

Koji Tominaga

Centre for Ecological and Evolutionary Synthesis (CEES)

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Education

2009–2013	PhD in Biology, University of Oslo
2007–2009	MSc in Environmental Science, Trent University
2003–2007	BSc in Environmental Science, Trent University

Academic Exchanges

Feb–Mar 2009	Technische Universität München
Apr–Jun 2009	Norwegian Institute for Water Research

Work Experiences

2013–current	Researcher, University of Oslo
2010–2013	Part-time Researcher, Norwegian Institute for Water Research
2006–2009	Research Assistant, Trent University
2007–2008	Teaching Assistant, Trent University
2008	Seminar Instructor, Trent University
2006–2007	Grader, Trent University
2006–2007	Technical Assistant, Kawartha World Issues Centre

Peer-review Contributions

2 times with Environmental Science and Technology and 2 times Science of the Total Environment.

Invited Talk

- [1] **Tominaga K**, Aherne J, Watmough SA (2008). Objective assessment of five process-oriented dynamic acidification models at Hubbard Brook. Hubbard Brook Committee of Science Meeting. Invited talk. Presenter.

Theses

- [2] **Tominaga K** (2013) Lake Modelling: an interdisciplinary context. PhD thesis, University of Oslo, Oslo, Norway.
- [3] **Tominaga K** (2009) Uncertainty evaluation of four dynamic acidification models: MAGIC, PnET-BGC, SAFE and VSD. MSc thesis, Trent University, Peterborough, Ontario, Canada.
- [4] **Tominaga K** (2007) Monitoring of hardwood forest health in south-central Ontario, Canada: survival analysis and remote sensing analysis. BSc honours thesis, Trent University, Peterborough, Ontario, Canada.

Peer-reviewed Journal Articles

- [5] Couture RM, **Tominaga K**, Starrfelt J, Moe SJ, Kaste Ø, Wright RF (2014) Modelling phosphorus loading and algal blooms in a nordic agricultural catchment-lake system under changing land-use and climate. *Environ Sci: Processes Impacts* 16: 1588–1599.
- [6] Trolle D, Hamilton DP, Hipsey MR, Bolding K, Bruggeman J, Mooij WM, Janse JH, Nielsen A, Jeppesen E, Elliott JA, Makler-Pick V, Petzoldt T, Rinke K, Flindt MR, Arhonditsis GB, Gal G, Bjerring R, **Tominaga K**, Hoen J, Downing AS, Marques DM, Fragoso CR, Sondergaard M, Hanson PC (2012) A community-based framework for aquatic ecosystem models. *Hydrobiologia* 683: 25–34.
- [7] **Tominaga K**, Aherne J, Watmough SA, Alveteg M, Cosby BJ, Driscoll CT, Posch M, Pourmokhtarian A (2010) Predicting acidification recovery at the hubbard brook experimental forest, new hampshire: Evaluation of four models. *Environ Sci Technol* 44: 9003–9009.
- [8] Mooij WM, Trolle D, Jeppesen E, Arhonditsis G, Belolipetsky PV, Chitamwebwa DBR, Degermendzhy AG, DeAngelis DL, Domis LND, Downing AS, Elliott JA, Fragoso CR, Gaedke U, Genova SN, Gulati RD, Hakanson L, Hamilton DP, Hipsey MR, 't Hoen J, Huelsmann S, Los FH, Makler-Pick V, Petzoldt T, Prokopenko IG, Rinke K, Schep SA, **Tominaga K**, Van Dam AA, Van Nes EH, Wells SA, Janse JH (2010) Challenges and opportunities for integrating lake ecosystem modelling approaches. *Aquat Ecol* 44: 633–667.
- [9] **Tominaga K**, Aherne J, Watmough SA, Alveteg M, Cosby BJ, Driscoll CT, Posch M (2009) Voyage without constellation: evaluating the performance of three uncalibrated process-oriented models. *Hydrol Res* 40: 261.
- [10] **Tominaga K**, Watmough S, Aherne J (2008) Predicting tree survival in ontario sugar maple (*acer saccharum*) forests based on crown condition. *Can J Forest Res* 38: 1730–1741.

