make him an excellent candidate for contributing to the groundfish plan team.

Sincerely,


Dr. Robert Foy
AFSC Director



Curriculum Vita James T. Thorson

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National Marine Fisheries Service (NMFS)
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Education

Ph.D. School of Aquatic and Fisheries Sciences (SAFS), University of Washington (UW), 2009-2011.
M.Sc. Department of Fisheries and Wildlife (FiW), Virginia Tech (V.T.), 2007-2009.
B.Sc. Environmental Studies, Philosophy, Minor: Economics, Emory University 2002-2006.

Employment

Statistical ecologist (ZP-5), Resource Ecology and Fisheries Management Division, AFSC, NMFS, Feb. 2023 – present.
Program Leader (ZP-5), Habitat & Ecological Processes Research, AFSC, NMFS, Aug. 2018 – Jan. 2023.
Operations Research Analyst (ZP-3 to ZP-4), Northwest Fisheries Science Center (NWFSC), NMFS, June 2012 – Aug 2018.
Post doctoral researcher, NWFSC, NMFS, March 2012 – June 2012.
Research Scientist, Commonwealth Scientific and Industrial Research Organization, July-Aug. 2011.

Affiliations

Affiliate Faculty, University of Washington, School of Aquatic and Fisheries Sciences, 2015-present
Affiliate Faculty, Oregon State University, Department of Fisheries and Wildlife, 2016-2019

Stock Assessments

Thompson, G., Conner, J., Shotwell, K., Fissel, B., Hurst, T., Laurel, B., Rogers, L., Siddon, E., and Thorson, J. 2021. Chapter 2: Assessment of the Pacific cod stock in the eastern Bering Sea. North Pacific Fisheries Management Council.
Ianelli, J., Fissel, B., Holsman, K., Honkalehto T., Kotwicki, S., Monnahan, C., Siddon, E., Stienessen, S., and **Thorson, J.** 2020. Chapter 1: Assessment of the Walleye Pollock Stock in the Eastern Bering Sea. North Pacific Fisheries Management Council.
Thompson, G., and **Thorson, J.** 2019. Assessment of the Pacific cod stock in the eastern Bering Sea. North Pacific Fisheries Management Council.
Ianelli, J., Fissel, B., Holsman, K., Honkalehto T., Kotwicki, S., Monnahan, C., Siddon, E., Stienessen, S., and **Thorson, J.** 2019. Chapter 1: Assessment of the Walleye Pollock Stock in the Eastern Bering Sea. North Pacific Fisheries Management Council.
Thorson, J., and Wallace, J. 2017. A catch-only update assessment for canary rockfish (*Sebastes pinniger*) in the California Current in 2017. Pacific Fisheries Management Council.
Thorson, J., and Wetzel, C. 2015. The status of canary rockfish (*Sebastes pinniger*) in the California Current in 2015. Pacific Fisheries Management Council.
Gertseva, V., and **Thorson, J.** 2013. Status of the darkblotched rockfish resource off the continental US Pacific Coast in 2013. Pacific Fisheries Management Council.
Stewart, I., **Thorson, J.**, and Wetzel, C. 2011. Status of the US sablefish resource in 2011. Pacific Fisheries Management Council.

Reports and Tech Memos

Pirtle, J., Thorson, J., Bayer, S. Hurst, T., Siple, M., Matta, B. Alaska Essential Fish Habitat Research Plan for 2023-2027. U.S. Department of Commerce., NOAA Technical Memorandum NMFS-AFSC-XXX, XX p.
Thorson, J. T., Angliss, R., Baldwin-Schaeffer, M., Boveng, P., Copeman, L., De Robertis, A., Kotwicki, S., Goldstein, E., Logerwell, E., Mooney-Seus, M., Ward, E., Whitehouse, G. A., and Wise, S. 2023. Chukchi and Beaufort Seas: Regional Action Plan to Implement the NOAA Fisheries Climate Science Strategy

- Through 2024. U.S. Department of Commerce., NOAA Technical Memorandum NMFS-AFSC-XXX, XX p.
- Gerritsen, Kotwicki, Ono, Anderson, Bacheler, Barnett, Berg, Blackhart, Bolser, Börjesson, Bryan, Cariou, , Chilton, Conner, De Groote, DeFilippo, Dolder, Foley, Gerritsen, Hall, Johnsen, Kelly, Kotwicki, Kupschus, Gwladys Lambert, Lipsky, Markowitz, Martin, Miller, Minto, O'Connor, Ono, Oyafuso, Paradinas, Grazia Pennino, Phillips, Ramirez, Reece, Regular, Siple, Siskey, Stokes, Stroh, **Thorson**, van Hal, Vigneau, Vilas, Wieland, Yalcin. 2023. Workshop on Unavoidable Survey Effort Reduction 2 (WKUSER2). ICES Scientific Reports. 5:13. 115 pp. <https://doi.org/10.17895/ices.pub.22086845>
- Cairns, D.K., Avery, T.S., Benchetrit, J., Bornarel, V., Casselman, J.M., Castonguay, M., Crow, S.K., Dorow, M., Drouineau, H., Frankowski, J., Galbraith, H.S., Haro, A., Hoyle, S.D., Knickle, D.C., Koops, M.A., Poirier, L.A., Rudd, M.B., **Thorson, J.T.**, Williams, E.K., Young, J., and Zhu, X. 2021. Methods and data sources to support American eel population analysis. Department of Fisheries and Oceans Canadian Science Advisory Secretariat Research Document 2020/031. vi + 77 p.
- Thorson, J.**, Angliss, R., Baldwin-Schaeffer, M., Boveng, P., Copeman, L., De Robertis, A., Kotwicki, S., Goldstein, E., Logerwell, L., Mooney-Seus, M., Ward, E., Whitehouse, G., Wise, S. 2021. Chukchi and Beaufort Seas Climate Science Regional Action Plan.
- Hurst, T.P., O'Leary, C.A., Rohan, S.K., Siddon, E.C., **Thorson, J.T.**, Vollenweider, J.J., 2021. Inventory, management uses, and recommendations for fish and crab condition information from the 2021 AFSC Condition Congress. AFSC Processed Report. 2021-04, 39.
- Fissel, B., McGilliard, C., **Thorson, J.**, and Yasumiishi, E. Analysis of Pay Differences Between Men and Women at the Alaska Fisheries Science Center: Report of the AFSC Equity Analysis Committee. AFSC Tech Memo.
- Kupschus, Kotwicki, Palsson, Barnett, Blaine, Börjesson, Britt, Bryan, Conner Cunningham, de Boois, Field, Gauvin, Hamel, Hillier, Hollowed, Ianelli, Ingram, Jorgensen, Karp, Keller, Kotwicki, Kupschus, Laman, Lambert, Marshall, Martin, Methot, Monnahan, Munro, Ono, Oyafuso, Pacunski, Palsson, Richar, Rideout, Rogers, Rooper, Spencer, Stokes, Taylor, **Thorson**, Tsou, von Szalay, Ward, Walker, Williams, Yeung. 2020. ICES Workshop on unavoidable survey effort reduction (WKUSER). ICES Scientific Reports. 2:72. 92pp. <http://doi.org/10.17895/ices.pub.7453>
- Thorson, J.**, Maunder, M., and Punt, A. 2020. The development of spatio-temporal models of fishery catch-per-unit-effort data to derive indices of relative abundance. *Fisheries Research*.
- Harvey, C., N. Garfield, G. Williams, N. Tolimieri, I. Schroeder, K. Andrews, K. Barnas, E. Bjorkstedt, S. Bograd, R. Brodeur, B. Burke, J. Cope, A. Coyne, L. deWitt, J. Dowell, J. Field, J. Fisher, P. Frey, T. Good, C. Greene, E. Hazen, D. Holland, M. Hunter, K. Jacobson, M. Jacox, C. Juhasz, I. Kaplan, S. Kasperski, D. Lawson, A. Leising, A. Manderson, S. Melin, S. Moore, C. Morgan, B. Muhling, S. Munsch, K. Norman, R. Robertson, L. Rogers-Bennett, K. Sakuma, J. Samhuri, S. Siedlecki, K. Somers, W. Sydeman, A. Thompson, **J. Thorson**, D. Tommasi, V. Trainer, A. Varney, B. Wells, C. Whitmire, M. Williams, T. Williams, J. Zamon, and S. Zeman. 2019. Ecosystem Status Report of the California Current for 2019: A Summary of Ecosystem Indicators Compiled by the California Current Integrated Ecosystem Assessment Team (CCEIA). U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-149
- Thorson, J.**, Fossheim, M., Mueter, F., Olsen, E., Lauth, B., Primicerio, R., Husson, B., Marsh, J., Dolgov, A., Zador, S. 2019. Comparison of near-bottom fish densities show rapid community and population shifts in Bering and Barents Seas, NOAA Arctic Report Card.
- Winker, H. Carvalho, F., **Thorson, J.**, Parker, D., Kerwath, S., Booth, A., Kell, L. JABBA-Select: an alternative surplus production model to account for changes in selectivity and relative mortality from multiple fisheries. Marine Resource Assessment and Management Group, University of Cape Town, MARAM/IWS/2018/Linefish/P2
- Winker, H., **Thorson, J.**, Fairweather, Tracy, Leslie, Rob, and Durholtz, Deon. Towards improving precision in South African demersal trawl survey indices using geostatistical GLMMs. Marine Resource Assessment and Management Group, University of Cape Town, MARAM/IWS/2017/Hake/BG8.
- Buhle, E., Scheuerell, M., Cooney, T., Ford, M., Zabel, R., **Thorson, J.** 2018. Using integrated population models to evaluate fishery and environmental impacts on pacific salmon viability. NOAA Technical Memorandum NMFS-NWFSC-140. DOI: 10.7289/V5/TM-NWFSC-140
- Thorson, J.** 2017. Estimating a Bayesian prior for steepness in Pacific rockfishes (*Sebastes* spp.) off the U.S. West Coast for the 2017 assessment cycle. Report for the Pacific Fisheries Management Council March 2017 briefing book.

- Thorson, J.,** Punt, A., Sampson, D., Kell, L., De Oliveira, J. 2016. Development, testing, and evaluation of data-poor assessment and fisheries management methods. *Fisheries Research*, 171: 1-3.
- Thorson, J.** 2015. Summary of the geostatistical delta-GLMM tool. Report for the Pacific Fisheries Management Council March 2015 briefing book.
- Thorson, J.** 2015. Estimating a Bayesian prior for steepness in Pacific rockfishes (*Sebastes* spp.) off the U.S. West Coast for the 2015 assessment cycle. Report for the Pacific Fisheries Management Council March 2015 briefing book.
- Thorson, J.** 2012. Estimating a Bayesian prior for steepness in Pacific rockfishes (*Sebastes* spp.) off the U.S. West Coast for the 2013 assessment cycle. Report for the Pacific Fisheries Management Council briefing book.

Shared software (with ongoing maintenance)

- Thorson, J. and Anderson, Sean. 2023. tinyVAST: Vector Autoregressive Spatio-Temporal Model Using Minimal Feature-Set (<https://vast-lib.github.io/tinyVAST/>)
- Thorson, J. 2023. dsem: Fit Dynamic Structural Equation Models (<https://james-thorson-noaa.github.io/dsem/>)
- Thorson, J. 2023. phylosem: Phylogenetic Structural Equation Model (<https://james-thorson-noaa.github.io/phylosem/>)
- Thorson, J. 2021. mvtweedie: fitting a multivariate Tweedie distribution using generalized linear and additive models (<https://github.com/James-Thorson/mvtweedie>)
- Thorson, J. 2018. FishStatsUtils: Utility functions for spatio-temporal analysis (<https://github.com/James-Thorson/FishStatsUtils>)
- Thorson, J. 2017. FishLife: Estimate fish traits for all marine fish species globally (<https://github.com/James-Thorson/FishLife>)
- Thorson, J. 2017. FishData: Tools to download and harmonize publicly available fisheries data (<https://github.com/James-Thorson/FishData>)
- Thorson, J. 2016. VAST: an R package for vector autoregressive spatio-temporal modelling of fish catch rate data (<https://github.com/James-Thorson/VAST>)
- Thorson, J., and Cope, J. 2014. CCSRA: an R package for implementing catch-curve stock reduction analysis, a new tool for data-poor assessments (<https://github.com/James-Thorson/CCSRA>).

Shared software (now maintained by others)

- Thorson, J., Stewart, I., and Punt, A. 2011. nwfscAgeingError: an R package user interface for estimating and assessing model fit for ageing bias and imprecision (<https://github.com/nwfsc-assess/nwfscAgeingError>).

Shared software (deprecated)

- Thorson, J. 2016. MIST: an R package for Multispecies Interactions Spatio-Temporal models (<https://github.com/James-Thorson/MIST>)
- Thorson, J. 2015. SpatialFA: an R package for spatial factor analysis when estimating joint species distribution models (https://github.com/James-Thorson/spatial_factor_analysis)
- Thorson, J. 2014. SpatialDeltaGLMM: an R package for spatial index standardization (https://github.com/nwfsc-assess/geostatistical_delta-GLMM)
- Thorson, J. 2013. *NegLogInt Fn()*, a tool for estimating random effects in Stock Synthesis (<https://github.com/cran/r4ss>).
- Ward, E., and Thorson J. 2012. nwfscDeltaGLM: an R package for Bayesian index standardization of post-stratified survey data (<https://github.com/nwfsc-assess/nwfscDeltaGLM>).

