

## Non-Seismic Data Acquisition, Processing and Interpretation

### Day 1 Monday Gravity

- 08:30-09:00 Introduction to the course: Biography, Course Schedule, Teams  
09:00-09:30 Lectures: Geophysical Methods, Gravity  
09:30-10:00 Exercises: Contour map  
10:00-10:15 Refreshments  
10:15-11:15 Lectures: Gravity Surveying  
11:15-13:00 Exercises: Depth Sphere, Depth Anticline, Depth Estimation, Swing  
13:00-14:00 Lunch  
14:00-14:30 Videos: Gravity, Gravity Train, Taipei Tower, The North  
14:30-15:00 Exercises: Resolution, Gravity Sphere  
15:00-15:15 Videos: Magnetism  
15:15-16:00 Exercises: Grav2dc 4D  
16:00-16:15 Refreshments  
16:15-17:00 Exercises: Grav2dc Inv  
17:00-17:15 Quiz1  
Team a Preparation Summary day 1

### Day 2 Tuesday Magnetism

- 08:30-09:00 Team a: Summary of day 1  
09:00-09:30 Videos: Magnetism, Grav-Mag  
09:30-10:00 Lectures: Magnetism, Grav\_Mag signatures  
10:00-10:15 Refreshments  
10:15-11:00 Exercises: Local Mag, Mag Latitudes, Magnetism  
11:00-11:30 Lectures: Seismic-Magnetism-Gravity-Gradiometry  
11:30-13:00 Exercises: Mag2dc Inclination, Mag2dc Inv, Resolution Basement  
13:00-14:00 Lunch  
14:00-14:15 Videos: Magnetic Dangers, Tokyo Skytree  
14:15-15:00 Exercises: Geomodel Inv, Grav-Mag  
15:00-15:30 Lectures: Electrical surveying I  
15:00-16:00 Exercises: Resistivity profiles  
16:00-16:15 Refreshments  
16:15-16:30 Lectures: Electrical surveying I  
16:30-17:00 Exercises: Effective Resistance  
17:00-17:15 Quiz 2  
Team b: Preparation Summary day 2.

### Day 3 Wednesday E & EM

- 08:30-09:00 Team b: Summary of day 2  
09:00-09:30 Lectures: Electrical surveying  
09:30-10:00 Exercises: Elec Survey  
10:00-10:30 Lectures: EM Land surveying  
10:30-11:00 Exercise: E-Refract  
11:00-11:15 Videos: Resistivity Profiles, Effective Resistance E-Refract  
11:15-12:30 Exercises: EM Refract

12:30-13:00 Lectures: Induced Polarization, EM Marine  
13:00-14:00 *Lunch*  
14:00-14:30 Videos: EM, CSEM, EAGE Magnetism  
14:30-15:00 Exercises: EM, TEM  
15:00-15:15 *Refreshments*  
15:15-16:00 Lecture EM Marine, Scripps Modelling  
16:00-16:30 Exercises: MT  
16:30-17:00 Quiz 3  
Team c: Preparation Summary day 3

#### Day 4 Thursday EM & CSEM

08:30-09:00 Team c: Summary of day 3  
09:00-10:00 Exercises: To Use or not to Use, skin-depth & velocity  
10:00-10:15 *Refreshments*  
09:00-10:00 Exercises: CSEM  
10:00-10:30 Lectures: EM Terminology  
10:30-11:30 Exercises: Scripps Modelling I  
11:30-12:00 Lectures: Inversion  
12:00-12:30 Exercises: TDEM  
12:30-13:00 Videos: EMGS (Vessel, Intro, Workflow)  
13:00-14:00 *Lunch*  
14:00-14:30 Videos: Bayes Rule  
14:30-15:00 Lectures: Airborne EM, Time lapse  
15:00-15:15 *Refreshments*  
15:15-16:00 Exercises: Scripps Modelling II  
16:00-16:30 Lectures: Joint Inversion: EM & FWI  
16:30-17:00 Quiz 4  
Team d: Preparation Summary day 4

#### Day 5 Friday VOI & ML

08:30-09:00 Team d: Summary of day 4  
09:00-10:00 Lectures: Machine learning, SOM  
10:00-10:15 *Refreshments*  
10:15-10:45 Exercises: VOI A  
10:45-11:15 Lectures: Lithology  
11:15-12:00 Exercises: VOI B,C,D  
12:00-12:15 Lectures: Weka  
12:15-13:00 Videos: PGK ML  
13:00-14:00 *Lunch*  
14:00-15:00 Exercises: ML Rocks  
15:00-15:30 Quiz 5  
15:30-16:00 Course Evaluation

Add ML Google Colab