

TFC Fusion Research Seminar #13

Date : November 2, 2018, 16:30-17:30 at TOKYO ELECTRON House of Creativity

Speaker : Timo Huttula (Finnish Environment Institute (SYKE))

1. Lecture title : Mathematical models in the assessment and management of Finnish water resources

2. Abstract :

Finland is rich in surface water resources. The lakes and rivers are very sensitive for external disturbances for example nutrient loading. The nation has been very successful in protecting the water resources during the last fifty years. This is resulting from various actions like increasing environmental awareness, boosting active water research, developing legislation and official rules and structures. Especially the modern and fairly strict environmental permitting procedures have lead to the minimizing the release of nutrients or other harmful effluents from industry or settlements. Assessment methods including mathematical models have been developed and widely used both in permitting and in everyday management of the water resources. The models cover a wide range from simple steady state solutions to online watershed systems and advective dispersive transport models. Typical state variables include concentrations of oxygen, nutrients, suspended sediments, trace metals, organic compounds, pharmaceutical ingredients and biological variables like chlorophyll and biomasses of various algal species. In near future also the transport of sound and nanoparticles will be simulated.

3. Lecture language : English