议程 Programme

第一周Week 1

9月18日星期一 Monday 18th September
8:30-12:00 学生登记与暑期班介绍
Enrollment and Introduction
14:00-17:30 福州大学与实验室介绍
Introduction to FZU and Labs
9月19日星期二 Tuesday 19th September
8:30-12:00 开展课题活动 Start of Project Activities
14:00-17:30 陈述结构形态的方法
Presentation on Methodology in Structural Morphology
9月20日星期三 Wednesday 20th September
8:30-12:00 结构优化原则
Principles of Structural Optimization
14:00-17:30 课堂作业 Classroom Work
9月21日星期四 Thursday 21st September
8:30-12:00 天桥结构优化
Structural Optimization in Footbridges
14:00-17:30 课堂作业 Classroom Work
9月22日星期五 Friday 22nd September
8:30-12:00 OCP结构优化的方法和软件
Approaches and Software for Structural Optimization–OCP
14:00-17:30课堂作业Classroom Work
9月23-24日星期六-星期天 Saturday-Sunday 23-24 September
参观学习 （例如：土楼）
Guided Site learning (eg. 土楼Tulou)

第二周 Week 2

9月25日星期一 Monday 25th September
8:30-12:00 课堂作业Classroom Work
14:00-17:30课堂作业Classroom Work
9月26日星期二 Tuesday 26th September
8:30-12:00 课堂作业 Classroom Work
14:00-17:30 课堂作业 Classroom Work
9月27日星期三 Wednesday 27th September
8:30-12:00 课堂作业 Classroom Work
14:00-17:30 课堂作业 Classroom Work
9月28日星期四 Thursday 28th September
8:30-12:00 项目汇报和成果准备
Project –presentation and results preparation
14:00-17:30 项目汇报和成果准备
Project –presentation and results preparation
9月29日星期五 Friday 29th September
8:30-12:00 最终成果展示
Final Presentation of Projects
14:00-17:30 颁奖与闭幕典礼
Awarding and Closing Ceremony

With:

组织与学术委员会
Organizing and Scientific Committee

Fuzhou University

B. Briseghella, G. C. Marano, Z. S. Lin, J.G. Wei, B.C. Chen, X. Wu, C.B. Hu, W.D. Zhuo, W. Lu, T. Zhang, L.B. Chen, C. Zhao, T. Deng, J.Q. Xue

Roma Tre University

C. Nuti, S. Santini, D. Lavorato, A. Bergami

National Technical University

N. Lagaros

Polytechnic University of Bari

R. Greco, F. Trentadue, F. Defilippis

University of Modena and Reggio Emilia

M. A. Tarantino, L. Lanzoni

University of Chieti-Pescara

I. Vanzi, E. Spacone

University of Cagliari

L. Fenu

University of L'Aquila

A. Gregori

更多信息，请联系: For info, please contact:

Ms Francesca Maulini
francesca.maulini@uniroma3.it
电话 Tel. 059122865387

Mr Libo Chen
lbchen@fzu.edu.cn
电话 Tel. 13960741943

福州大学土木工程学院与建筑学院

College of Civil Engineering/College of Architecture

Fuzhou University

以及 and

福州大学-罗马第三大学中意交流中心

Fuzhou– Roma Tre Sino-Italian Center

以及 and

國立雅典理工大学

National Technical University of Athens

第二届“结构形态”夏令营

SSSM17

Second International Summer School

“Structural Morphology”

福州，2017年09月18-29号

Fuzhou, September 18-29, 2017

摘要 Abstract

One of the deepest and central theme in design is the relationship between geometry and structures. How geometrical shapes influence forces' flow into elements is a basic point to better understand and design structures.
The so-called "optimal" geometrical shape has a strong influence on structure definition, as the coupling between form and forces, usually called structural morphology, is a key point for success to solve challenging structural problems, both using conventional materials or innovative shapes and technologies.
This School is focused on a practical approach to the coupling between form and forces in design, with emphasis on harmonizing the architectural and engineering vision.

设计中最深刻、最核心的主题之一是几何与结构的关系。几何图形如何影响力的流动是一个基本点，以更好地理解和设计结构。
所谓“最优”的几何形状对结构定义有强大的影响力，形与力之间的耦合，通常称为结构形态，是成功解决结构问题的一个关键点，无论是使用传统材料还是使用创新的形状和技术。
这次活动的重点是找到一个实用的方法，在设计中形成形式和力之间的耦合，强调达成工程和建筑形象之间的和协。

主题介绍 Contents

The Summer School starting point is the reinterpretation of the main consolidated "forms" and the relationships between the spatial configurations and structures. Particular importance will be given to the possible morphological - structural "forms" (through geometric, static and materials logics), rethought in order to obtain new design and production methods.
Footbridges will be used as case study, analysing both the architectural applications and structural solutions for a number of real configurations.
Computer supports for the geometrical and analytical aspects of structural design are a specific tool that will be used by students to develop the case studies.

暑期班从对主要整合“形式”重新解读出发，探讨空间形态与结构的关系。尤其重视可能的形态结构的“形式”（通过几何、静态和材料的逻辑），反思以获得新的设计和制造方法。
以人行桥作为研究案例，从建筑应用和结构方案来分析大量实际的布局。
计算机支持的结构设计方面的几何和分析作为一个特别的工具，将用于学生发展自己的研究案例。

比赛 Contest

The summer school will be based on a group design approach and specific lessons done by expert in different fields involved in structural morphology.
Working groups will be organised in teams composed by students from different countries, both with engineering and architecture backgrounds, to guarantee a complete contamination between form and structure.
Each group will produce a final project, comprehensive of drawings, animation, 3D rendering and real scale models. As final result, solution developed to properly satisfy both architectural aspects and structural safety requirements will be presented to a public evaluation committee.

暑期班将基于小组设计的方法，由与结构形态相关的不同领域专家授课。
小组将由中国和国外学生构成，兼有工程和建筑背景，以达成满足形式和结构的充分交流。
每个小组将产生一个最终的方案，以详细的图纸，动画，三维透视图和实体模型表达。作为最终的结果，应适当地满足建筑方面和结构安全的要求，提交给公共评估委员会。