

International Doctorate in Civil and Environmental Engineering

DOCTORAL COURSE

Google Earth Engine (GEE) for analysis and synthesis of geographical data

Teacher: Dott. **Francesco Mugnai**

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Calendar	
24/07/2020, 09,30-12,30 – on line course	Earth Engine API, JavaScript Code Editor, computing statistics on imagery,
27/07/2020, 09,30-12,30 – on line course	Multi temporal analysis. Creating charts, exporting results, parameter optimization. Class Room Exercise: Spectral angle differencing, spectral distance thresholds.
Total	6 hours – 1,5 credits

Program
<p>This course is geared toward scientists who would like to analyze satellite and vector data. The Earth Engine API (application programming interface) provides the ability to create ad-hoc algorithms to process raster and vector imagery. At the end of the course students will be able to use the Earth Engine Javascript code editor, Computing statistics on imagery, creating charts, exporting the results of analyses.</p> <p>Furthermore, understanding the steps for creating, using and validating a classification in Earth Engine and the basic limitations of the classifier system (table size, tileScale, etc), learning how to do parameter optimization, inter-annual compositing and investigate the effects of multi-temporal feature vectors and multi-sensor fusion on classifier accuracy.</p> <p>The course includes classroom exercises. Students are recommended to bring their own laptops.</p>