Scholarships and Awards

- Bronze medal, Department of Commerce, Sept. 2021.
- Best presentation, North Pacific Marine Sciences Organization (PICES) annual meeting, Sept. 2017.
- Presidential Early Career Award for Scientists and Engineers, Winter 2016.
- Reviewer of the Year, *Canadian Journal of Fisheries and Aquatic Sciences*, 2015.
- Employee of the Year, Northwest Fisheries Science Center, NMFS, NOAA, 2015.
- Faculty Merit Award from SAFS, 2012.
- National Research Council Fellowship, 2012.
- FINS travel award, 2011
- SAFS Top Scholar Fellowship, 2012-2014
- Sea Grant Pop. Dy. Fellowship, 2009-2012

AFS Marine Section Travel Grant, June 2009
Skinner Memorial Award (Runner-Up), June 2009
Young's Award for Written Excellence in Natural Resources, April 2009
NMFS-RTR Fellowship, Virginia Tech, 2007-2009.
Louis S. Gilbert Fund Grant, Mote Marine Labs, 2006.
Scholastic Inquiry and Research at Emory (SIRE), Emory University, 2005.
Dean's Achievement Scholarship, Emory University, 2002-2006.
National Merit Scholarship, Emory University, 2002-2006.

Teaching

Instructor (20 lectures/labs): Spatio-temporal models for ecologists, Univ. Wash., Spring 2024
Instructor (2 day workshop): Dynamic structural equation models for Ecosystem Based Fisheries Management, Woods Hole, MA, Feb. 26-27, 2024.
Instructor (0.5 day workshop): VAST for stock assessment scientists. National Stock Assessment Workshop, Providence, RI, May 9, 2023.
Guest lecturer (1 lecture): Data weighting: an iterative process linking field-samples and population models to evaluate mis-specification. FISH 555: Age-structured models. Seattle, WA, April 20, 2023.
Guest lecturer (1 lecture): Model-based approaches for standardizing both abundance and compositional data. FISH 572: Fisheries Surveys. Seattle, WA, Feb. 1, 2023.
Instructor (1 day workshop): An introduction to spatio-temporal analysis. American Fisheries Society (AFS) annual meeting, continuing education workshop, Baltimore, MD (teaching remotely), Nov. 6, 2021.
Guest lecturer (1 lecture): Analyzing compositional data. FISH 572: Fisheries Surveys. Seattle, WA, Feb. 8, 2021.
Instructor (2 day workshop): Spatiotemporal analysis of ecological time series. Alaska Fisheries Science Center, Juneau, AK, Feb. 24-25, 2020.
Instructor (3 day workshop): Spatiotemporal analysis of ecological time series. Alaska Fisheries Science Center, Seattle, WA, Feb. 12-13, 2020.
Instructor (2 day workshop): Spatio-temporal analysis using the R package VAST, Northeast Fisheries Science Center, Woods Hole, MA, Aug. 15-16, 2019.
Instructor (2 day workshop): Spatio-temporal analysis of ecological time series, Irish Marine Institute, Galway, Ireland, March 21-22, 2019.
Instructor (20 lectures/labs): FISH 556: Spatio-temporal models for ecologists, Univ. Wash., Spring 2018
Instructor (1 day tutorial): Center for the Advancement of Population Assessment and Modelling (CAPAM) mini-workshop on spatio-temporal models for fishery catch-per-unit-effort data. La Jolla, CA, USA, March 2, 2018.
Instructor (2 day workshop): Mini-Symposium: Future of Statistical Fisheries Science and Ecology, Yokohama, Japan, Feb. 20-21, 2018.
Instructor (4 day workshop): Spatio-temporal modelling to derive indices of abundance from scientific surveys, Seattle, USA, Jan 29-Feb. 1, 2018.
Instructor (2 day intensive course): Spatial models using mixed effects in Template Model Builder, Institute of Marine Resources, Bergen, Norway, Aug. 23-24, 2017.
Instructor (3 day intensive course): FishStats: A spatio-temporal toolbox for fisheries, Alaska Fisheries Science Center, Seattle, Feb. 8-10, 2017.
Instructor (20 lectures/labs): FISH 509: Spatio-temporal models for ecologists, Univ. Wash., Spring 2016
Instructor (5 day intensive course): Spatio-temporal models for fisheries, National Institute of Water and Atmospheric Research, Wellington, New Zealand, March 14-18, 2016.
Instructor (5 day intensive course): Using Template Model Builder for fisheries models, Univ. Wash. Winter 2016.
Instructor (10 day intensive course): Tag-resighting models and applications, Univ. Concepcion, Jan 11-22 2016 (2 week course)
Guest lecturer (1 lecture): Applied stock assessment methods, Univ. Wash., Fall 2014
Instructor (20 lectures/labs): FISH 509: Hierarchical approach to population modelling, Univ. Wash., Spring 2014
Guest lecture (2 lectures): Decision analysis, University of Washington, Fall 2013.
Guest lecturer (3 lectures): Numerical computing, University of Washington, Fall 2012.
Guest lecturer (8 lectures): Simulation Modeling, Virginia Tech, Spring 2009
Co-instructor: Statistical Programming, Virginia Tech, Fall 2008
Teaching Assistant: population dynamics workshop, Virginia Tech, Jan. 2008, Jan. 2009.
Teaching Assistant: Meteorology, Emory University, 2006.

Books

1. 2024. Thorson, J, and Kristensen, K. *Spatio-temporal Models for Ecologists*. CRC Press.

Peer-reviewed publications (n = 202)

(Collaborators – *undergraduate, †graduate, ‡international at beginning of writing)

1. In press. Sullaway, G., Cuningham, C., Kimmel, D., Pilcher, D., Thorson, J. Combining ecosystem model output with empirical data to predict zooplankton biomass under climate change in a high latitude ecosystem.
2. In press. Thorson, J. Measuring complexity for hierarchical models using effective degrees of freedom. *Ecology*. <https://doi.org/10.1002/ecy.4327>
3. In press. Berger, A., Barceló, C., Goethel, D., Hoyle, S., Lynch, P., McKenzie, J., Dunn, A., Punt, A., Methot, R., Hampton, J., Porch, C., McGarvey, R., Thorson, J., A'mar, T., Deroba, J., Elvarsson, B., Holmes, S., Howell, D., Langsdeth, B., Marsh, C., Maunder, M., Mormeded, S., Rasmussen, S. Synthesizing the spatial functionality of contemporary stock assessment software to identify future needs for next generation assessment platforms. *Canadian Journal of Fisheries and Aquatic Sciences*.
4. In press. Gaichas, S., Gartland, J., Smith, B., Ng, E., Celestino, M., Wood, A., Drew, K., Tyrell, A., Thorson, J. Assessing small pelagic fish trends in space and time using piscivore diet data. *Canadian Journal of Fisheries and Aquatic Sciences*. <https://doi.org/10.1139/cjfas-2023-0093>
5. In press. Wells, B., Santora, J., Bizzarro, J., Billings, A., Brodeur, R., Daly, E., Field, J., Richerson, K., **Thorson, J.** Spatio-temporal variability of Pacific hake and Chinook salmon diets reveal biogeographic structuring, overlap, and paths for ecosystem assessment. *Marine Ecology Progress Series*. <https://doi.org/10.3354/meps14319>
6. 2024. Kerametsidis, G., **Thorson, J.**, Rossi, V., Álvarez-Berastegui, D., Barnes, C., Certain, G., Esteban, A., García, E., Jadaud, A., Piñeiro, S., Vivas, M., and Hidalgo, M. Cross-scale environmental impacts across persistent and dynamic aggregations within a complex population: implications for fisheries management. *Canadian Journal of Fisheries and Aquatic Sciences*. 81(3): 268–284. <https://doi.org/10.1139/cjfas-2023-0120>
7. 2024. Thorson, J., Essington, T., Large, S., Andrews, A. Dynamic structural equation models synthesize ecosystem variables constrained by ecological mechanisms. *Methods in Ecology and Evolution*. 15(4): 744-755 <https://doi.org/10.1111/2041-210X.14289>
8. 2024. Grüss, A.‡, Winker, H.‡, **Thorson, J.**, Walker, N.‡, Maureaud, A.‡, Pacoureaux, N‡. Coupling state-of-the-art modelling tools for better informed Red-List assessments of marine fishes. *Journal of Applied Ecology*. 61(4): 647-657. <https://doi.org/10.1111/1365-2664.14601>
9. 2024. Ovando, D., Bradley, D., Burns, E., Thomas, L., **Thorson, J.** Simulating benefits, costs and trade-offs of spatial management in marine social-ecological systems. *Fish and Fisheries*. 25(2): 218-234. <https://doi.org/10.1111/faf.12804>.
10. 2024. Schaub, M., Maunder, M., Kéry, M., Thorson, J., Jacobson, E., Punt, A. Lessons to be learned by comparing fisheries stock assessment methods (SAMs) with integrated population models (IPMs). *Fisheries Research*. 272: 106925. <https://doi.org/10.1016/j.fishres.2023.106925>
11. 2024. Harris, J, Pirtle, J.L., Laman, E.A., Siple, M.C., **Thorson, J.T.** Ensemble models mitigate bias in estimating habitat utilization and range area from commonly used species distribution models. *Journal of Applied Ecology*. 61(2): 351-364. <https://doi.org/10.1111/1365-2664.14559>.
12. 2024. Maureaud, A., Palacios-Abrantes, J., Kitchel, Z., Mannocci, L., Pinsky, M., Fredston, A., Beukhof, E., Forrest, D., Frelat, R., Palomares, M., Pecuchet, L., **Thorson, J.**, van Denderen, P., Mérigot, B. FISHGLOB_data: an integrated database of fish biodiversity sampled with scientific bottom trawl surveys. *Scientific Data*. 11:24. <https://doi.org/10.1038/s41597-023-02866-w>
13. 2024. Thorson, J. Trees for fishes: The neglected role for phylogenetic comparative methods in fisheries science. *Fish and Fisheries*. 25(1): 168-179. <https://doi.org/10.1111/faf.12800>
14. 2024. Hoyle, S.D., Campbell, R., Ducharme-Barth, N., Grüss, A., Moore, B., **Thorson, J.**, Tremblay-Boyer, L., Winker, H., Zhou, S., Maunder, M. Catch per unit effort modelling for stock assessment: a summary of good practices. *Fisheries Research*. 269: 106860. <https://doi.org/10.1016/j.fishres.2023.106860>
15. 2023. Correa, G.M., Monnahan, C., Sullivan, J. **Thorson, J.T.**, Punt, A.E.. Modelling time-varying growth in state-space stock assessments. *ICES Journal of Marine Sciences*. 80(7): 2036–2049. <https://doi.org/10.1093/icesjms/fsad133>

