



UNIVERSITÀ  
DI PAVIA

**Ph.D. Program in Electronics, Computer Science and Electrical Engineering**

## **COURSE**

### **3D Computer Graphics**

***Prof. Piercarlo Dondi, University of Pavia***  
***Alessandro Gaggia, PhD, beSharp***

**OBJECTIVES:** This course aims to give an overview of 3D Computer Graphics (CG) and of its current applications in both research and industry. The course will introduce the theoretical bases of 3D CG and will provide practical exercitations using Unity.

#### **PROGRAM**

- Lecture 1 – Introduction and Rendering Pipeline.
- Lecture 2 – Geometry, Transformations and Animation.
- Lecture 3 – Lightning, Shading and Texturing.
- Exercitation 1 – Introduction to Unity, 3D environment setup and interaction.
- Exercitation 2 – Development of a cross-platform 3D application in Unity.

**EVALUATION:** Students may choose between the development of a small project in Unity or the analysis of a research paper. Groups (up to 2 people each) are allowed for the project. In both cases students are required to give a short presentation to the class.

**ATTENDANCE:** The course will take place in the GREEN Seminar Room, Floor D.

**LECTURES:** 14h (6h theory, 8h exercitation)

**CREDITS:** 3 CFU

#### **DATES:**

- Theory: June 17, 18 and 21 from 10:00 to 12:00
- Exercitations: June 25 and 26 from 9:00 to 13:00

**Ph.D. Coordinator**

**Prof.ssa Ilaria Cristiani**

Seminar in English

WEBSITE: [https://vision.unipv.it/corsi/CG\\_2024/](https://vision.unipv.it/corsi/CG_2024/)

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