Conference and Seminar Presentations

- [11] Barton DN, Moe SJ, Engebretsen AM, Romstad E, **Tominaga K** (2013) Bayesian networks for assessment of WFD compliance based on lake phytoplankton. Oslo, Norway. Final EUTROPIA Conference. Oral presentation. Not presenter.
- [12] Couture RM, Shafei B, Markelov I, **Tominaga K**, Starrfelt J, Kaste Ø (2013) Linking the benthic cycling of p to its surface water dynamics in lakes. Uppsala, Sweden. 7th International Phosphorus Workshop (IPW7). Poster presentation. Not presenter.
- [13] Engebretsen AM, **Tominaga K**, Barton DN, Andersen T, Starrfelt J, Kaste Ø, Vogt RD (2013) Modelling of nutrient transport in the morsa catchment: integrating model uncertainty using bayesian networks. In: Miliø2015-konferensen IV. Oslo, Norway. Miliø2015-konferensen IV. Oral presentation. Co-presenter.
- [14] Kaste Ø, Couture RM, Starrfelt J, **Tominaga K** (2013) The REFRESH project: Modelling's possible futures in the hobøl river with the INCA-p model. Oslo, Norway. Final EUTROPIA Conference. Oral presentation. Not presenter.
- [15] Moe SJ, Barton DN, **Tominaga K** (2013) Bayesian networks for assessment of WFD compliance based on lake phytoplankton. Oslo, Norway. Final EUTROPIA Conference. Oral presentation. Not presenter.
- [16] **Tominaga K** (2013) How to make friends with environmental models: three points of view. Oslo, Norway. Final EUTROPIA Conference. Oral presentation. Presenter.
- [17] **Tominaga K** (2012) Simulating limnological responses to various runoff scenarios using MyLake. Oslo, Norway. EUTROPIA Mid-term Conference. Oral presentation. Presenter.

- [18] **Tominaga K** (2012) MyLake on storefjorden and vestre vansjø. Frederikstad, Norway. EUTROPIA-REFRESH Modelling Workshop. Oral presentation. Presenter.
- [19] **Tominaga K**, Finstad AG, Kaste Ø, Andersen T (2012) Future climate change impact on lakes in fennoscandia: A dynamic mechanistic approach. Otsu, Shiga, Japan. 2012 ASLO Aquatic Sciences Meeting. Oral presentation. Presenter.
- [20] **Tominaga K** (2011) Why you should care about MyLake (or ecological models in general). Sør Nesset, Norway. Bi-annual Meeting Workshop on Environmental and Analytical Chemistry. Oral presentation. Presenter.
- [21] **Tominaga K** (2010) Ensemble model framework for lake ecosystem modelling - case study from acidification modelling. Silkeborg, Denmark. Lake Ecosystem Modelling Workshop. Oral presentation. Presenter.
- [22] **Tominaga K** (2009) Modelling eutrophication in lake vansjø. Oslo, Norway. MILJØ2015 PhD Seminar. Oral presentation. Presenter.
- [23] **Tominaga K** (2009) Modelling eutrophication in lake vansjø. Sør Nesset, Norway. Bi-annual Symposium on Environmental and Analytical Chemistry. Oral presentation. Presenter.
- [24] **Tominaga K**, Aherne J, Watmough SA, Alveteg M, Cosby BJ, Driscoll CT, Posch M, Pourmokhtarian A (2009) Predicting future soil and stream chemistry using an ensemble of acidification models at hubbard brook. Lincoln, New Hampshire, USA. 46th Annual Hubbard Brook Cooperators' Meeting. Oral presentation. Presenter.
- [25] **Tominaga K**, Aherne J, Watmough SA, Alveteg M, Cosby BJ, Driscoll CT, Kiebusch J, Posch M, Pourmokhtarian A, Weis W, Huber C (2009) Modelling acidification recovery at long-term monitoring sites: a multi-model evaluation. Helsinki, Finland. 6th International Symposium on Ecosystem Behaviour BIOGEOMON 2009. Poster presentation. Presenter.
- [26] **Tominaga K**, Aherne J, Watmough SA (2008) Modelling the chemistry of soil and surface water at hubbard brook, new hampshire, USA. Gananoque, Ontario, Canada. 22nd Annual Gananoque Conference on Environmental Science and Engineering. Oral presentation. Presenter.
- [27] **Tominaga K**, Aherne J, Watmough SA, Alveteg M, Cosby BJ, Driscoll CT, Posch M (2008) Evaluation of process-oriented acidification models at hubbard brook. Durham, New Hampshire, USA. Northeastern Ecosystem Research Cooperative Conference. Poster presentation. Presenter.
- [28] **Tominaga K**, Watmough SA (2007) Survival analysis of hardwood trees in southern ontario. Gananoque, Ontario, Canada. 21st Annual Gananoque Conference on Environmental Science and Engineering. Poster presentation. Presenter.