16. 2023. Grüss, A., Charsley, A., **Thorson, J.**, Anderson, O., O’Driscoll, R., Wood, B., Parsons, D., Devine, J., Breivik N., O’Leary, C. Integrating survey and observer data improves the predictions of New Zealand spatio-temporal models. *ICES Journal of Marine Sciences*. 80(7): 1991–2007. <https://doi.org/10.1093/icesjms/fsad129>
17. 2023. **Thorson, J.**, Miller, T., Stock, B. The multivariate-Tweedie: a self-weighting and heteroskedastic likelihood for age and length composition data. *ICES Journal of Marine Sciences*. 80(10): 2630–2641. <https://doi.org/10.1093/icesjms/fsac159>
18. 2023. Badger, J., **Thorson, J.**, Large, S. Ecosystem-based management using spatiotemporal species distribution models: applications to indicators in ecosystem reporting. *ICES Journal of Marine Sciences*. 80(7): 1949–1962. <https://doi.org/10.1093/icesjms/fsad123>
19. 2023. **Thorson, J.**, and van der Bijl, W. phylosem: a fast and simple R package for phylogenetic inference and trait imputation using phylogenetic structural equation models. *Journal of Evolutionary Biology*. 36(10): 1357-1364. <http://dx.doi.org/10.1111/jeb.14234>
20. 2023. Fredston, A.†, Cheung, W., Frölicher, T., Kitchel, Z., Maureaud, A., **Thorson, J.**, Auber, A., Mérigot, B., Palacios-Abrantes, J., Palomares, D., Pecuchet, L., Shackell, N., Pinsky, M. Marine heatwaves do not generally cause biomass decline or tropicalisation in temperate oceans. *Nature*. 621: 324–329. <https://doi.org/10.1038/s41586-023-06449-y>
21. 2023. Grüss, A., **Thorson, J.**, Anderson, O., O’Driscoll, R., Shipley, M, Goodman, S. Spatially-varying catchability for integrating research survey data with other data sources: case studies involving observer samples, industry cooperative surveys, and predators-as-samplers. *Canadian Journal of Fisheries and Aquatic Sciences*. 80(10): 1595–1615. <http://dx.doi.org/10.1139/cjfas-2023-0051>
22. 2023. DeFilippo, L., O’Leary, C., Kotwicki, S., Hoff, J., **Thorson, J.**, Ianelli, J., Punt, A. Characterizing dominant modes of variability for a transboundary groundfish assemblage. *Fisheries Oceanography*. 32(6): 541-558. <https://doi.org/10.1111/fog.12651>
23. 2023. Olmos, M., Cao, J., **Thorson, J.**, Punt, A., Monnahan, C., Alglave, B., Szuwalski, C. A step towards the integration of spatial dynamics in population dynamics models: Eastern Bering Sea snow crab as a case study. 485: 110484. <https://doi.org/10.1016/j.ecolmodel.2023.110484>
24. 2023. **Thorson, J.** Data weighting: an iterative process linking surveys, synthesis, and population models to evaluate mis-specification. *Fisheries Research*. 266: 106762. <https://doi.org/10.1016/j.fishres.2023.106762>
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187. 2013. Stewart, I. J., Hicks, A., Taylor, I., **Thorson, J.**, Wetzel, C. and Kupschas, S. A comparison of stock assessment uncertainty estimates using maximum likelihood and Bayesian methods implemented with the same model framework. *Fisheries Research*. 142: 37-46. <https://doi.org/10.1016/j.fishres.2012.07.003>
188. 2012. Lapointe, N.W.R., **Thorson, J.**, and Angermeier, P.L. Relative roles of natural and anthropogenic drivers of watershed invasibility in riverine ecosystems. *Biological Invasions* 14(9): 1931-1945. <https://doi.org/10.1007/s10530-012-0204-2>
189. 2012. Gutierrez, N.L., Valencia, S.R.†, Branch, T.A., Agnew, D.J. ±, Baum, J.K. ±, Bianchi, P.L., Cornejo-Donoso, J. ±, Costello, C., Defeo, O., Essington, T.E., Hoggarth, D., Larsen, A., Ninnes, C., Selden, R.L., Sistla, S., Smith, A.D.M., Stern-Piriot, A. ±, Teck, S.J., **Thorson, J.**, Williams, N.E. Eco-Label Conveys Reliable Information on Fish Stock Health to Seafood Consumers. *PLoS One* 7(8) e43765. <https://doi.org/10.1371/journal.pone.0043765>
190. 2012. **Thorson, J.**, Cope, J., Branch, T., and Jensen, O. Spawning biomass reference points for exploited marine fishes, incorporating taxonomic and body size information. *Canadian Journal of Fisheries and Aquatic Sciences* 69(9): 1556-1568. <https://doi.org/10.1139/f2012-077>
191. 2012. Zhou, S.±, Yin, S., **Thorson, J.**, Smith, A.D.M. ±, and Fuller, M±. Linking fishing mortality biological reference points to life history traits: an empirical study. *Canadian Journal of Fisheries and Aquatic Sciences* 69 (8), 1292-1301. <https://doi.org/10.1139/f2012-060>
192. 2012. **Thorson, J.**, Stewart, I., and Punt, A. Development and application of an agent-based model to evaluate methods for estimating stock abundance for shoaling fishes such as Pacific rockfish (*Sebastes* spp.). *ICES Journal of Marine Sciences* 69 (4):635-647. <https://doi.org/10.1093/icesjms/fss003>
193. 2012. **Thorson, J.**, Punt, A.E, and Nel, R±. Evaluating population recovery for sea turtles under nesting beach protection while accounting for nesting behaviors and changes in availability. *Journal of Applied Ecology* 49: 601-610. <https://doi.org/10.1111/j.1365-2664.2012.02143.x>
194. 2012. **Thorson, J.**, Branch, T., and Jensen, O. Using model-based inference to evaluate global fisheries status from landings, location and life history data. *Canadian Journal of Fisheries and Aquatic Sciences* 69: 645–655. <https://doi.org/10.1139/f2012-016>
195. 2011. **Thorson, J.** Focal and auxiliary assessment models: A proof-of-concept involving time-varying catchability and stock status estimation. *ICES Journal of Marine Sciences*, 68: 2264-2276. <https://doi.org/10.1093/icesjms/fsr160>
196. 2011. **Thorson, J.**, Stewart, Ian, and Punt, A.E. Accounting for fish shoals in single- and multi-species survey data using mixture distribution models. *Canadian Journal of Fisheries and Aquatic Sciences*, 68(9): 1681-1693. <https://doi.org/10.1139/f2011-086>
197. 2011. **Thorson, J.**, and Prager, M.H. Better catch curves: Incorporating age-specific natural mortality and logistic selectivity. *Transactions of the American Fisheries Society*. 140:2, 356-366. <https://doi.org/10.1080/00028487.2011.557016>
198. 2010. Lapointe, N.†, **Thorson, J.**, Angermeier, P. Seasonal meso- and microhabitat selection by the northern snakehead (*Channa argus*) in the Potomac river system. *Ecology of Freshwater Fishes*. 9:566-577. <https://doi.org/10.1111/j.1600-0633.2010.00437.x>
199. 2010. **Thorson, J.** and Berkson, J. Multispecies estimation of Bayesian priors for catchability trends and density dependence in the US Gulf of Mexico. *Canadian Journal of Fisheries and Aquatic Sciences* 67:936-954. <https://doi.org/10.1139/F10-040>
200. 2010. Wilberg, M., **Thorson, J.**, Linton, B., and Berkson, J. Incorporating time-varying catchability into population dynamics stock assessment models. *Reviews in Fisheries Science*, 18(1):7-24. <https://doi.org/10.1080/10641260903294647>
201. 2009. **Thorson, J.**, and Berkson, J. Evaluating single- and multi-species procedures to estimate time-varying catchability functional parameters. *Fisheries Research* 101:38-49. <https://doi.org/10.1016/j.fishres.2009.09.005>
202. 2009. **Thorson, J.** and Simpfendorfer, C±. Gear selectivity and sample size effects on growth curve selection in shark age and growth studies. *Fisheries Research* 98:75-84. <https://doi.org/10.1016/j.fishres.2009.03.016>

Manuscripts in review or revisions

1. In review. Fredston, A., Ovando, D., Allyn, A., **Thorson, J.**, Pinsky, M. Operational dynamic range models for near-term forecasts of species on the move.
2. In review. Kitchel, Z., Maureaud, A, Fredston, A., Shackell, N., Mérigot, B., **Thorson, J.**, Pécuchet, L., Palacios-Abrantes, J., Palomares, M., Acón, A., Belchier, M., Bono, G., Carbonara, P., Collins, M.,

- Cubillos, L., Fairweather, T., Follesa, M., Ruiz, C., Garofalo, G., Isajlović, I., Kathena, J., Koen-Alonso, M., Maiorano, P., Manfredi, C., Massuti, E., Mifsud, J., O'Driscoll, R., Sbrana, M., Sólmundsson, J., Spedicato, M., Stephenson, F., Werner, K., Yepsen, D., Zupa, W., Pinsky, M. Marine fish communities cycle between homogenized and differentiated states through time.
3. In review. **Thorson, J.**, Anderson, S.C., Goddard, P., Rooper, C.N. tinyVAST: R-package with an expressive interface to specify lagged and simultaneous effects in multivariate spatio-temporal models.
 4. In review. Anderson, S.C., Ward, E.J., English, P.A., Barnett, A.K. **Thorson, J.T.** sdmTMB: an R package for fast, flexible, and user-friendly generalized linear mixed effects models with spatial and spatiotemporal random fields.
 5. In review. Grüss, A., O'Driscoll, R., **Thorson, J.**, McKenzie, J., Dunn, M., Ballara, S., Charsley, A., Devine, J. Impacts of different types of data integration on the predictions of spatio-temporal models: a fishery application and simulation experiment
 6. In review. Sharma, S., Winner, K., Pollock, L., **Thorson, J.**, Mäkinen, J., Merow, C., Pedersen, E., Chefira, K., Portmann, J., Iannarilli, F., Beery, S., Lutio, R. Jetz, W. Leave No Species Behind - Borrowing Strength to Map Data-Deficient Species.
 7. In preparation. FISHGLOB: a collaborative infrastructure for marine science and management. Maureaud, A., Kitchel, Z., Guralnick, R., Palacios-Abrantes, J., Palomares, M., Pinsky, M., Shackell, N., **Thorson, J.**, Mérigot, B.
 8. Essington, T., **Thorson, J.**, Deutsch, C. Hierarchical estimation of oxygen tolerance of marine taxa reveals remarkable consistency across phylogenetically diverse species.
 9. **Thorson, J.** Kristensen, K., Aydin, K., Gaichas, S., Kimmel, D.G., McHuron, E.A., Nielsen, J.N., Townsend, H., Whitehouse, G.A. EcoState: Extending Ecopath with Ecosim to estimate biological parameters and process errors using RTMB and time-series data. Pre-print URL: <https://doi.org/10.32942/X2QK81>

Manuscripts in preparation

1. In preparation. Conner, J., and **Thorson, J.** Introducing the generalized gamma: A flexible distribution for index standardization models
2. In preparation. Gonzalez, S., Nielsen, J., Eisner, L., Hopcroft, R., Hart, M., Kimmel, D., Logerwell, E., Lomas, M., Schnetzer, A. **Thorson, J.** Planktonic associations in the Northern Bering and Chukchi Seas in the warm period of 2017-2019
3. In preparation. Ferguson, M., **Thorson, J.**, Conn, P., Miller, D. Spatially-explicit models of density improve estimates of Eastern Bering Sea beluga (*Delphinapterus leucas*) abundance and distribution from line-transect surveys
4. In preparation. Hart, L., Cunningham, C., Yasumiishi, E., Mueter, F., **Thorson, J.** Pirtle, J., Dimond, A. Species distribution models estimate time-varying juvenile salmon distributions in the north- and southeastern Bering Sea.
5. Lindegren, M., Thorlacius, M., **Thorson, J.T.**, Elvarsson, B., Gonzalez-Troncoso, D., Benoît, H., Treble, M., Nogueira, A., Ridao, L., Vihtakari, M., Wheeland, L., Boje, J. Population structure of Greenland halibut across the North Atlantic: insights from large-scale monitoring and spatial modelling
6. Karp, M., Cimino, M., Craig, K., Crear, D., Haak, C., Hazen, E., Kaplan, I., Kobayashi, D., Morrison, W., Moustahfid, H., Muhling, B., Smith, L., **Thorson, J.**, Woodworth-Jefcoats, P. Species distribution modeling to support living marine resources management in the U.S.: Applications and Future Needs.
7. Kotwicki, S., **Thorson, J.**, et al. Modernization of fisheries-independent surveys: Obstacles, opportunities, and pathways for change.
8. Monnahan, C., Siple, M., **Thorson, J.**, Kapur, M., Hulson, P., Spencer, P. Replacing the lognormal likelihood for abundance indices in stock assessment models: a first step.
9. Karp, M., Cimino, M., Craig, K., Crear, D., Haak, C., Hazen, E., Kaplan, I., Kobayashi, D., Moustahfid, H., Muhling, B., Pinsky, M., Smith, L., **Thorson, J.**, Woodworth-Jefcoats, P. Species distribution modeling to support living marine resources management: Applications and Future Needs

Student committees

- Indivero, Julia. Ph.D. School of Aquatic and Fisheries Sciences, Univ. Wash., Title TBD. Expected graduation: 2025.
- Siwicke, Kevin. Ph.D. University of Alaska Fairbanks in Juneau. Expected graduation: 2024.

- Best, John. Ph.D., Quantitative Ecology and Resource Management (QERM), Univ. Wash. Title TBD. Expected graduation: 2023.
2023. Allyn, Andrew. Ph.D. Marine Science Program, University of Massachusetts Amherst. “Assessing the capacity of species distribution models to support forward-looking decision making processes.” Expected graduation: 2023.
2022. Kajanus, M. Ph.D., Unit of Ecology and Genetics, University of Oulu. Interspecific associations and interactions: ecological and evolutionary consequences, and conservation implications. Expected graduation: 2022.
2022. Ferguson, Megan. M.S. Quantitative Ecology and Resource Management (QERM), Univ. Wash. Spatial modeling, parameter uncertainty, and precision of density estimates from line-transect surveys: a case study with Western Arctic bowhead whales. Graduated: March 2022.
2019. Chasco, Brandon, Ph.D., Dept. Fish. and Wildlife, OSU. “Combining disparate data sources with ecosystem and integrated models: case studies for improving management of protected species.” Graduated: March 2019.
2018. O’Leary, Cecilia, Ph.D., School of Marine and Atmospheric Sciences, Stony Brook University. “Statistical Approaches to Determine the Influence of Climate and Fishing on Flatfish Abundances.” Graduated: December 2018.
2017. Monnahan, Cole. Ph.D., Quantitative Ecology and Resource Management (QERM), Univ. Wash., “Optimizing Bayesian integration in data-rich stock assessments.” Graduated: June 2017.
2017. Rudd, Merrill. Ph.D., School of Aquatic and Fisheries Sciences, Univ. Wash., “Data limited assessment options and application for global coral reef fisheries.” Graduated June 2017.
2017. Qi, Lee, M.S., School of Aquatic and Fisheries Sciences, Univ. Wash. “Incorporating an otolith-derived environmental index into growth for stock assessment models.” Graduated: June 2017.

