

# 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–present	Researcher, University of Oslo (temporarily part-time)
2015–present	Adjunct Lecturer, Ngee Ann Polytechnic <ul style="list-style-type: none"><li>• 2nd year statistics and research methods module</li></ul>
2010–2013	Part-time Researcher, Norwegian Institute for Water Research
2006–2009	Research Assistant, Trent University
2007–2008	Teaching Assistant, Trent University <ul style="list-style-type: none"><li>• 4th year climate change course</li><li>• 2nd year energy science course</li></ul>
2008	Seminar Instructor, Trent University <ul style="list-style-type: none"><li>• R for natural scientists at graduate level</li></ul>
2006–2007	Grader, Trent University <ul style="list-style-type: none"><li>• 2nd year statistics course</li></ul>
2006–2007	Technical Assistant, Kawartha World Issues Centre

## Peer-review Contributions

- 2 times for Environmental Science and Technology
- 2 times for Science of the Total Environment
- 2 times for PLOS ONE

## 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.

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## Conference and Seminar Presentations

- [5] Joehnk KD, Stepanenko V, Bueche T, Gal G, Goyette S, Janssen A, Lindgren E, MacIntyre S, Perroud M, Thierry W, Toffolon M, **Tominaga K**, Lijuan W (2015) Integrated modelling of lakes in the climate system: A summary. Évora, Portugal. Lake 2015: Parameterization of Lakes in Numerical Weather Prediction and Climate Modelling. Oral presentation. Not presenting author.
- [6] Couture RM, de Wit HA, **Tominaga K**, Kiuru P, Markelov I (2015) Modelling the impact of increasing dissolved organic carbon load on seasonal anoxia in a boreal humic lake. Montréal, Canada. 2015 Joint Assembly AGU-GAC-MAC-CGU. Oral presentation. Not presenting author.
- [7] **Tominaga K**, Andersen T, Blumentrath S, Englund G, Finstad AG, Hessen DO, Laken BA, Larsen S, Stordal F, Yang H (2015) Physical status of lakes in northern europe for the next 100 years. Granada, Spain. The 2015 ASLO Aquatic Sciences Meeting: Global and Regional Perspective – North Meets South. Oral presentation. Presenting author.
- [8] Larsen S, Finstad AG, **Tominaga K**, Hessen DO, Andersen T, de Wit H (2015) DOM under changing climatic conditions. Granada, Spain. The 2015 ASLO Aquatic Sciences Meeting: Global and Regional Perspective – North Meets South. Oral presentation. Not presenting author.
- [9] Wojewodzic MW, Becker D, **Tominaga K**, Zhou X, Zhao J, Shala N, Colbourne JK, Hessen DO (2014) Seeking for transgenerational effects (maternal effects vs epigenetics) of diet quality in clones - ecophysiological and RNA-seq approaches. Lednice, Czech Republic. 10th Symposium on Cladocera. Oral presentation. Not presenting author.
- [10] Wojewodzic MW, Becker D, **Tominaga K**, Zhou X, Zhao J, Shala N, Colbourne JK, Hessen DO (2014) Seeking for transgenerational effects (maternal effects vs epigenetics) of diet quality in clones - ecophysiological and RNA-seq approaches. Camerino, Italy. First European Summer School on Nutrigenomics. Oral presentation. Not presenting author.
- [11] Wojewodzic MW, Becker D, **Tominaga K**, Zhou X, Zhao J, Shala N, Colbourne JK, Hessen DO (2014) Seeking for transgenerational effects of diet quality in clones – ecophysiological and RNA-seq approaches. Oslo, Norway. SocBiN Bioinformatics. Oral presentation. Not presenting author.
- [12] Wojewodzic MW, Becker D, **Tominaga K**, Zhou X, Zhao J, Shala N, Colbourne JK, Hessen DO (2014) Partitioning of transgenerational effects (maternal versus epigenetic) in a clonal model organism for biomedical research. Oslo, Norway. Oslo Epigenetics Symposium. Oral presentation. Not presenting author.
- [13] Wojewodzic MW, Becker D, **Tominaga K**, Zhou X, Zhao J, Shala N, Colbourne JK, Hessen DO (2014) Transgenerational effects of diet quality in *Daphnia* assessed by ecophysiological and transcriptomic analysis. Birmingham, UK. EMBO Conference: The mighty *Daphnia*: Past, Present, and Future. Poster presentation. Not presenting author.
- [14] 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 presenting author.

