GIS-IDEAS 2021 Training Workshop Program for 4th September 2021

As a part of GIS-IDEAS 2021, the following training workshops are scheduled to be conducted online. Upon successful completion of the Workshop, the participants will receive certificates awarded by conference organizers. All the workshops will be in lecture styles with the trainers providing explanation and demos. The participants will be provided with hands on material software and sample datasets for self-paced learning after attending the workshops.

Venue: Online Channel will be informed to registrants

Participants wishing to attend the training should register in advance by sending by e-mail to the GISIDEAS Secretariat at gidea-office@gisws.media.osaka-cu.ac.jp. Please indicate "Registration for GIS-IDEAS 2021 Training Workshop" in the subject of your e-mail and include following details:

- Name and Affiliation (Name of Institution/Company and Position)
- Name of Training workshop you wish to register

Training will be on first-come-first-serve basis and registration will close on 15 August 2021 (23:59 UTC).

WS1: *Introduction to PostGIS for Spatial Analysis and Management*

Date: 4 September 2021 Time: 9:00 - 12:30 (Thai time)

Content: This workshop aims to provide an introduction to spatial database analysis and management using opensource tool, PostGIS, for GIS users and professionals who look to broaden their skillset in spatial data management for multi-user enterprise. After the workshop, participants should be able to import and manage spatial data under relational database environment, as well as, understand concepts and perform simple geoprocessing tasks on both vector and raster data using PostGIS and SQL commands.

Participants will learn,

- What is spatial database and why it is important.

- How to install PostGIS and import spatial data into database.

- How to use SQL and PostGIS to process, manage, and analyze spatial data.

- How to work with both vector and raster data in PostGIS.

- How to validate data and manage user access.

- How to access and work with your data from QGIS

a) Pre-requisite for attending the workshop (Pre-installed software, OS etc.)

   - Pre-installed QGIS 3.x (www.qgis.org)

   - Pre-downloaded PostgreSQL 13.x

   (https://www.enterprisedb.com/downloads/postgres-postgresql-downloads)

   - Pre-downloaded dataset from

https://drive.google.com/drive/folders/1-y8RBO-X0sIWbL-t8NCPcVhFOoyXhz7U?usp=sharing

b) Skill set required from participants (programming skills etc.): None

c) Level: Basic/Beginner

d) Materials that will be provided to participants:

- Download *Mueangkao.zip* dataset to be used in this workshop from the following url:

https://drive.google.com/drive/folders/1-y8RBO-X0sIWbL-t8NCPcVhFOoyXhz7U?usp=sharing

Lecturer: Sarun Apichontrakul, Khon Kaen University, Thailand

Participants: Maximum 20

Language: English (Thai if all participants are Thais)

WS2: *OGC API – Features*

Date: 4 September 2021 Time: 9:00 - 12:30 (Thai time)

Contents: The OGC API is modern geospatial data access standard. There are more than 10 series of OGC API release since 2020. The first released standard is OGC API – Features Part 1:Core or ISO ISO 19168-1:2020 Geographic information — Geospatial API for features — Part 1: Core. This workshop can enlighten geo-spatial standard and open api standard including bring you play around the OSGeo Thailand services which provided more understanding OGC API – Features.

a) Pre-requisite for attending the workshop (Pre-installed software, OS etc.)

   OS: Any

   Software: Web Browser, Postman (https://www.postman.com/)

b) Skill set required from participants (programming skills etc.): None

   Programming skills required: None

c) Level (eg. Basic/Intermediate/Advanced): Basic/Beginner

d) Materials that will be provided to participants: Online access to presentation materials will

    be provided

Lectures: Sattawat Arab and Pongsakorn Udombua, i-bitz Company Limited, Thailand

Participants: Maximum 15

Language: Thai/English

WS3: *Building Standards Compliant Geospatial Web Applications – The Quick & Easy MapMint Way*

