Programme

Hall C2, Carelia building, University of Eastern Finland, Joensuu Campus, Yliopistokatu 4, Joensuu

**SUNDAY, AUGUST 23**

19:00 – 21:00 Get-together party, Joensuu Arts Museum (Kirkkokatu 23)

**MONDAY, AUGUST 24**

8:00 – 9:30 Registration

9:30 – 9:40 Vice-Dean of the Faculty of Science and Forestry, Prof. Elina Oksanen: Symposium opening

*Session: Climate change induced physical and biological responses in large lakes*

*Chair: Orlane Anneville*

9:40 – 10:30 **Keynote Dr. Dietmar Straile: The response of large and deep lakes to climate change**

10:30 – 11:00 Coffee break

11:00 – 11:20 **Jonna Kuha**: Abiotic and biotic response of boreal lakes to episodic weather events

11:20 – 11:40 **Fabien Cremona**: Modelling phytoplankton and periphyton primary production in hemiboreal lakes

11:40 – 12:00 **John Lenters**: Long-term trends in global lake surface temperature: A century of measurements from in situ and remotely sensed data

12:00 – 13:00 Lunch

*Chair: Lauri Arvola*

13:00 – 13:20 **Petri Kiuru**: A process-based model for simulation of lake oxygen and dissolved inorganic carbon

13:20 – 13:40 **Külli Kangur**: Changes in water temperature and chemistry preceding the massive kill of bottom-dwelling fish: an analysis of high–frequency buoy data of shallow Lake Võrtsjärv (Estonia)
13:40 – 14:00  **Sten-Åke Wängberg**: Lake Vänern - physical and biological features and effects from climate change

14:00 – 14:20  **Arkady Terzhevik**: Russian-Swiss cooperative study of under-ice convection in Lake Onego: Preliminary results

14:20 – 14:40  **Yang Yang**: The effects of physical factors on spring phytoplankton in a temperate lake (Lake Erken, Sweden)

14:40 – 15:10  Coffee break

15:10 – 15:30  **Nikolai Filatov**: Lakes of Russia: Diagenesis and prediction of state of ecosystem under climate change and anthropogenic impacts

**Session: Long-term changes in nutrient and organic matter loading and trophic status of large lakes**

**Chair: Arkady Terzhevik**

15:30 – 15:50  **Orlane Anneville**: Fish communities in the Anthropocene: detecting drivers of changes in two peri-alpine lakes (L. Geneva and L. Annecy)

15:50 – 16:10  **Marko Järvinen**: Brownification of large lakes in Finland - implications to ecological status

16:10 – 16:30  **Karl-Otto Rothhaupt**: Impacts of oligotrophication on seasonality and depth distribution of chlorophyll in a deep large lake – Lake Constance

16:30 – 16:50  **Natalia Belkina**: The chemical composition of sediments as indicator of changes in the ecosystem of Lake Onega under the influence of anthropogenic factors

**TUESDAY, AUGUST 25**

**Session: Ecosystem services of large lakes – more than fishing and recreation**

**Chair: Anne-Mari Ventelä**

8:30 – 9:20  **Keynote Dr. Laurence Carvalho**: Putting Ecology into Ecosystem Services: the Challenges ahead for Lakes Research

9:20 – 9:40  **Peeter Nõges**: Carbon sequestration by an alkaline lake

9:40 – 10:00  **Sami Taipale**: High nutritional quality phytoplankton fuels food webs of large boreal lakes

10:00 – 10:20  **Sirje Vilbaste**: Ecosystem services (ES) of Võrtsjärv (VJ) under multiple stress

10:20 – 10:50  Coffee break
Session: Long-term changes in nutrient and organic matter loading and trophic status of large lakes

Chair: Tiina Nõges

10:50 – 11:10  Kari-Matti Vuori: Lake ecosystem changes in Finland as reflected by human experience and limnological evidence

11:10 – 11:30  Lauri Arvola: CDOM of large Finnish lakes relative to their landscape position