Supervision of post-doctoral researchers

- Alglave, Baptiste. Co-supervised with A. Punt (12 months).
- Veron, Matthiew. Co-supervised with T. Essington (12 months)
- Siskey, Matthew. “Simulation testing the advection-taxis-model (ATM) under alternative sampling designs.” Co-supervised with A. Punt (12 months).
- Siskey, Matthew. “Improving the allocation of age-reading effort across groundfish species using novel techniques to predict from age-reads through assessment consequences.” Co-supervised with P. Hulson and A. Punt (16 months).
- Olmos, Maxime. “Inferring effects of loss of sea ice on movement phenology of yellowfin and flathead sole in the Bering Sea and Aleutian Islands from fishery-dependent data using spatio-temporal modeling.” Co-supervised with C. McGilliard and T. Essington (12 months).
- Barnes, Cheryl. “Dynamic designation of Essential Fish Habitat under changing environment: skill test involving spatially downscaled models for habitat, population, and ecosystem dynamics.” Co-supervised with J. Pirtle and K. Aydin, 2020-2022 (24 months).
- O’Leary, Cecilia. “Integrating data from multiple surveys designs with different data availabilities to estimate basin-scale trends in abundance and distribution.” Co-supervised with J. Ianelli, S. Kotwicki, and A. Punt, 2019-2021 (24 months).
- Monnahan, Cole. “Combining acoustic and bottom trawl data using a vertically integrated, multivariate spatio-temporal model”. Co-supervised with J. Ianelli, S. Kotwicki, and A. Punt, 2018-2019 (12 months).
- Grüss, Arnaud. “Spatio-temporal analysis for stock and ecosystem assessment applications”. Co-supervised with T. Essington, 2018-2020 (18 months).
- Ovando, Dan. “Economic information for data-poor stock assessment worldwide”. Co-supervised with R. Hilborn, 2018-ongoing.
- Rudd, Merrill, “Accounting for variable fishing mortality and recruitment in length-based data-limited stock assessments”. Co-supervised with T. Branch, 2017-2019 (2 years at half time)
- Cao, Jie, “Development and application of a size-structured spatiotemporal model for invertebrates: individual growth, size-transitions, and natural and fishing mortality”. Co-supervised with A. Punt. 2017-2018 (1 year)
- Xu, Haikun. “Statistical integration of environmental indices in an integrated assessment model, Stock Synthesis”. Co-supervised with T. Essington and R. Methot, 2016-2017 (1 year).
- Gao, Jin. “New geostatistical index standardization and habitat modeling tool for stock assessments and essential fish habitat designation”. Co-supervised with T. Essington. 2015-2017 (2 years)

Councill, Elizabeth. "Simulation Study to Improve Forecasts of Stock Rebuilding" Co-supervised with A. Punt, L. Brooks, and R. Methot. 2014-2015 (1 year).

Supervision of interns

Denson, LaTrese. "Environmental influences on indices of abundance for King Mackerel in the Gulf of Mexico examined through spatiotemporal geostatistical models." Co-supervised with B. Babcock, June-Sept 2018 (3 months).

Committees, Working Groups, and Service

Chair, Promotion Advisory Board (PAB), AFSC, NOAA, Oct. 2021-2023.

Chair, Performance Management Advisory Committee (PMAC), AFSC, NOAA, Oct. 2018-Oct. 2021.

Distribution Modelling Working Group, NOAA, March 2021-present date.

Equity Analysis Committee, Alaska Fisheries Science Center, 2018-2021.

"Spatio-temporal modelling mini-workshop" Center for the Advancement of Population Modelling (CAPAM) plan team, March 2017-Feb 2018.

"Incorporating Climate and Environmental Information into Fisheries Management" (ICE-FM) NOAA plan team, May 2017-2018.

Fisheries and the Environment (FATE) scientific and statistical committee, Nov. 2016–2018.

Associate editor, *Canadian Journal of Fisheries and Aquatic Sciences*, Nov. 2015–2018.

"Regional stock status", Conservation International, DC, Oct. 2014-Oct. 2016.

Handling editor, *Fisheries Research* special issue on data-poor stock assessment, Jan. 2014-July 2015.

"National Habitat Assessment Working Group," NOAA working group, San Francisco, July 22-24, 2014.

"ICES working group on forecasting recruitment," ICES working group, Copenhagen, June 16-20, 2014.

"Improving the Accuracy of Fishery-Independent Survey Indices by Accounting for Dynamic Habitats," Virginia Institute of Marine Sciences, May 2, 2014.

"Ocean Modelling Forum," Moore Foundation working group, Seattle, Mar. 26-27, 2014.

"Data-poor assessment methods," NRDC working group, Miami, Jan. 15-17, 2014.

"Future directions for Stock Synthesis," NMFS working group, Seattle, Dec. 10-12, 2013.

"Stock Assessment Model Database (SAMDB)", Multi-agency collaboration, Seattle, July-present day.

"Northwest Regional Habitat Assessment Prioritization Working Group," NMFS, Seattle, June-Dec. 2013.

"Combining occupancy and tag-resighting models," Powell Center, Fort Collins, CO, ongoing.

"Global stock status," FAO and Conservation International, DC, June 18, 2012.

"Non-parametric forecasting methods," SWFSC, La Jolla, CA, April 17, 2012.

"Evaluating success of marine stewardship council," NCEAS, Santa Barbara, June 22, 2011.

Positions and Internships

Co-organizer, session on Marine Ecosystem Modelling at International Statistical Ecology Conference (ISEC), Seattle, WA, 2016.

Co-organizer, MyFish symposium on maximum sustainable yield targets, Athens, Greece, 2015.

Co-organizer, Monster Jam seminar (visiting speaker series), NWFSC, Seattle, 2014.

Co-organizer, Symposium on Time-Varying Effects in Stock Assessment, AFS national meeting, 2011.

Representative for ESAC, Climate Action Plan Land Use Policy Committee, 2011.

Liaison to undergraduates, University of Washington chapter of AFS, 2011.

Organizer, Think Tank seminar series, School of Aquatic and Fisheries Sciences, 2010-2011.

Grad. student representative. School of Aquatic and Fisheries Science Curriculum Committee, 2010-2011.

Grad. student senate representative, Environmental Stewardship Advisory Committee (ESAC), 2010-2011.

Intern, Environmental Management Certificate program, working with WA Restaurant Association, 2010.

Communications chair, Virginia Tech chapter of American Fisheries Society, 2007-2009.

Website designer, Virginia Tech chapter of Habitat for Humanity, 2007-2008.

Intern, NMFS-RTR research for Marine Protected Areas in Florida and the U.S. Virgin Islands, 2006.

Intern, Shark research laboratory, MOTE Marine Labs, Sarasota, FL, 2006.

Pending proposals

Davis, D., Hoskins-Brown, D., Serafy, J., Ailloud, L, Thorson, J., Denson, L., and Zink, I. Inshore Essential Fish Habitat Contribution to Offshore Fisheries: Developing an Assessment Framework. FY22 MARFIN

Cao, J., Thorson, J., Shertzer, K., Walter, J. Evaluating environmental impacts on western Atlantic bluefin tuna recruitment by linking population dynamics to spatial varying environmental conditions. FY22 Bluefin Tuna Research Program.

Funded Grant Proposals

2023. Sullivan, J. Monnahan, C., Thorson, J. Evaluating climate-driven changes in the productivity of Alaska groundfish using state-space stock assessments. Magnuson-Stevens Implementation 2023 RFP. \$140,000 awarded.
2023. Barnes, C., Pirtle, J., Reum, J., and Thorson, J. Predators as samplers: using food habits data to inform climate- and community-driven shifts in the distributions of important prey of EFH species. Office of Habitat Conservation RFP, \$100,588 awarded.
2022. Logerwell, L., Thorson, J., Schnetzer, A., McCabe, R., Iken, K., Grebmeier, J., Mordy, C. Pelagic-benthic decoupling? Ecosystem restructuring in the Northern Bering and Chukchi seas. North Pacific Research Board Arctic Integrated Ecosystem Research Program Synthesis Phase. \$800,000 awarded.
2021. Sullivan, J., Thorson, J., Monnahan, C. Developing next-generation stock assessments that incorporate climate-driven and unexplained demographic variation while fitting age and length data. Magnuson-Stevens Implementation 2021 RFP. \$110,000 awarded.
2020. Miller, T., Gaichas, S., Stock, B., Thorson, J. Incorporating multivariate physical and biological data as covariates in state-space age-structured stock assessments. Northeast Fisheries & Climate FY2020 RFP. \$146,239 awarded.
2020. Cunningham, C., Thorson, J., Bryan, M., and Tribuzio, C. Evaluation of Spatio-temporal Methods for Standardizing Data from Multiple Fishery-Independent Surveys in the Gulf of Alaska, Bering Sea and Aleutian Islands. Pollock Conservation Cooperative Research Center, 2020 RFP. \$212,210 awarded.
2020. Spencer, P., O'Leary, C., Thorson, J. A simulation and case-study comparison of existing and spatio-temporal methods to apportion coastwide catch limits for subregional management. Magnuson-Stevens Implementation 2020 RFP. \$165,000 awarded.
2019. Kimmel, D., Thorson, J., and Pilcher, D. Validation of regional ocean model hindcasts for zooplankton biomass via comparisons with thirty years of field sampling data in a rapidly changing ecosystem. Climate Program Office FY2020 RFP Competition #4 (MAPP). \$452,195 awarded.
2019. Best, J., Punt, A., and Thorson, J. Improving spatiotemporal indices of abundance with fishery-dependent and -independent data. Sea Grant Pop. Dy. Fellowship, 2019 RFP. \$120,000 awarded.
2019. Pirtle, J., and Thorson, J. Refine Nearshore EFH Models and Maps to Improve Non-fishing Effects Consultation for Alaska. Office of Habitat Conservation 2019 RFP. \$125,000 awarded.
2019. Thorson, J., Aydin, K., and Pirtle, J. Dynamic designation of Essential Fish Habitat under changing environment: skill test involving spatially downscaled models for habitat, population, and ecosystem dynamics. Magnuson-Stevens Implementation 2019 RFP. \$229,306 awarded.
2019. McGilliard, C., Thorson, J., and Essington, T. Inferring effects of loss of sea ice on movement phenology of yellowfin and flathead sole in the Bering Sea and Aleutian Islands from fishery-dependent data using spatio-temporal modeling. National Cooperative Research Program, 2019 RFP. Feb. 2019. \$101,000 awarded.
2019. Szuwalski, C., and Thorson, J. Mapping a fishery: a fully-spatial stock assessment for snow crab in the Bering Sea. Magnuson-Stevens Implementation 2019 RFP. \$111,803 awarded.
2018. Omori, K., Thorson, J., and Hoenig, J. Dealing with the most species: improving the methodology to appropriately form and assess species complexes. Sea Grant Pop. Dy. Fellowship, 2018 FRP. Jan. 2018. \$115,000 awarded.
2018. Hoff, G., Thorson, J., and Punt, A. Spatio-temporal dynamics of groundfish availability to EBS bottom trawl surveys and abundance estimate uncertainties. North Pacific Research Board (NPRB) 2018 RFP. Dec. 2017. \$251,304 awarded.
2017. Ianelli, J., Thorson, J., Kotwicki, S. Combining acoustic and bottom-trawl data in a spatio-temporal index standardization model for Eastern Bering Sea pollock. Improve a Stock Assessment 2018 RFP. June 2017. \$109,785 awarded.
2017. Boldt, J., Thorson, J., Gauthier, S., Forrest, R. Evaluating the effects of environmental conditions on pelagic fish distributions in marine waters of British Columbia. SPERA proposal for 2017 DFO. 324,000 CAD awarded.
2017. Haynie, A., and Thorson, J. The integration of spatiotemporal fishery and biological survey data. Economics 2016 RFP. \$95,000 awarded.

