

31. August – 4. September



# Split Summer School 2020

## PRESENTATION AND OBJECTIVES

University of Split, Faculty of Civil Engineering, Architecture and Geodesy organizes a summer school for nine different courses in the area of civil engineering, architecture and geodesy. Each program provides an opportunity for students to learn online from our highly motivated professionals and expand their knowledge by gaining valuable hands on experience in offered school topics.

The goal of STSS is to enable students from different countries and educational backgrounds an experience of multicultural and interdisciplinary studying with focus on one of the nine subjects, while actively networking with each other and lecturers.

Students who successfully complete any of these courses will be awarded 2 ECTS\* credits. An assessment is based on classwork and final presentation.

The program is accredited by The Quality Enhancement Centre of University of Split.

\* European Credit Transfer System



## ORGANIZATION COMMITTEE

Assoc. Prof. Nikša Jajac, Ph.D., Dean of the Faculty  
Assoc. Prof. Neno Torić, Ph. D., Vice - Dean for International Cooperation  
Assist. Prof. Ivana Uzelac Glavinić, Ph. D.

## REGISTRATION ON

[www.split-summerschool.com](http://www.split-summerschool.com)

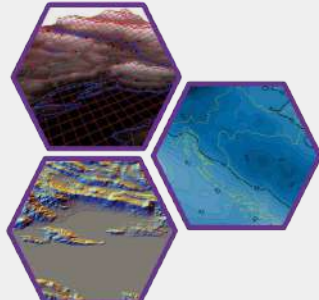
## Programs



### STRUCTURAL FIRE ENGINEERING ANALYSIS

Introduction of key steps in a fire engineering analysis: fire modeling, heat transfer modeling, structural fire analysis, evacuation modeling.

- + Heat transfer modeling
- + Structural fire analysis
- + Prescriptive based design of structures in accordance with Eurocode rules
- + Performance based design of structures
- + Application of Eurocode calculation procedures on steel and concrete structures.



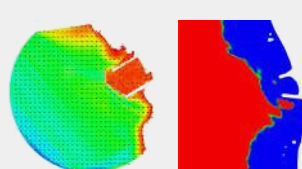
### INTRODUCTION TO GIS WITH PRACTICAL APPLICATIONS

- + GIS concepts
- + Overview of commercial and open source geospatial data and software
- + Geospatial analysis
- + Main concepts of remote sensing image analysis
- + Geospatial data visualisation
- + Web GIS dissemination



### BIM FOR STRUCTURAL DESIGN

- + BIM approach in modelling
- + Making of 3D BIM model according to 2D drawings
- + Generating plans from 3D BIM model
- + Making work form plans
- + 3D reinforcing in Allplan
- + Export material quantities from 3D BIM model
- + Automatic reinforcement display
- + Bimplus platform – interoperability and collaboration with other occupational groups



### COASTAL ENGINEERING – MODELING WAVE TRANSFORM AND BEACH SEDIMENT TRANSPORT

- + Wind data sets analysis; statistical stationarity;
- + Deep water wind generated wave parameters estimation;
- + Input preparation for the wave transform model, setting up and running model.
- + Results postprocessing.



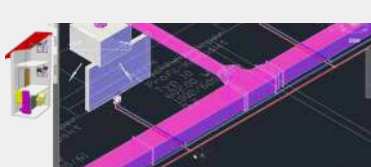
### BIM FOR ARCHITECTS

- + BIM modelling approach
- + Making of 3D BIM model according to 2D drawings
- + Carpentry installation, finishings and furniture
- + Generating plans from 3D BIM model
- + Export material quantities from 3D BIM model
- + Bimplus platform – interoperability and collaboration with other professional groups
- + Allplan rendering possibilities and Lumion presentation



### BIM FOR ENGINEERS

- + BIM approach in modelling
- + Making of 3D BIM model according to 2D drawings
- + Generating plans from 3D BIM model
- + Making work form plans
- + 3D reinforcing in Allplan
- + Export material quantities from 3D BIM model
- + Automatic reinforcement display
- + Bimplus platform – interoperability and collaboration with other occupational groups



### BIM FOR HVAC

- + BIM approach in mechanical engineering
- + Modeling office building using HVAC BIM approach in AX3000
- + Ventilation module
- + Heating module
- + Energetic simulation module
- + Sanitary module
- + Bimplus platform – interoperability and collaboration with other occupational groups



### BIM MANAGEMENT

- + BIM project management
- + BIM standards (ISO, BS, PAS)
- + Employer's Information Requirements – EIR
- + BIM Execution Plan – BEP (project information, BIM software tools, data sharing...)
- + Coordination of BIM models
- + Communication of BIM participants (allocation of responsibilities and setting deadlines)
- + Document Management in Bluebeam
- + Work in a shared data environment (Bimplus)



### APPLICATIONS OF GPR (Ground Penetrating Radar) IN CIVIL ENGINEERING

- + Introduction to GPR
- + Basic principles of GPR operation
- + GPR instrumentation
- + Detection of buried objects
- + GPR surveying of pavements, bridges, tunnels and buildings; underground utility and void sensing;
- + Antenna Systems for GPR
- + Data processing techniques
- + Numerical modeling techniques for electromagnetic wave propagation
- + Various Applications of GPR

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