I have also participated in several other international and domestic conferences and meetings.

Other manuscripts in preparation

- Modelling the response of a cold temperate lake to changes in external forcing.
- Melting and warming of northern lakes.
- Calibration uncertainty in sequential model application.

Achievements

Biogeomon Symposium 2009, Finland

2009 | Student scholarship

Research Council of Norway (Norges Forskningsråd)

2009 | Norwegian Government Scholarship April-June 2009

German Academic Exchange Service (Deutscher Akademischer Austausch Dienst, DAAD)

2009 | Short-term Study Scholarship February-March 2009

Northeastern Ecosystem Research Cooperative, USA

2008 | Travel support for graduate students at the NERC Conference

Trent University (non-student), Canada

2008 | Academic Innovation Fund. “Introductory seminar on R for biologists and environmental scientists”

Trent University (graduate)

2007–2009 | Graduate Teaching Assistantship and Research Assistantship (declined for 2009)
2007–2009 | Research Fellowship Award
2007–2008 | Graduate Studies Bursary

At Trent University (undergraduate)

2007 | President’s Role
2007 | J.D. Page Scholarship in Environmental and Resource Studies (ERS)
2003–2007 | Dean’s Role (4 times)
2003–2007 | Entrance Scholarship (automatically renewable)
2003–2007 | Trent International Program (TIP), Board of Governors Bursary (4 times)
2004–2007 | In-Course Scholarship (TIP, 3 times)
2004–2007 | Trent International Student Association Bursary (3 times)
2006 | J. Percy MacNaughton Prize (ERS)
2006 | Catherine Parr Traill College Principal’s Prize
2006 | Honorarium, Kawartha World Issues Centre
2005 | Cyril and Jenny Carter Scholarship in Environmental Studies (ERS)
2004 | Graham Hartley Chemistry Prize (Chemistry Department)

Computing

HPC and super computer facilities

I have handled more than 1000 computing nodes at the same time, and have handled terabytes of data at the following facilities:

- Notur Abel, Norway
- Amazon Elastic Computing Cloud, Ireland
- Shared Hierarchical Academic Research Computing Network (SHARCNET), Ontario, Canada

Skills Listed by Familiarity

Python, R, Unix, Linux, SSH, L^AT_EX, Git, NetCDF, GIS (GRASS, QGIS), Matlab/Octave, XML, HTML, SQLite, Fortran, C, C++, HTTP.

Miscellaneous

Natural Languages

English	fluent
Japanese	native
Norwegian	elementary
Chinese	elementary

Travels

As resident	Japan, Canada, Germany, Norway, Malaysia
Assignment	United States, Ireland, Sweden, Netherlands, Finland, Denmark, Portugal, Spain, China
As tourist	Singapore, Thailand, Laos, Myanmar, Czech Republic, Austria, Italy, France, Belgium, Indonesia, Qatar