2017. Rooper, C., Thorson, J., and Boldt, J. Detecting changes in life history traits and distribution shifts in eastern Bering Sea fishes in response to climate change. Habitat Information for Stock Assessments 2016 RFP. \$110,919 awarded.
2017. Thorson, J., Bryan, M., and Nadon, M. Accounting for variable fishing mortality and recruitment in length-based data-limited stock assessments. Improve a Stock Assessment 2016 RFP. \$93,093 awarded.
2016. Forsman, J., Thorson, J. Diversity of species interactions: a missing key for understanding biodiversity in a changing world. Kone Foundation 2016 RFP. 300,000€ (\$320,000 value) awarded.
2016. Chasco, B., Heppell, S., Thorson, J., Thompson, G., and Dalziel, B. Integrated spatial, temporal mixed-effects models: leveraging stock assessment techniques for threatened and protected species. Sea Grant Pop. Dy. Fellowship, 2016 RFP. \$104,000 awarded.
2016. Thorson, J., Szuwalski, C., and Punt, A. Development and application of a size-structured spatiotemporal model for invertebrates: individual growth, size-transitions, and natural and fishing mortality. Stock Assessment Analytical Methods 2015 RFP. \$181,587 awarded.
2015. Scheuerell, M., and Thorson, J. Improving salmon population forecasts by combining environmental drivers, variable age composition and spatial structure into hierarchical models. Fisheries and the Environment 2014 RFP. \$149,050 awarded.
2015. Thorson, J., Ianelli, J., and O'Brien, L. Distribution and application of a new geostatistical index standardization and habitat modeling tool for stock assessments and essential fish habitat designation in Alaska and Northwest Atlantic regions. Habitat Assessment Improvement Plan 2014 RFP. \$205,000 awarded.
2014. Stock, B., Semmens, B., and Thorson, J. Improving assessment models of aggregating fish species: a case study of Nassau grouper (*Epinephelus striatus*). Sea Grant Pop. Dy. Fellowship 2014 RFP. \$130,000 awarded (award declined by B. Stock)
2014. Thorson, J., Brooks, E.M., and Methot, R.D. Simulation Study to Improve Forecasts of Stock Rebuilding and Estimated Probability of Exceeding Target/Limit Reference Points in the Presence of Autocorrelation and Environmentally Driven Recruitment. Stock Assessment Improvement Plan, 2013 RFP. \$123,000 awarded.
2013. Monnahan, C., Branch, T., and Thorson, J. Optimizing Bayesian integration in data-rich stock assessments. Sea Grant Pop. Dy. Fellowship, 2013 RFP. \$130,200 awarded.
2013. Thorson, J., Punt, A., and Gertseva, A. Incorporating climate driven growth variability into stock assessment models: a simulation-based decision table approach. Fisheries and the environment (FATE), 2012 RFP. \$112,600 awarded.
2013. Shelton, O., Ward, E., Thorson, J., Bellman, M., and Feist, B. Integrating spatial habitat and fisheries effort data to improve abundance estimates of West Coast groundfish. Habitat assessment improvement, 2012 RFP. \$60,000 awarded
2012. Thorson, J. Developing generic meta-analysis tools for estimating ecological processes and anthropogenic effects in marine and anadromous fishes. National Research Council Fellowship program. \$56,000 awarded.
2009. Thorson, J., Punt, A., and Stewart, I. Evaluating Pacific groundfish schooling behavior and untrawlable refuges using multi-species mixture models and data from autonomous underwater vehicles. Sea Grant Population Dynamics Fellowship. \$96,250 awarded.

Unfunded proposals (starting 2016)

- Declined for funding. Nye, J., Mills, K., Tokunaga, K., Cao, J., Lucey, S., Thorson, J., Craig, K. Futures thinking for US East coast fisheries: Coastwide projections of distribution, productivity, and adaptation scenarios. Climate and Fisheries Adaptation. \$1,200,000 requested.
- Declined for funding. Cao, J., Thorson, J., Shertzer, K. Evaluating environmental impacts on western Atlantic bluefin tuna recruitment by linking population dynamics to spatial varying environmental conditions. FY21 Bluefin Tuna Research Program.
- Declined for funding. Hardison, S., Thorson, J., and Castorani, M. From conceptual models to tactical advice: structural equation models for ecosystem-based fisheries management. Sea Grant Pop. Dy. Fellowship, 2020 RFP.
- Declined for funding. Pinsky, M., and Thorson, J. A next-generation tool for tracking climate-driven shifts in distribution across US fisheries management regions. NMFS Office of Science and Technology FY2020. \$290,000 requested.
- Declined for funding. Large, S., Pinsky, M., Karp, M., Bundy, A., Craig, K., Selden, B., Morley, J., Thorson, J. Climate-driven shifts in distribution across US fisheries management regions; improve methods, assess skill,

- and synthesize results. Climate Program Office FY2020 RFP Letter of Intent for Competition #8 (COCA). \$750,000 requested.
- Declined for funding. Carroll, G., Bograd, S., Brodie, S., Grüss, A., Haltuch, M., Hazen, E., Holsman, K., Pinsky, M., Samhour, J., Selden, B., Thorson, J. Quantifying changes in northeast Pacific predator-prey interactions: a multi-species climate vulnerability assessment. Climate Program Office FY2020 RFP Letter of Intent for Competition #8 (COCA). \$1,500,000 requested.
- Declined for funding. van Deurs, M., Brooks, M., Thorson, J. Re-thinking the way we use biomass thresholds in fisheries management. Independent Research Fund Denmark, Technology & Production-sciences 2019 RFP. 2,000,000 Danish Krone requested (approx. \$300,00).
- Declined for funding. Iwicky, C., Thorson, J., Jensen, O. The role of climate in fisheries productivity. Sea Grant Pop. Dy. Fellowship, 2019 RFP. \$120,000 requested.
- Declined for funding. Barbeaux, S., Thorson, J., Hollowed, Anne, Hazen, E. Projecting climate impacts on shifts in distribution and abundance of groundfish using a coast-wide 3 km Regional Ocean Model with biogeochemistry: a cross-funding proposal. Stock Assessment Analytical Methods 2018 RFP. June 2017. \$199,614 requested.
- Declined for funding. Thorson, J., Essington, T. Causal Statistical Modelling to Improve Forecast of Species Response to Environmental Change. Fisheries and the Environment 2018 RFP. June 2017. \$145,541 requested
- Declined for funding. Wakefield, W., Thorson, J., Keller, A., Ciannelli, L. General guidance and decision support tool for including habitat information during index standardization for stock assessments. Habitat Information for Stock Assessment 2018 RFP. June 2017. \$112,870 requested.
- Declined for funding. Ciannelli, L., Spitz, Y., Watson, J., Fonner, R., Thorson, J., McClatchie, S., Hunsicker, M., Keller, A. Adaptability of fish and fisheries to climate change in the California Current System under biological and socio-economic constraints. COCA Competition I (Understanding Climate Impacts on Fish Stocks and Fisheries in the California Current Large Marine Ecosystem), 2017 RFP.
- Declined for funding. Wiedenmann, J., Pinsky, M., Seagraves, R., Miller, T., Thorson, J. Adapting to Climate Variability and Change in the Assessment and Management of Northeast Fisheries. COCA Competition II (Competition II: Understanding Climate Impacts on Fish Stocks and Fisheries in the Northeast U.S. Continental Shelf Large Marine Ecosystem), 2017 RFP. \$1,328,677 requested.
- Declined for funding. Hauser, L., Canino, M., Spies, I., Thorson, J. Seasonal movement of Pacific cod in the Aleutian Islands, and its effect on stock assessment. North Pacific Research Board (NPRB) 2017 RFP. \$264,250 requested.
- Declined for funding. Crone, P., Piner, K., Lee, H., Thorson, J., Maunder, M. Does variability in juvenile M matter? Model structure to minimize impact or predator data to estimate the variability in juvenile M. Stock Assessment Analytical Methods 2016 RFP. Sept. 2016. \$54,794 requested.
- Declined for funding. Thorson, J., Kotwicki, S., Hanselman, D. A data-integrated spatio-temporal model for index standardization, demonstrated using acoustic/bottom trawl and fishery/survey case studies. Stock Assessment Analytical Methods 2016 RFP. Sept. 2016. \$229,797 requested.
- Declined for funding. Hollowed, A., Keller, A., King, J., Rooper, C., Shelton, O., Thorson, J., and Li, L. Multi-model spatial comparison of fish responses to anomalous climate conditions along the US and Canadian west coast. Fisheries and the Environment 2016 RFP. Sept. 2016. \$97,908 requested.
- Declined for funding. Thorson, J. Using a global database of fish catch rates and interactive online tools to analyse spatial distribution in support of ecosystem-based ocean management. Pew Marine Fellows Program, June 2016. \$150,000 requested.

Review and editorial service

- Handling editor for 29 papers in total (through May 2018): *Canadian Journal of Fisheries and Aquatic Sciences* (23), *Fisheries Research* (6),
- Reviewer for 2 stock assessments for tactical fisheries management (through Oct. 2017): Canada Dept. of Fisheries and Oceans (2)
- Reviewer for 20 internal reviews for NOAA (through Oct. 2017)
- Reviewer for 14 grant proposals (through Oct. 2017): Sea Grant population dynamics fellowship (8), NOAA Habitat Assessment Improvement Plan (6)
- Reviewed 108 papers in total (through Oct 2017): for Fisheries Research (19), Ecological Applications (9), Canadian Journal of Aquatic and Fisheries Sciences (10), ICES Journal of Marine Sciences (12), Conservation Biology (1), Journal of Aquatic and Living Resources (2), Journal of Applied Ecology (4), Fish

and Fisheries (2), North American Journal of Fisheries Management (2), Transactions of the American Fisheries Society (1), Population Ecology (2), Convention on Living and Marine Resources of Antarctica (1), Conservation Letters (1), Chinese Journal of Oceanography and Limnology (1), Marine Policy (2), Methods in Ecology and Evolution (5), Nature (2), Nature climate (1), Nature Communications (2) Ecology (3), Environmental and Ecological Statistics (1), PloS (2), Ecology Letters (1), African Journal of Marine Science (1), Ecology and Evolution (1), Proceedings of the Royal Society B (1), Fisheries Bulletin (1), Global Ecology and Biogeography (1), Marine Ecology Progress Series (1), Spatial Statistics (1), and Ecography (1).

For partial list of reviews, see: <https://publons.com/author/1213978/james-t-thorson#profile>

Invited presentations (excluding region-specific NMFS presentations)

- 2023. Thorson, J. Model-based estimation and scenario-testing for calibration ratios. Atlantic States Marine Fisheries Commission NEAMAP/SEAMAP Trawl Survey Vessel and Gear Calibration Workshop. Tampa, FL, Jan. 18, 2023.
- 2023. Thorson, J. Causal analysis: Dynamic and phylogenetic structural equation models. SWFSC Seminar Series, Santa Cruz, CA, Dec. 6, 2023.
- 2023. Thorson, J. Phylogenetic comparative methods using TMB. CANSSI workshop “Advancing Best Practice in State Space Assessment Modeling of Complex Fisheries and Biological Data, with a Focus on the Canadian Context”, Halifax, Nova Scotia, May 15, 2023.
- 2022. Thorson, J. Data weighting: an iterative process linking field-samples and population models to evaluate mis-specification. Center for the Advancement of Population Assessment and Modelling (CAPAM) workshop on “good practices” for stock assessment. Rome, Italy, Oct. 26, 2022
- 2022. Thorson, J. Simulation tools in VAST. WK-USER ICES Working Group, Galway, Ireland, Sept. 13, 2022.
- 2022. Thorson, J. Eating on-the-run: Fast and general analysis of consumption and movement using stomach contents, tags, and surveys. Stony Brook University Departmental Seminar, Stony Brook, NY (attending remotely), Feb. 25, 2022
- 2022. Thorson, J. Grand Challenge for Habitat Science: Predicting impact of local human activities on regional fishery productivity. NOAA Habitat Science Working Group, Washington, DC. (attending remotely), Jan. 31, 2022.
- 2022. Thorson, J. “and he saith unto them, Follow me, and I will make you fishers of [data]” (i.e., how to sort and weigh data). Center for the Advancement of Population Assessment and Modelling workshop on assessment model diagnostics, Jan. 31, 2022
- 2021. Thorson, J. Grand Challenge for Habitat Science: Predicting impact of local human activities on regional fishery productivity. NOAA EBFM Seminar, Washington, DC (attending remotely), Sept. 8, 2021.
- 2021. Thorson, J. Using the Vector Autoregressive Spatio-Temporal (VAST) model for habitat research. Gulf of Mexico Consultation for Mid-Breton Sediment Diversion project. Baton Rouge, LA (attending remotely), Jan. 12, 2021.
- 2020. Thorson, J. Forecasting nonlocal climate impacts for mobile species using multivariate spatio-temporal extensions to empirical orthogonal function analysis. Western North American Region of The International Biometric Society (online only) Nov. 20, 2020.
- 2020. Thorson, J. Forecasting nonlocal climate impacts for mobile marine species using extensions to empirical orthogonal function analysis. Statistics Departmental Seminar, Dalhousie University, Oct. 22 (attending remotely), 2020.
- 2020. Thorson, J. Data-integrated models for life-history parameters, and suggestions for future life-history research. National Stock Assessment Webinar, Washington, DC (attended remotely), June 4, 2020.
- 2020. Thorson, J. Forecasting nonlocal climate impacts for mobile marine species using extensions to empirical orthogonal function analysis. University of New South Wales Statistics Seminar, Kensington, Australia (attended remotely), May 7, 2020.
- 2020. Thorson, J. Joint species distribution models using the Vector Autoregressive Spatio-Temporal (VAST) model. Science and Technology Training Workshop, Washington, DC (attended remotely), April 21, 2020.
- 2020. Thorson, J. Demonstrating the Vector Autoregressive Spatio-Temporal software for joint dynamic species distribution models, involving a decadal-scale forecast of ecosystem function in the Bering Sea. Map of Life workshop on Joint distribution models. New Haven, CT (attended remotely), April 4, 2020.
- 2020. Thorson, J. Rapid responses to climate-driven shifts in spatial distribution. PCC Skippers Meeting, Seattle, WA, Jan. 6, 2020.
- 2019. Thorson, J. Statistics for teleconnections in community ecology. Statistical Ecology and Environmental Management, Wellington, New Zealand, Dec. 2, 2019.