11:30 – 11:50  Teija Kirkkala: Challenges of nutrient load reduction in the catchment of Lake Pyhäjärvi (SW Finland) in fluctuating climate

11:50 – 12:10  Kristjan Piirimäe: Climate scenarios to phosphorus load to a large boreal lowland lake - case study in Lake Peipsi drainage basin

12:10 – 13:10  Lunch

Session: Biotic interactions and biodiversity in large lakes

Chair: Nico Salmaso

13:10 – 14:00  Keynote Dr. Priit Zingel: Microbial loop in large lakes

14:00 – 14:20  Jouko Sarvala: Planktivorous fish regulate crustacean zooplankton dynamics in a large, shallow lake

14:20 - 14:40  Elizabeth Yohannes: Isotopic puzzle of Lake Constance: Is particulate organic material genuine indicator of food web base?

14:40 – 15:10  Coffee break

Chair: Elizabeth Yohannes

15:10 – 15:30  Katrit Karus: Effects of macrophytes, fish and metazooplankton on a microbial food web

15:30 – 15:50  Kimmo Tolonen: Decomposing variation in the species composition of specialists and generalists between local environmental variables and spatial processes in a large lake system

15:50 – 16:10  Alexander Rusanov: Beta diversity patterns of phytoplankton, periphytic diatom and macrophyte communities in a large lake (Lake Ladoga, Northwestern Russia)

16:10 – 16:30  Helen Agasild: Small cladoceran Chydorus sphaericus forms an important link in food web of eutrophic lake

16:30 – 16:50  Anastasiya Sidorova: Distribution and population characteristics of Baikalian invader Gmelinoides fasciatus (Crustacea: Amphipoda) in lake Onego

16:50 – 18:00  Poster session
Session: Occurrence and impacts of toxic cyanobacteria on the food webs of large lakes

Chair: Lauri Arvola

8:30 – 9:20  Keynote Prof. Hans. W. Paerl: Controlling a global proliferation of toxic cyanobacterial blooms in large lakes: The case for dual nutrient (N & P) input reduction strategies

9:20 – 9:40  Camilla Capelli: Dolichospermum lemmermannii (Cyanobacteria) in European waters: distribution patterns and toxic potential

9:40 – 10:00  Nico Salmaso: Unravelling anatoxin-a in the large lakes south of the Alps: Occurrence and toxic potential of Tychonema (Cyanobacteria)

10:00 – 10:20  Ekaterina Voyakina: Cyanobacterial blooms in Lake Ladoga around Valaam islands

10:20 – 10:50  Coffee break

10:50 – 11:10  Valerii Tonkopii: Danger of anatoxin-a(s) and organophosphorus pesticides for aquatic ecosystem health

Session: Sustainability of ecosystem services and good ecological status in large lakes - challenges for management

Chair: Dietmar Straile

11:10 – 11:30  Juha Niemistö: Hypolimnetic aeration intensifies phosphorus recycling and increases organic material sedimentation in a stratifying lake: Effects through increased temperature and turbulence

11:30 – 11:50  Jukka Ruuhijärvi: Responses of fish and zooplankton to the pumping of epilimnetic water into hypolimnion in Lake Vesijärvi

11:50 – 12:10  Noora Mustamäki: Structural changes in three coastal fish assemblages in the northern Baltic Sea archipelago

12:10 – 12:30  Behnam Zamani: Simulation of the movement of a turbid density current during a flood event in a large reservoir with complex morphology (Maroon reservoir, southwest Iran)

12:30 – 13:30  Lunch

14:00 – 17.00  Mid-Excursion (Lake Pyhäselkä onboard M/S Vinkeri II), Passanger harbor, Rantakatu 2
**THURSDAY, AUGUST 27**

*Session: New tools for monitoring and assessment of ecological status in large lakes*

**Chair: Kari-Matti Vuori**

8:30 – 9:20  **Keynote Dr. Seppo Hellstén: Recent trends and future perspectives in ecological status monitoring of Finnish lakes**

