

Tutorials at ISPRS Geospatial Week 2019



ISPRS GEOSPATIAL Faculty ITC, Hengelosestraat 99, Enschede. They are ranging from traditional geospatial web service technologies to modern deep learning methods.

> The first half-day tutorial, **Deep learning for geospatial data analysis**, will be presented by Dr Nico Lang from ETH Zurich, Switzerland. This tutorial will explain the theory of deep learning focusing on convolutional neural networks (CNNs) in the context of image interpretation. It will present an overview of recent research and teach a hands-on

programming class for deep learning beginners. Emphasis is on deep learning techniques applied to geospatial data like aerial and satellite images and tasks like semantic segmentation and object detection.

The second half-day tutorial, **Deep learning methods for 3D point cloud semantic segmentation**, will be presented by Dr Loic Landrieu from IGN, France. This tutorial will present an overview of the recent developments in neural network architecture for the semantic segmentation of 3D point clouds. Emphasis is on deep networks which learn local spatial encodings of 3D point clouds through convolution-like operators, such as PointNet and SuperPoint Graph.

The third full-day tutorial, **Geospatial Web Service Technologies: Online Sharing of Geospatial Data, Algorithms and Models**, will be presented by Dr Zhipeng Gui from Wuhan University, China. This tutorial will provide an introduction to the basic theories, cutting-edge technologies, relevant standards and basic development skills of geospatial web services. The goal is to reinforce capacity building to promote the sharing and interoperability of various geographic information resources through the web, including data, online algorithms, geoprocessing models, teaching materials and so on, within ISPRS and beyond. Techniques including web service technologies, database technologies and cloud computing will be introduced.

The fourth half-day tutorial, **Programming photogrammetry with Pix4Dengine**, will be presented by Pix4D staff. In this tutorial, participants will learn how to automate the photogrammetry workflows with <u>Pix4Dengine</u>. Real-life applications will be created using Python and Pix4Dengine. The photogrammetry workflow will be demonstrated with Pix4Dengine.

For further information on the details of the above four tutorials, please see https://www.gsw2019.org/tutorial/.

https://www.gim-international.com/content/news/tutorials-at-isprs-geospatial-week-2019