- [15] 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.
- [16] **Tominaga K** (2013) How to make friends with environmental models: three points of view. Oslo, Norway. Final EUTROPIA Conference. Oral presentation. Presenting author.
- [17] 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 presenting author.
- [18] Kaste Ø, Couture RM, Starrfelt J, **Tominaga K** (2013) The REFRESH project: Modelling possible futures in the hobøl river with the INCA-P model. Oslo, Norway. Final EUTROPIA Conference. Oral presentation. Not presenting author.
- [19] 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 presenting author.
- [20] **Tominaga K** (2012) Simulating limnological responses to various runoff scenarios using MyLake. Oslo, Norway. EUTROPIA Mid-term Conference. Oral presentation. Presenting author.
- [21] **Tominaga K** (2012) MyLake on Storefjorden and Vestre Vansjø. Frederikstad, Norway. EUTROPIA-REFRESH Modelling Workshop. Oral presentation. Presenting author.
- [22] **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. Presenting author.
- [23] **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. Presenting author.
- [24] **Tominaga K** (2010) Ensemble model framework for lake ecosystem modelling - case study from acidification modelling. Silkeborg, Denmark. Lake Ecosystem Modelling Workshop. Oral presentation. Presenting author.
- [25] **Tominaga K** (2009) Modelling eutrophication in Lake Vansjø. Oslo, Norway. MILJØ2015 PhD Seminar. Oral presentation. Presenting author.
- [26] **Tominaga K** (2009) Modelling eutrophication in Lake Vansjø. Sør Nesset, Norway. Bi-annual Symposium on Environmental and Analytical Chemistry. Oral presentation. Presenting author.
- [27] **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. Presenting author.
- [28] **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. Presenting author.
- [29] **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. Presenting author.

- [30] **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. Presenting author.
- [31] **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. Presenting author.

I have also participated in several other international and domestic conferences and meetings, including:

- University of Birmingham (November 2014)
- International Centre for Theoretical Physics, Trieste, Italy (October–November 2014)
- SYKE, Helsinki, Finland (May 2012)
- EU WFD meeting, Sitges, Spain (March 2012)
- Tianjin Academy of Environmental Sciences, Tianjin, China (September 2011)
- RCEES, Chinese Academy of Sciences, Beijing, China (September 2011)
- Instituto Superior Técnico, Lisbon, Portugal (April 2011)
- Technische Universität München, Freising, Germany (March 2009)
- Trent University, Peterborough, Ontario, Canada (November and December 2007, February, April and October 2008 and November 2009)
- RIVM, Bilthoven, The Netherlands (May 2008)
- Lund University, Lund, Sweden (May 2008)
- Syracuse University, Syracuse, New York, USA (November 2007)
- Hubbard Brook Experimental Forest, Lincoln, New Hampshire, USA (July 2007)
- University of New Hampshire, Durham, New Hampshire, USA (October 2006)
- Ontario Ministry of the Environment, Toronto, Ontario, Canada (October 2006)

## 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,  $\LaTeX$ , Git, NetCDF, HDF5, GIS (GRASS, QGIS), Matlab/Octave, XML, HTML, SQL, Fortran, C, MPI, OpenMP, C++, HTTP.

## Miscellaneous

### Natural Languages

English	fluent
Japanese	native
Norwegian	elementary
Chinese	elementary

### Travels

As resident	Japan, Canada, Germany, Norway, Malaysia, Singapore
Assignment	United States, Ireland, Sweden, Netherlands, Finland, Denmark, Portugal, Spain, China (Mainland), Italy, United Kingdom
As tourist	Thailand, Laos, Myanmar, Czech Republic, Austria, France, Belgium, Indonesia, Qatar, China (Hong Kong and Macau), Australia, India, Taiwan (ROC)