



El Departamento de Informática de la Universidad Técnica Federico Santa María tiene el agrado de invitar a la comunidad universitaria a una charla a realizarse el día **Viernes 06 de Noviembre a las 14:30 Hrs.** en el Laboratorio de Programación Avanzada (LPA) del Departamento de Informática, Campus San Joaquín. La charla se transmitirá por videoconferencia a la Sala de Reuniones del DI en Casa Central.

## Título

Big Data and Big Water: Machine Learning from Ocean Vessel Trajectory Data

## Invitado



**Prof. Stan Matwin**

Dalhousie University, Halifax, Canada

### Mini Bio

Stan Matwin is a Professor and Canada Research Chair in the Faculty of Computer Science at Dalhousie University, where he directs the Institute for Big Data Analytics. He is also a Professor at the Institute of Computer Science, Polish Academy of Sciences. His research interests are in text analytics, data mining, as well as in data privacy. Author and co-author of more than 250 research papers and articles, Stan is a former President of the Canadian Artificial Intelligence Society, a member of the Scientific Council of the Polish Artificial Intelligence Society, and a member of Association Francaise pour l'Intelligence Artificielle.

## Resumen

In this presentation we will focus on the ongoing work in exploration and analysis of data from ocean vessel movements, using the Automatic Identification System (AIS) data. We will discuss some of the challenges and benefits related to the large-scale management, exploration and analysis of AIS data using Machine Learning techniques and advanced data management tools. We will look at detection of anomalous trajectories of ships in mid-ocean and in port vicinity, and at the ecologically-oriented detection and analysis of data related to fishing activities. We will discuss our early results in these select applications, including data representation and data modeling techniques, particularly the clustering techniques, classification, and attribute engineering used in our work. We will round up with discussion of potential future work with AIS data.

## Lugar y Fecha

**Viernes 06 de Noviembre de 2015, 14:30 Hrs.**

LPA, Departamento de Informática UTFSM San Joaquín

*Sala de Reuniones (Videoconferencia), DI UTFSM Casa Central*

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