2019. Thorson, J. Forecast skill: the path for probabilistic climate attribution. North American Regional Team (NART) workshop on habitat models, Aug. 13, 2019.
2019. Thorson, J. The world through a fish-eye lens: Multivariate approaches to big data. Irish Marine Institute, Galway, Ireland, March 30, 2019.
2018. Thorson, J. Two talks: Model-based inference for distribution; and Spatio-temporal models: Ecosystem dynamics, attribution, and skill-testing. Workshop in changes in productivity and distribution. Aberdeen, Scotland, Nov. 24, 2018.
2018. Thorson, J. Three uncertainties for ecosystem-based management: Life-history, spatial heterogeneity, and forecast skill. FAO-IMR joint workshop regarding the Nansen program for bioregionalization in Western Africa, Rome, Aug. 23, 2018.
2018. Thorson, J., Conn, P., Johnson, D., and Best, J. Using Joint Models of Fisher Targeting and Resource Abundance to Account for Preferential Sampling in Fisheries. Joint Statistics Meeting, Vancouver, Canada, July 30, 2018.
2018. Thorson, J. Spatio-temporal models for fishery catch and effort data: Solving old problems and creating new ones. Center for the Advancement of Population Assessment and Modelling (CAPAM) mini-workshop on spatio-temporal models for fishery catch-per-unit-effort data. La Jolla, CA, USA, Feb 26, 2018.
2018. Thorson, J. Know Thy Stochastic Process: The key to generality in statistical ecology. Invited seminar, University of Tokyo Biodiversity laboratory, Yokohama, Japan, Feb. 23, 2018.
2017. Thorson, J. Measuring density dependence, portfolio effects, and climate-drivers in the North Pacific using spatio-temporal models and causal statistics. PICES annual science meeting, Vladivostok, Russia, Sept. 26, 2017.
2017. Thorson, J. The importance of causal inference in assessing management and attributing climate-impacts for fisheries. Invited speaker at weekly seminar, Institute of Marine Resources, Bergen, Norway, Aug 25, 2017.
2017. Thorson, J. Oceans through a fisheye lens: Estimating community regulation and synchrony due to spatial and multispecies biocomplexity for fishes worldwide. Invited speaker at organized session “Dynamic Approaches to Changing Communities” at ESA annual meeting, Portland, OR, Aug 8, 2017.
2017. Thorson, J. Know Thy Stochastic Process: The key to generality in statistical ecology. Invited speaker at Quantitative Scientist interview, University of Washington, Seattle, WA, March 27, 2016.
2017. Thorson, J. A marriage of models and maps: Community theory and species distribution models. Invited speaker at organized session, American Academy for the Advancement of Sciences annual meeting, Boston, MA, Feb. 20, 2017.
2016. Thorson, J. FishStats: A toolbox for combining stock assessment, habitat, ecosystem, and climate research. NOAA QUEST seminar, Washington, DC (speaking remotely), Dec. 15, 2016.
2016. Thorson, J. Fish community dynamics and interactions: An illustration of multivariate spatio-temporal models. Invited seminar, North Atlantic Regional Team NOAA workshop, Fall River, MA, Aug. 19, 2016.
2016. Thorson, J. Estimating dynamics, stability, and distribution shifts for fish communities using multispecies spatio-temporal models. Invited speaker at International Biometric Society, Victoria, BC, July 13, 2016
2016. Thorson, J. Advancements in spatio-temporal models in TMB. ADMB/TMB developers workshop, Seattle, WA, June 20, 2016
2016. Thorson, J. Fish community dynamics and interactions: An illustration of multivariate spatio-temporal models. Invited statistics seminar, University of British Columbia Statistics Department, Vancouver, BC, June 16, 2016
2016. Thorson, J., Rindorf, A., Gao, J., Hanselman, D., Winker, H., Fonner, R., Haltuch, M., Ono, K. A framework for estimating abundance from multispecies fishery data incorporating spatiotemporal variation and fisher targeting. World Fish Congress, Busan, Korea, May 23, 2016
2016. Thorson, J. Spatio-temporal models for fisheries: the case for a global bottom trawl database. National Institute of Water and Atmospheric Research (NIWA), Wellington, New Zealand, March 14, 2016.
2016. Thorson, J. The potential for a global database of bottom trawl data to estimate abundance and range shifts for marine fishes. Invited speaker at Pacific Biological Station, Nanaimo, BC, Feb. 3, 2016.
2015. Thorson, J. A marriage of models and maps: understanding community dynamics, climate impacts, and fisher behaviors using multivariate spatiotemporal models. IGB Departmental Seminar, Berlin, Germany, Nov. 3, 2015.
2015. Thorson, J., Johnson, K., Methot, R., Taylor, I. What is the likelihood that your model is wrong? Generalized tests and corrections for overdispersion during model fitting and exploration. Center for the Advancement of Population Modelling, La Jolla, CA, Oct. 19, 2015.

- 2015. Thorson, J., Skaug, H., Kristensen, K. New developments in spatial modeling. United States-New Zealand JCM, Sustainable Fisheries theme. Portland, OR, Aug. 21, 2015.
- 2015. Thorson, J., Hovel, R., Munch, S., Skaug, H., Kristensen, K., Maunder, M., Aires-da-Silva, A. State-space models for addressing pressing fisheries problems: climate, movement, and spatial overfishing limits. *Advancements to State-Space Models for Fisheries Science*, Halifax, Canada, June 17, 2015.
- 2015. Thorson, J. Introduction to template model builder, an improved tool for maximum likelihood and mixed-effects models in R. *Marine Mammal Roundtable*. Vancouver, BC, May 6, 2015.
- 2015. Thorson, J. and Cope, J. Progress and roadblocks in the estimation of stock status and catch limits for global fisheries. *National Scientific and Statistical Committee annual meeting*, Honolulu, Hawaii, Feb. 23, 2015.
- 2015. Thorson, J. A Marriage of Models and Maps: New Directions for Estimating Density Dependence, Species Distributions, and Coupled Natural and Human Systems. University of Idaho, graduate student invited speaker. Moscow, Idaho, Jan. 27, 2015.
- 2014. Thorson, J. Tutorial on Template Model Builder. Center for the Advancement of Population Assessment Methods, La Jolla, CA, Nov. 4, 2014.
- 2014. Kanno, Y., Letcher, B., Thorson, J., and Zipkin, E. Modeling species response to environmental change: development of integrated, scalable Bayesian models of population persistence. Fort Collins USGS invited seminar, Fort Collins, CO, Sept. 18, 2014.
- 2014. Thorson, J., and Ward, E. Analysis of survey data: the delta-GLMM approach. VIMS working group on dynamic habitat, Seattle, WA (attending remotely), May 2.
- 2013. Thorson, J. Links between theory and practice: developing new tools for population ecology and management. Vancouver, BC, Feb. 28, 2013.

Contributed presentations

- 2024. Thorson, J. Dynamic structural equation models: expressive specification for multivariate time-series and spatio-temporal models. John Wakefield Spatial reading group, March 26, 2024, Seattle, WA.
- 2024. Thorson, J., Arimitsu, M., Piatt, J., and Siddon, E. Bridging seabirds and marine ecosystem research in Alaska: recent examples and future approaches. Pacific Seabird Group, March 21, 2024, Seattle, WA.
- 2024. Maureaud, Thorson, et al. Towards a collaborative platform integrating scientific bottom-trawl survey data to study and manage species on the move. World Fish Congress, March 9, 2024, Seattle, WA.
- 2024. Thorson, J. Hulson, P., Monnahan, C. Input sample size is necessary for stock assessment and to optimize fishery-dependent designs. World Fish Congress, March 9, 2024, Seattle, WA.
- 2023. Thorson, J. Causal analysis: Dynamic and phylogenetic structural equation models. UW Quantitative Seminar, Nov. 2, 2023, Seattle WA.
- 2023. Thorson, J., Nielsen, J., Siwicke, K. Using archival tags and mechanistic movement models to estimate habitat utilization for mobile species, Oct. 23, 2023, PICES Annual Science Meeting, Seattle WA.
- 2023. Thorson, J. Hands-on demonstration for phylogenetic comparative methods using R-package phylosem: improving stock assessment (natural mortality) and ecosystem modelling (consumption over biomass). SAFS Think Tank, Oct. 10, 2023, Seattle WA.
- 2023. Siple, M., and Thorson, J. Modernizing Essential Fish Habitat using ensemble species distribution models, movement analysis, and data integration. NWFSC Monster Jam, Oct. 5, 2023, Seattle WA.
- 2023. Thorson, J. Phylogenetic imputation of reproductive, behavioral, and morphometric traits, and their use in joint species distribution models to understand community assembly. Groundfish Plan Team, Sept. 21, 2023, Seattle, WA.
- 2023. Nielsen, J., Siwicke, K., and Thorson, J. Archival tag methods: Estimating habitat preferences and utilization distribution. Groundfish Plan Team, Sept. 21, 2023, Seattle, WA.
- 2023. Thorson, J. VAST in ecosystem-based fisheries management. Honolulu, HI, Aug. 30, 2023. ESP workshop with NEMOW biennial meeting.
- 2023. Thorson, J. Dynamic structural equation models synthesize ecosystem variables constrained by ecological mechanisms. Honolulu, HI, Aug. 28, 2023. ESP workshop with NEMOW biennial meeting.
- 2023. Thorson, J. Practical, scale-free, and generic approach to movement modelling: bridging from individual-based to population-scale dynamics. Quantitative Seminar, University of Washington, Seattle, WA. May 26, 2023.
- 2023. Thorson, J. Trait-based habitat analysis: including phylogenetic-imputation of life-history strategies in joint species distribution models. National Stock Assessment Workshop, Providence, Rhode Island, May 9, 2023.
- 2023. Thorson, J. Data assimilation for fisheries: climate impacts on ecosystems and animal movement. NOAA Science Seminar on Stock Assessment, March 2, 2023

2023. Thorson, J. Model-based approaches for standardizing both abundance and compositional data. Survey design and analysis course at University of Washington, Feb. 1, 2023
2022. Thorson, J. Data assimilation given multicausal dynamics: climate impacts on ecosystems and animal movement. NOAA Modelling Board seminar series, Seattle, WA, Dec. 8, 2022.
2022. Thorson, J. Phylogenetic imputation of reproductive, behavioral, and morphometric traits, and their use in joint species distribution models to understand community assembly. Groundfish Seminar, Seattle, WA, Oct. 11, 2022.
2022. Thorson, J. Integrating data across management regions. NEFSC-SEFSC data-integration discussion group. Beaufort, NC, (attending remotely) Sept. 27, 2022.
2022. Thorson, J. Model-based expansion of age, length, and prey subsampling while estimating equivalent multinomial sample size. WK-USER ICES Working Group, Galway, Ireland, Sept. 14, 2022.
2022. Thorson, J, Arimitsu, Levi, Roffler. Diet analysis using generalized linear models derived from foraging processes using R package mvtweedie. International Statistical Ecology Conference (ISEC), (attending remotely), June 28, 2022.
2022. Thorson, J. Improved synthesis of movement and diet: analyzing tags, surveys, fishery CPUE, stomach content, and fatty acids. International Pacific Halibut Commission, Seattle, WA, March 30, 2022.
2022. Thorson, J. Adding density dependence to species distribution models. Ocean Sciences Meeting, (attending remotely), Feb. 27, 2022.
2022. Thorson, J., Angliss, R., Baldwin-Schaeffer, M., Boveng, P., Copeman, L., De Robertis, A., Kotwicki, S., Goldstein, E., Logerwell, L., Mooney-Seus, M., Ward, E., Whitehouse, G., Wise, S. Regional Action Plan for the Chukchi and Beaufort Seas. University of Alaska Strait Science, Anchorage, AK (attending remotely), Jan. 27, 2022.
2022. Thorson, J. Grand Challenge for Habitat Science: Predicting impact of local human activities on regional fishery productivity. Alaska Marine Science Symposium, Anchorage, AK (attending remotely), Jan. 25, 2022.
2021. Thorson, J. Benthic-pelagic de-coupling: Ecosystem re-assembly in the Northern Bering and Chukchi seas. Pacific Arctic Group science seminar, Nov. 30, 2021.
2021. Thorson, J. Statistical models for whole-of-ecosystem understanding, and changes in the Pacific gateway to the Arctic. University of Uulu departmental seminar, Oulu, Finland (attending remotely), Nov. 25, 2021.
2021. Thorson, J. The multivariate Tweedie: A practical primer on generalized linear models for diet analysis derived from foraging theory. American Fisheries Society Annual Meeting, Baltimore, MD (attending remotely), Nov. 10, 2021.
2021. Thorson, J. Grand Challenge for Habitat Science: synthesis of fishing effects, stage-structured dynamics and movement (with a few toy demos). UW Quantitative Seminar, Oct. 12, 2021.
2021. Thorson, J. Data-integrated model for life-history and recruitment. World Fish Congress, Adelaide, Australia (attending remotely), Sept, 24, 2021.
2021. Thorson, J. Prospects for whole-of-ecosystem sampling and synthesis for Arctic oceans. Alaska Arctic NOAA Science Seminar, Sept. 16, 2021.
2021. Thorson, J., Angliss, R., Baldwin-Schaeffer, M., Boveng, P., Copeman, L., De Robertis, A., Kotwicki, S., Goldstein, E., Logerwell, L., Mooney-Seus, M., Ward, E., Whitehouse, G., Wise, S. Regional Action Plan for the Chukchi and Beaufort Seas. NPFMC Scientific and Statistical Committee Sept, 15, 2021.
2021. Thorson, J. The multivariate Tweedie: A practical primer on generalized linear models for diet analysis derived from foraging theory. Center for the Advancement of Population Assessment and Modelling (CAPAM) meeting on natural mortality, Seattle, WA, USA, June 14, 2021.
2021. Thorson, J. Standardizing fishery-dependent CPUE data using VAST. Pacific Cod Center for Independent Experts (CIE) review. April 26, 2021.
2021. Thorson, J. High-resolution movement rates and habitat utilization from environmental variables, tags, fishery catch-and-effort, and resource surveys using advection-diffusion-taxis modelling. Pacific Cod Center for Independent Experts (CIE) review. April 26, 2021.
2021. Thorson, J. The Grant Challenge for Habitat Science: When our house is on fire get moving! Quantitative Seminar, April 4, 2021.
2021. Thorson, J. Paths to understanding seabird response to habitat, ecosystem, and climate conditions using spatio-temporal models. Pacific Seabird Group annual meeting, Feb. 26, 2021.
2021. Thorson, J. Forecasting nonlocal climate impacts for mobile species using multivariate spatio-temporal extensions to empirical orthogonal function analysis. San Diego State University, Computational Science Research Center, San Diego, CA (attending remotely), Feb. 5, 2021.