9:20 – 9:40  **Daud Hassan:** International Legal Regimes for Fisheries Management: An Evaluation

9:40 – 10:00  **Alfred Sandström:** Assessing the potential of remote sensing derived variables to explain spatial variation in fish distribution and assemblage composition in large lakes

10:00 – 10:20  **Lea Tuvikene:** Using a single metric for a water quality element may cause unfair judgement of the ecological status of a lake

10:20 – 10:50  Coffee break

**Chair: Helen Agasild**

10:50 – 11:10  **Dina Dudakova:** A new method of combined aerial videofilming (using unmanned aerial vehicle - UAV) and underwater research in the studies of biogeocenosis of littoral zone of Lake Ladoga

11:10 – 11:30  **Tapio Sutela:** A littoral fish index responds to eutrophication in boreal lakes

11:30 – 11:50  **Árpád Ferincz:** Risk assessment of non-native fishes in the catchment of a Central-European large, shallow lake (Lake Balaton Hungary) using the FISK system

11:50 – 12:10  **Nataliya Kalinkina:** Lake Onego biomonitoring: estimates of spatial-temporal heterogeneity and scales of biological processes

12:10 – 13:10  Lunch

*Session: Fish and fisheries management in large lakes*

**Chair: Jouko Sarvala**

13:10 – 14:00  **Keynote Dr. Anne-Mari Ventelä:** Fisheries and climate change

14:00 – 14:20  **Tiina Nõges:** Cascading fisheries impact on the ecosystem of a large and shallow eutrophic lake

14:20 – 14:40  **Roland Rösch:** Drastic changes in the fish community of Lake Constance Upper lake with re-oligotrophication

14:40 – 15:10  Coffee break

15:10 – 15:30  **Anssi Vainikka:** Size limit-based management of pikeperch (*Sander lucioperca*) in Finnish lakes with respect to life-history variation

15:30 – 15:50  **Ain Järvalt:** Fishery regulation has effect on the ecological status of lakes
15:50 – 16:10  **Jimmiel Mandima**: Potential application of *Limnothrissa miodon* (Boulenger, 1906) daily ration and population food consumption estimates to predict the potential standing biomass in Lake Kariba, Zambia/Zimbabwe

16:10 – 17:30  Poster session

19:00 – 22:00  Conference dinner at Teatteriravintola, Rantakatu 20

**FRIDAY, AUGUST 28**

*Session: Fish and fisheries management in large lakes*  
*Chair: Martti Rask*

9:00 – 9:20  **Aurora Hatanpää**: Radio telemetry surveillance of landlocked salmon (*Salmo salar* m. sebago) in the River Ala-Koitajoki

9:20 – 9:40  **Thomas E. Axenrot**: Consequences of variable seasonal habitat volume for vendace population size and stock assessment

9:40 – 10:00  **Timo J. Marjomäki**: Potential for the ecologically sustainable yield (ESY) of vendace from Finnish large lakes

10:00 – 10:20  **Ádám Staszny**: Scale shape based identification of fish species inhabiting the largest shallow lake of Central Europe

10:20 – 10:50  Coffee break

10:50 – 11:10  **Hiroshi Suito**: Heterogeneous wind field and lake circulation – atmospheric and aquatic modelling results

11:10 – 11:30  **Kai Ginter**: Linkages between fish-zooplankton interactions and changed fish assemblage in large shallow Lake Peipsi (Estonia/Russia)

*Session: Emerging contaminants*  
*Chair: Paula Kankaala*

11:30 – 11:50  **Timo Huttula**: Modelling the transport and fate of contaminants in the aquatic environment

11:50 – 12:10  **Jarkko Akkanen**: Anthropogenic particles as emerging contaminants in freshwater environments are a challenge for aquatic ecotoxicology and risk assessment

12:10 – 12:30  **Closing the symposium**

12:30 - 13:30  Lunch