Date: 4 September 2021 Time: 9:00 - 12:30

Content: This workshop will introduce the MapMint framework that provides a quick and easy way to build and manage geospatial web applications using Open Source, Open Standards, and Open Data. The MapMint is a development framework based on ZOO-Project, MapServer, GDAL OGR on the server-side and jQuery, Bootstrap, and OpenLayers on the client-side. The MapMint framework is developed on the principle that everything is a service, from data-oriented services such as WMS, WFS, WFS-T, WCS, and WMTS, to task-oriented services: WPS based on existing geospatial libraries such as GDAL OGR, pgRouting, R, OTB, SAGA-GIS etc.

a) Pre-requisite for attending the workshop: Pre-installed software required: Docker Desktop

(https://www.docker.com/products/docker-desktop)

b) Skill set required from participants (programming skills etc.): None

c) Level (eg. Basic/Intermediate/Advanced): Basic/Beginner

d) Materials that will be provided to participants: Material will be provided online

Lecturers: Rajat Shinde, Gérald Fenoy and Venkatesh Raghavan ZOO-Project Team

Participants: Maximum limit not specified

Language: English

WS4: *MS4W: Configure and Deploy OGC Services on the fastest server, on Windows*

Date: 4 September 2021 Time: 9:00 - 12:30 (Thai Time)

MapServer for Windows (MS4W) is a longtime popular installer that makes it easy to serve spatial data through various mapping standards (WMS/WFS/WPS/CSW, etc). Attendees of this workshop will be able to install and configure their mapping service through MS4W, and learn various tips for deploying their spatial data services through MapServer. The instructor has been deploying MapServer services for over 21 years, and is a member of the MapServer Project Steering Committee (PSC).

Level: beginner

Requirements: Windows instance with Administrator rights (or can follow along on other systems)

Goals: Learn that MapServer is easy, and fun!!!

Materials that will be provided to participants: Online access to presentation materials will be provided. Software (MS4W) will be downloaded and installed together during the workshop. Notepad++ (https://notepad-plus-plus.org/downloads/) already installed is recommended.

Lecturer: Jeff McKenna, GatewayGeo, Canada

Participants: Limit not specified

Language: English

WS5: *Digital Cartography with Maputnik*

Date: 4 September 2021 Time: 9:00 - 12:30

Content: Maputnik and JSON styling become powerful tools for spatial data visualization. Breakthrough the traditional styling limitation on web application with JSON Style and Vector Tiled Dataset. This workshop brings you to customize OpenStreetMap (OSM) data set from OSGeo Thailand services and your data set on web-based application calls Maputnik. Moreover, how to blend it together to your web application.

a) **Pre-requisite for attending the workshop (Pre-installed software, OS etc.)**
   OS: Any
   Software: Web Browser, Maputnik (https://maputnik.github.io/)
b) **Skill set required from participants (programming skills etc.):** None
c) **Level (eg. Basic/Intermediate/Advanced):** Basic/Beginner
d) **Materials that will be provided to participants:** Online access to presentation materials will be provided

Lectures: Natpakal Maneerat, i-bitz Company Limited, Thailand

Participants: 10

Language: Thai

WS6: *WebODM - Drone Image Data processing and Analysis tools*

Date: 4 September 2021 Time: 14:00 - 17:30

Content: Looking for a low cost drone mapping and modeling software package? There is actually an Open source program called WebODM is available for use! WebODM (https://www.opendronemap.org/webodm/) is free, user-friendly, extendable application for drone image processing. It also has API which users can use to extend the functionality or integrate with software like QGIS, Meshlab, AutoCAD etc. It generates georeferenced maps, point clouds and textured 3D models from aerial images. In this workshop. You will learn how to create point clouds, DSM and orthophotos with WebODM.

a) Pre-requisite for attending the workshop: Virtualbox and Live WebODM ISO (link will be provided)

b) Skill set required from participants (programming skills etc.): None

c) Level: Intermediate

d) Materials that will be provided to participants: Handout and Presentation

Lecturers: Sarawut Ninsawat, Asian Institute of Technology (AIT), Thailand

Participants: Maximum 20

Language: English/Thai

WS7: *Build mobile apps for field data collection with no coding*

Date: 4 September 2021 Time: 14:00 - 17:30

Content: This workshop provides fundamental concepts for design and create mobile application for field data collection with no coding and no prior mobile apps development experience required, this workshop demonstrates designing, building, testing, and publishing of mobile application on iOS and Android app stores. We also accumulated tools, some of tips and tricks to get started with mobile apps development and how to customize them. participants can create your own mobile application for the field data collection without any programming.