2021. Thorson, J. Novel synthesis framework for ecosystem dynamics forecasts community reassembly in the Bering Sea and identifies demographic fingerprint of cold pool for Alaska pollock. Alaska Marine Science Symposium, Jan. 26, 2021.
2020. Thorson, J. Forecasting climate impacts on arctic ecosystems using multivariate spatio-temporal models: combining earth systems models with resource and ecosystem surveys. University of Washington, Think Tank, Seattle, WA, Dec. 1, 2020.
2020. Thorson, J. Forecasting climate impacts on arctic ecosystems using multivariate spatio-temporal models: combining earth systems models with resource and ecosystem surveys. Applied Physics Laboratory Polar Friday Seminar, University of Washington, Nov. 13, 2020.
2020. Thorson, J. Methods to homogenise different surveys data and application to the data set. FishGLOB working group, Sept. 29, 2020.
2020. Thorson, J., and Barnett, L. Species Distribution Models: Temporal Changes in Spatial Indicators. Ecological and Socio-Economic Indicators workshop, Juneau, AK (attending remotely), March 9, 2020.
2020. Thorson, J., Ciannelli, L., Litzow, M. Defining indices of ecosystem variability using biological samples of fish communities: a generalization of empirical orthogonal functions. Ocean Sciences Meeting, San Diego, CA, Feb. 17, 2020.
2020. James Thorson, Lisa Eisner, Dave Kimmel, Lauren Rogers, Ellen Yasumiishi. Seasonal spatio-temporal models for Calanus index standardization and phenology in the Eastern Bering Sea. AMSS Annual Conference, Anchorage, AK, Jan. 27, 2020.
2020. Thorson, J., Bryan, M., Hulson, P., Xu, H., Punt, A.. Measuring the impact of increased ageing effort: theory and case-study demonstration. WK-USER ICES Working Group, Seattle, WA, Jan. 13, 2020.
2019. Thorson, J., Ciannelli, L., Litzow, M., Kimmel, D., Eisner, L., Yasumiishi, E., O'Leary, C., Hermann, A., Thompson, G., Ianelli, J., and Cheng, W.. Onramps and offramps: Three proposed uses for spatio-temporal models in connecting ecosystem surveys to fisheries management. EcoFOCI seminar, Seattle, WA, Nov. 27, 2019.
2019. Thorson, J. Forecasting distribution shifts using oceanographic indices: the spatially varying effect of cold-pool extent in the Eastern Bering Sea. PICES Annual Science Conference, Victoria, Canada, Oct. 17, 2019.
2019. Thorson, J. Spatio-temporal models connecting across line offices: regional ocean models, biogeographic assessments, and modes of variability in fish spatial distribution. NOAA Science Seminar, Washington, DC, Oct. 2, 2019.
2019. Thorson, J. Benefits, drawbacks, and proposed terms-of-reference for using VAST in 2019 SAFE reports. Groundfish Plan Team, Seattle, WA, Sept. 16, 2019.
2019. Thorson, J., Ciannelli, L., Litzow, M. Defining indices of ecosystem variability using biological samples of fish communities: a generalization of empirical orthogonal functions. ICES Annual Science Conference, Gothenberg, Sweden, Sept. 11, 2019.
2019. Thorson, J. Spatial distributions. Spring PEEC, Seattle, WA, June 6, 2019.
2019. Thorson, J. Global and regional approaches to estimate climate impacts on fish productivity and distribution. Wildlife seminar, Seattle, WA, June 3, 2019.
2019. Thorson, J. Habitat and Ecosystem Process Research program research for Ecological and Socio-economic profiles. ESP workshop, Seattle, WA, May 31, 2019.
2019. Thorson, J. Multispecies spatio-temporal models: A new tool for ecological synthesis across multiple trophic levels. Marine Mammal Laboratory Lunchtime Seminar, May 29, 2019.
2019. Thorson, J. VAST modelling: Discuss applicability to crab assessments. Crab Plan Team Meeting, Anchorage, AK, May 3, 2019.
2019. Thorson, J., Ciannelli, L., Ianelli, J., Kotwicki, S., Litzow, M. Learning ecological and evolutionary dynamics from multivariate data: life-history theory and oceanographic drivers of Bering Sea groundfishes. University of Alaska Fairbanks weekly seminar, Juneau, April 12, 2019.
2019. Thorson, J. New uses for vector autoregressive spatio-temporal (VAST) models: MICE-in-space, oceanographic indices, and expanding composition data from multiple surveys. Quantitative Seminar, Seattle, WA, Feb. 20, 2019.
2019. Thorson, J. How to simultaneously fit presence-absence and presence-only data, and why we should never throw out absence data. Deep-Sea Coral Initiative modelling workshop, Seattle, WA, Feb. 19, 2019.
2018. Thorson, J. The world through a fish-eye lens: Multivariate approaches to big data, CalCOFI annual conference, La Jolla, Dec. 4, 2018.
2018. Thorson, J. The world through a fish-eye lens: Multivariate approaches to big data, Departmental seminar, Stoney Brook University, Nov. 9, 2018.

2018. Thorson, J. From vessels to models: Steps to measure the value of age/length/diet sampling in data collection and model-based management advice. Groundfish Seminar, Seattle, WA, Oct. 7, 2018.
2018. Thorson, J. Spatial downscaling of adult fish dynamics: skill testing and species interactions. Site-visit to Auke Bay Laboratory, Juneau, AK, Sept. 31, 2018.
2018. Thorson, J. Mesopelagic dynamics in California Current, 1951-2016, from larval samples. Pacific Fisheries Management Council Ecosystem Subcommittee technical review, Seattle, WA, Sept. 5, 2018.
2018. Thorson, J. Catch-up workshop for VAST users. VAST users workshop, Seattle, WA, July 25, 2018.
2018. Thorson, J. Spatio-temporal approaches to estimating species interactions. AFSC workshop on predation, Seattle, WA, July 23, 2018.
2018. Thorson, J. Forecast skill for predicting distribution shifts: A retrospective experiment for the Eastern Bering Sea, Washington, DC, June 7, 2018.
2018. Thorson, J. Data-integrated model for life-history and recruitment. National Stock Assessment Workshop, Irvine, CA, May 24, 2018
2018. Thorson, J. Variability + Uncertainty = Steepness. Quantitative Seminar, Seattle, WA, March 9, 2018.
2018. Thorson, J., and Haltuch, M. New features for FishStats: An improved model for biomass sampling data, spatial expansion of age/length compositions, and short-term forecasts for distribution shift. Think Tank seminar, Seattle, WA, Jan. 9, 2018.
2017. Thorson, J. and Gao, J. A biological PDO: Dominant spatio-temporal patterns for fish communities. BioOcean Brown Bag lunch seminar, Seattle, WA, Nov. 13, 2017.
2017. Thorson, J. Replacing tuning algorithms with parameter estimation, and a regional meta-analysis for steepness. Center for the Advancement of Population Assessment and Modelling (CAPAM) meeting on recruitment, La Jolla, CA, USA, Oct. 29, 2017.
2017. Thorson, J. Time-varying processes in stock assessment: A bridge to ecosystem-based reference points. PICES annual science meeting, Vladivostok, Russia, Sept. 26, 2017.
2017. Thorson, J., Ianelli, J., and Kotwicki, S. Using the FishStats spatio-temporal toolbox to attribute and communicate uncertain drivers of distribution shifts for assessed stocks. ICES Annual Science Conference, Fort Lauderdale, FL, Sept. 19, 2017.
2017. Thorson, J., and Barnett, L. Does incorporating spatio-temporal correlations among fishes and biogenic habitat improve estimates of abundance trends and distribution shifts? NOAA Protected Species Workshop, Seattle, WA, Jan. 18, 2017.
2016. Thorson, J. Autocorrelation in recruitment and its effect on estimation of stock recruit parameters. Pacific Fisheries Management Council Productivity Workshop, Seattle, WA, Dec. 5, 2016.
2016. Thorson, J, Munch, S., Cope, J, and Gao, J. A multivariate life-history analysis of global fisheries data to generate priors on length, weight, growth, mortality, and maturity parameters for all 32,000 marine fishes. Pacific Fisheries Management Council Productivity Workshop, Seattle, WA, Dec. 6, 2016.
2016. Thorson, J. Autocorrelation in recruitment and its effect on estimation of stock recruit parameters. Pacific Fisheries Management Council Productivity Workshop, Seattle, WA, Dec. 5, 2016.
2016. Thorson, J. FishStats: A fisheries spatio-temporal toolbox. SAFS Think Tank seminar, Seattle, WA, Nov. 29, 2016.
2016. Thorson, J. Spatio-temporal index tools for 2017 assessments. Pacific Fisheries Management Council Methodology Review for 2017 assessments, Seattle, WA, Oct. 15, 2016.
2016. Thorson, J. Fisher targeting and standardizing fishery catch-rate data. Half-baked seminar for economics research, Seattle, WA, July 27, 2016.
2016. Thorson, J. Joint dynamic species distribution models: a tool for community ordination and spatiotemporal monitoring. International Statistical Ecology Conference, Seattle, WA, June 29, 2016.
2016. Thorson, J., Fonner, R., Haltuch, M., Ianelli, J., Larsen, E., Ries, L., Ono, K., Winker, H., Scheuerell, M., Szuwalski, C., Zipkin, E. Joint dynamic species distribution models: a statistical tool for monitoring community dynamics, World Fish Congress, Busan, Korea, May 24, 2016
2016. Thorson, J. Developments in geostatistical modeling of survey data for pollock. Center for Independent Experts (CIE) review for walleye pollock assessment, Seattle, WA, May 16, 2016.
2016. Thorson, J. Recent and future developments in geostatistical index standardization: the case for a global bottom trawl database. Quantitative Seminar, Seattle, WA, March 4, 2016.
2016. Thorson, J. The potential for a global database of bottom trawl data to estimate abundance and range shifts for marine fishes. Fish and Chips seminar, UBC, Vancouver, BC, Feb. 2, 2016.

2016. Thorson, J., Hovel, R., Scheuerell, M., Quinn, T. What can we learn about community dynamics and climate impacts from spatiotemporal models? A case study of freshwater fishes. American Mathematical Association Annual Meeting, Seattle, WA, Jan. 8, 2016.
2015. Thorson, J. Spatial models for population ecology. MyFish meeting on MSY targets and limits. Athens, Greece, Oct. 27, 2015.
2015. Thorson, J., Jannot, J., Somers, K. New methodology for estimating OFL for using data from Fmsy/M methods. Pacific Fisheries Management Council Scientific and Statistical Committee Methodology Review. Seattle, WA, Sept. 29, 2015.
2015. Thorson, J., Scheuerell, M., Semmens, B., and Pattengill-Semmens, C. Demographic modeling of citizen science data informs habitat preferences and population dynamics of recovering fishes. American Fisheries Society Annual Meeting, Portland, OR, Aug. 20, 2015.
2015. Thorson, J., Maunder, M., Skaug, H., Munch, S., Aires-Da-Silva, A., Kristensen, K. Spatial Predator-Prey Dynamics: A Model of Tuna Longline Fishery Development in the Pacific Ocean. American Fisheries Society Annual Meeting, Portland, OR, Aug. 18, 2015.
2015. Thorson, J. New tools and techniques for understanding spatial dynamics of populations and communities. Southwest Fisheries Science Center seminar series, Santa Cruz, CA, July 14, 2015.
2015. Thorson, J. and Wetzel, C. Status of the canary rockfish (*Sebastes pinniger*) population in U.S. waters. SSC defense, Spokane, WA, June 10, 2015.
2015. Thorson, J., Hovel, R., Munch, S., Skaug, H., Kristensen, K., Maunder, M., Aires-da-Silva, A. Combining climate and fisheries sciences using reaction-advection-diffusion and spatial dynamic factor analysis models. UW Quant. Sem. Seattle, WA, May 14, 2015.
2015. Thorson, J. A marriage of models and maps. Marine Mammal Roundtable. Vancouver, BC, May 5, 2015.
2015. Thorson, J. and Wetzel, C. Draft Status of the canary rockfish (*Sebastes pinniger*) population in U.S. waters. STAR panel, Seattle, WA, April 27, 2015.
2015. Thorson, J., Scheuerell, M., Semmens, B., and Pattengill-Semmens, C. Demographic modeling of citizen science data informs habitat preferences and population dynamics of recovering fishes. American Academy for the Advancement of Science Symposium on Citizen Science. San Jose, CA, Feb. 16, 2014.
2015. Lee Qi, Thorson, J., Vlada Gertseva, and André Punt. Incorporating climate driven growth variability into stock assessment models: a simulation-based decision table approach. Fisheries and the Environment (FATE) annual meeting. La Jolla, CA, Jan. 12, 2015.
2014. Thorson, J. Improvements in habitat-based methods in stock assessments. Habitat Advisory Committee of the Pacific Fisheries Management Council (PFMC) meeting. Costa Mesa, CA, Nov. 13, 2014.
2014. Thorson, J., Shelton, A.O., Ward, E., and Skaug, H. Geostatistical index standardization. Science and Statistical Committee (SSC) of the Pacific Fisheries Management Council (PFMC) meeting. Costa Mesa, CA, Nov. 12, 2014.
2014. Thorson, J., Minte-Vera, C., and Webber, D. How much does growth vary over time, space, and among individuals? Three case studies and their implications on biological reference points. Center for the Advancement of Population Assessment Methods, La Jolla, CA, Nov. 6, 2014.
2014. Thorson, J., and Cope, J. New data-poor assessment methods in 2014. Conservation International, Washington, DC., Oct. 27, 2014.
2014. Thorson, J. Summary of recent “integrated, scalable” research for populations. Powell Center Working Group, Fort Collins, CO, Sept. 15, 2014.
2014. Thorson, J., Skaug, H., and Kristensen, K. New spatial modelling tools for stock assessments. American Fisheries Society Annual Meeting, Quebec City, Canada, Aug. 19, 2014.
2014. Thorson, J. Estimating recruitment variability including autocorrelated, synchronous, and spatial components. ICES Working group on recruitment forecasting, Copenhagen, June 18, 2014.
2014. Thorson, J., Skaug, H., Kristensen, K., Shelton, O., Ward, E., Ono, K., Scheuerell, M., Benante, J., Harms, J. Random Fields: A Marriage of Models and Maps. UW Quant. Sem. Seattle, WA, May 24, 2014.
2014. Thorson, J. Alternatives to design-based estimators when analyzing survey data. AFSC team meeting, Seattle WA, May 12, 2014.
2014. Thorson, J. Spatial modelling: An important direction for quantitative ecology and environmental management. Univ. British Columbia Fish. Centre seminar, Vancouver, Canada, April 4, 2014.
2014. Thorson, J., Kristensen, K., Skaug, H. Introduction to template model builder, an improved tool for maximum likelihood and mixed-effects models in R. UW Seminar on advanced R programming. Seattle, WA, Mar. 7.

2014. Thorson, J., and Cope, J. Catch curve stock-reduction analysis: A new solution to the catch equations. Data-poor working group, Miami, FL, Jan. 14.
2013. Thorson, J., Hicks, A., and Methot R. Using the Laplace approximation to estimate random effects in ADMB and Stock Synthesis. Stock Synthesis working group, Dec. 12.
2013. Cope, J., and Thorson, J. Alternative solutions to the catch equations. Think Tank Seminar, University of Washington, Seattle, WA, Nov. 13.
2013. Thorson, J., Hicks, A., and Methot, R. Random effect estimation in Stock Synthesis. Think Tank Seminar, University of Washington, Seattle, WA, Oct. 30.
2013. Thorson, J., See, K., Scheuerell, K., Ward, E., Semmens, B, and Semmens, C. Two case-studies showing the broad applicability of state-space models for count data. Quantitative Seminar, Seattle, WA, Oct. 25, 2013.
2013. Gertseva, Vlada, and Thorson, James. Stock assessment for darkblotched rockfish in 2013. STAR panel, Seattle, WA, May 13, 2013.
2013. Thorson, J. Surplus production: new directions for one of the oldest models in fisheries. Quantitative Seminar, Seattle, WA, April 19, 2013.
2013. Thorson, J. A proposal for penalized-likelihood estimation of semi-parametric selectivity in age-structured stock assessment models. La Jolla, CA, Mar. 12, 2013.
2013. Thorson, J. Priors for rockfish steepness. PFMC SSC meeting. Tacoma, WA, Mar. 5, 2013.
2013. Thorson, J. 2013 update to delta-GLMM software. PFMC SSC meeting. Tacoma, WA, Mar. 5, 2013.
2013. Monnahan, Cole, Thorson, J., and Taylor, Ian. Next-generation MCMC: theory, options, and practice for Bayesian inference in ADMB. Univ. Wash. Think Tank. Seattle, WA, Feb. 27, 2013.
2013. Punt, A. E., and Thorson, J. Estimating steepness for U.S. West Coast groundfishes. Univ. Wash. Think Tank. Seattle, WA, Jan. 28, 2013.
2013. Thorson, J. Effort dynamics and assessing fishery status using catch data. FAO/CI working group, Seattle, WA, Jan. 1, 2013.
2012. Thorson, J., and Ward, Eric. Accounting for space-time interactions in index standardization models. Think Tank Seminar, Seattle, WA, Nov. 28, 2012.
2012. Thorson, J., Cope, Jason, and Patrick, Wes. Assessing the quality of life history information in FishBase, a publicly available database. Quantitative Seminar, Seattle, WA, Oct. 25, 2012.
2012. Thorson, J., Clarke, M. Elizabeth, Stewart, Ian J., and Punt, A. The implications of untrawlable habitats on bottom trawl surveys for West Coast groundfishes. National Habitat Assessment Workshop, Seattle, WA, Sept. 6, 2012.
2012. Thorson, J., Nel, Ronel, and Punt, A. Is nesting beach protection successful for South African sea turtles? ESA Annual Meeting, Portland, OR, Aug. 7, 2012.
2012. Thorson, J. Meta-analysis in support of data-poor stock assessment methods. Pacific Science and Statistical Committee, Seattle, WA, June 6, 2012.
2012. Thorson, J. Improved biological realism in the design and analysis of surveys. USGS weekly seminar series, Olympia, WA, June 19, 2012.
2012. Thorson, J. Summary and next-steps for Using model-based inference to evaluate global fisheries status from landings, location and life history data. FAO/CI meeting on data-poor stocks, Washington, DC, June 4, 2012.
2012. Thorson, J. Meta-analysis in support of data-poor stock assessment methods. Think Tank Seminar, Seattle, WA. May 2, 2012.
2012. Thorson, J. Generalized fisheries meta-analysis, with application to natural mortality and cohort strength. ICES/PICES Young Investigators Meeting, Mallorca, Spain, April 26, 2012.
2012. Thorson, J. Preliminary results for developing Bayesian priors for relative cohort strength of groundfishes off the U.S. West Coast using multi-species Stock Synthesis models. PFMC Science and Statistical Committee Meeting, Seattle, WA, April 4, 2012.
2012. Thorson, J., Clarke, E., and Stewart, I. Bias in survey results arising from spatially varying bottom trawl gear efficiency, and a proposed solution involving *in situ* underwater vehicles. Presentation at Western Groundfish Conference, Seattle, WA, Feb. 8, 2012.
2012. Thorson, J. Ichs, herps, and splines: How approximating time-varying parameters can improve model accuracy and interpretability. Presentation at University of British Columbia Quantitative Seminar, Vancouver, BC, Feb. 2, 2012.
2012. Thorson, J. "Rationale, preliminary development, and simulation testing of meta-analysis capabilities using stock synthesis." Presentation at Think Tank seminar, Seattle, WA, Jan. 10, 2012.
2011. Thorson, J. "A general approximation to time-varying parameters in ecological models." Presentation at University of Washington Quantitative Seminar, Seattle, WA, Oct. 28, 2011.

2011. Thorson, J. "Comparing accuracy of stock status estimates among integrated models using functional-form and random-walk catchability." Presentation at American Fisheries Society National Meeting, Seattle, WA, Sept. 6, 2011.
2011. Thorson, J., Clarke, Elizabeth, Stewart, Ian, and Punt, André E., "Simulation comparison of simple and stratified sampling designs for Pacific coast rockfish involving bottom trawl and submersible gears." Presentation at American Fisheries Society National Meeting, Seattle, WA, Sept. 5, 2011.
2011. Thorson, J. "Optimization in R: algorithms, sequencing, and automatic differentiation." Presentation at Hobart R User Group, Hobart, Tasmania. Aug. 26, 2011.
2011. Thorson, J. "Multi-species occupancy modeling and species range maps." Presentation at Data-Poor Fisheries Workshop, Hobart, Tasmania, July 20, 2011.
2011. Thorson, J. "Meta-analysis in support of data-poor stock assessment and time-varying effects." Presentation at Lab Meeting, Hobart, Tasmania, July 7, 2011.
2011. Thorson, J. "Propensity score matching: identifying control fisheries for comparison with MSC data." Invited presentation at NCEAS working-group regarding Marine Stewardship Council (MSC) certification, Santa Barbara, CA, June 22, 2011.
2011. Thorson, J., Stewart, I, and Punt, A. "Agent-based model evaluation of methods to estimate annual abundance for shoaling fishes such as Pacific rockfish (*Sebastes* spp.)." Presentation at Annual Sea Grant Fellows Meeting, Southeast Fisheries Science Center, Miami, FL, May 23, 2011.
2011. Ono, K., Cunningham, C., and Thorson, J. "Fishing vessel search patterns, evolutionary ecology of salmon, and groundfish sampling designs: three examples of agent-based modeling." Presentation at Think Tank seminar, Seattle, WA, May 5, 2011.
2011. Thorson, J., Stewart, I., and Punt, A.E. "Accounting for fish shoals in single- and multi-species survey data." Presentation at University of British Columbia Quantitative Seminar, Vancouver, WA, April 14, 2011.
2010. Thorson, J. and Branch, T. "Global status and predictive models for fishery collapse from the NCEAS database and landings data." Presentation at University of Washington Think Tank seminar, Seattle, WA, Oct. 13, 2010.
2010. Thorson, J., and Prager, M. "Better catch curves: Incorporating age-specific natural mortality and logistic selectivity." AFS Symposium on Data-Poor Methods, Pittsburg, PA, Sept. 14, 2010
2010. Thorson, J., and Stewart, I. "Learning about Schools: Mixture distributions and Pacific rockfish." National Stock Assessment Workshop, St. Petersburg, FL, May 17, 2010.
2010. Thorson, J. "Learning About Schools: Mixture Distributions and Pacific rockfish." Western Groundfish Conference, Juneau, AK, April 28, 2010.
2010. Thorson, J. "Learning About Schools: Mixture Distributions and Pacific rockfish." Sea Grant Fellows Meeting, Seattle, WA, April 15-16, 2010.
2010. Thorson, J. and Lapointe, N. "Improving Predictive Models for Ecosystem Invasibility." AFS/TWS Joint Symposium on Invasive Species, Starkville, MI, April 8, 2010.
2009. Thorson, J. "Evaluating management benchmark estimates from single- and multi-species state-space models for time-varying catchability." Presentation at University of Washington Mini-Workshop, Seattle, WA, November 10, 2009.
2009. Thorson, J. and Berkson, J. "Multi-species estimation of Bayesian priors for catchability functional parameters." Quantitative Seminar, Seattle, WA, Oct. 9, 2009.
2009. Thorson, J. and Berkson, J. "Time-varying catchability in the Gulf of Mexico." AFS National Meeting, St. Louis, MO, 2009.
2009. Thorson, J. "Time-varying catchability in the Gulf of Mexico." Southeast Stock Assessment Workshop (SESAW), Miami, FL, May 5, 2009.
2009. Thorson, J. "Estimating and evaluating multi-species catchability models in the Gulf of Mexico." Southeast Data, Assessment, and Review (SEDAR) procedural workshop II: Catchability, Atlanta, GA, Feb. 10, 2009.
2009. Thorson, J. "Mechanisms and models for time-varying catchability." Southeast Data, Assessment, and Review (SEDAR) procedural workshop II: Catchability, Atlanta, GA, Feb. 9, 2009.
2008. Thorson, J. and Simpfendorfer, C. "Improvements from Multi-Model Estimation: A Shark Length-Growth Case Study." AFS National Meeting, Ottawa, Ontario, Aug. 20, 2008.
2008. Thorson, J. "Nonstationarity and nonlinearity in Gulf of Mexico catchability" Southeast Fisheries Science Center technical meeting, Miami, FL, July 16, 2008.
2007. Thorson, J. and Simpfendorfer, C. "Gear selectivity and sample size effects on growth curve selection in shark age and growth studies" Joint Meeting of Ichthyologists and Herpatologists, St. Louis, MO. July 16, 2007.