- **Pre-requisite for attending the workshop:**
  a) Mobile devices such as smartphone or tablet
  b) Laptop or Notebook computer
  c) Be able to access the Internet
  d) Google sheets or Excel on Office365
- **Skill set required from participants:** Programming skills none.
- **Level:** Basic
- **Materials that will be provided to participants:** Handout and Presentation

Lecturers: Sawarin Lerk-u-suke, University of Phayao, Thailand

Participants: Maximum 20

Language: English/Thai

WS8: *Introduction to ZOO-Project*

Date: 4 September 2021 Time: 14:00 - 17:30

Content: The ZOO-Project is an open source software which provides a WPS (Web Processing Service) compliant and developer-friendly framework to easily create and chain OGC Webservices. The ZOO-Project is made of four parts. ZOO-Kernel is a powerful server-side C Kernel which makes possible to manage and chain Web services coded in different programming languages. ZOO-Services is a growing suite of example Web services based on various Open Source libraries. ZOO-API is a server-side JavaScript API able to call and chain the ZOO Services, which makes the development and chaining processes easier, and ZOO-Client is a JavaScript library to interact with WPS servers from your web applications.

The OGC API - Processes will also be highlighted during the workshop including its benefits and potential part that would benefit to be enhanced.

a) Pre-requisite for attending the workshop: Pre-installed software required: Docker Desktop

(https://www.docker.com/products/docker-desktop)

b) Skill set required from participants (programming skills etc.): None

c) Level (eg. Basic/Intermediate/Advanced): Basic/Beginner

d) Materials that will be provided to participants: Material will be provided online

Lecturers: Gérald Fenoy , Rajat Shinde ZOO-Project Team

Participants: Maximum limit not specified

Language: English

WS9: *MapMint4ME data collection*

Date: 4 September 2021 Time: 14:00 - 17:30

Content: MapMint4ME means MapMint 4 (for) Measure and Evaluation, It is an Android application which allows you to edit geolocated data in online or offline mode. During this workshop, the MapMint Table module will be introduced, new tables will be created and configured to be edited in the field. After a short session outside for recording data, the data will be then uploaded back to the MapMint server. Using the collected data, the way to generate reports and maps will be presented.

a) Pre-requisite for attending the workshop: Android cellphone / tablet recommended for real

testing, software required on the computer: Google Chrome Browser

b) Skill set required from participants (programming skills etc.): None

c) Level (eg. Basic/Intermediate/Advanced): Basic/Beginner

d) Materials that will be provided to participants: Material will be provided online

Lecturers: Gérald Fenoy , Rajat Shinde ZOO-Project Team

Participants: Maximum limit not specified

Language: English

WS10: *Vallaris Mapping Platform: Desktop to Cloud*

Date: 4 September 2021 Time: 14:00 - 17:30

Content: Vallaris Mapping Platform (https://vallaris.space/) is modern mapping platform that allows you to stored, process and services either vector and raster data set. Workshop will brings you travel into Vallaris ecosystem since desktop to server, and make you feel free and faster

provide data services for web and mobile application. Vallairs has loosely components that allows developer or GIS Analyst pick-up components meets the requirement.

a) Pre-requisite for attending the workshop (Pre-installed software, OS etc.)

   OS: Any

   Software: Web Browser, Postman (https://www.postman.com/)

b) Skill set required from participants (programming skills etc.): None

c) Level (eg. Basic/Intermediate/Advanced): Basic/Beginner

d) Materials that will be provided to participants: Online access to presentation materials will be provided

Lecturers: Anon Bianglae, i-bitz Company Limited

Participants: Maximum 10

Language: Thai