



UNIMORE
UNIVERSITÀ DEGLI STUDI DI
MODENA E REGGIO EMILIA



AIRI
AI Research & Innovation Center



Dr. Iuri Frosio, *PhD, NVIDIA USA* Seminar “*Research in videogames: use of deep learning for saliency estimation and cheating prevention*”

Abstract: working in a company that is leader in both the videogames and machine learning fields offers exciting research opportunities at the intersection between these two domains.

In this talk, I will illustrate two of these applications. In the first part, I will concentrate my attention on saliency prediction in videogames, based on a dataset of Fortnite sequences that we acquired in 2019. I will illustrate the peculiar aspects of saliency in videogames, show that different frames in video sequences are not equally reliable, depending on the number of observers and frame content, and propose a general paradigm that explicitly takes this aspect into account when training a deep learning saliency prediction model.

In the second part of the talk, I will introduce the problem of cheating in videogames and propose a deep learning based solution for the case of visual cheating. Our method allows identifying cheaters with high probability, and it is designed to be robust with respect to potential adversarial attacks put in place by cheat designers. I will conclude the talk by illustrating other potential research areas including videogames and deep learning.



Bio: Iuri Frosio got his PhD in biomedical engineering at the Politecnico of Milan in 2006. He was a research fellow at the Computer Science Department of the University of Milan from 2003 and an assistant professor in the same department from 2006 to 2013. In the same period, he worked as a consultant for various companies in Italy and in USA. He joined NVIDIA USA in 2014 as senior research scientist. After seven years in Silicon Valley, he is back in Italy since 2021, still working for NVIDIA. His research interests include image processing, computer vision, robotics, parallel programming, machine learning, and reinforcement learning.

Agenda

2:00 pm – 2:15 pm Rita Cucchiara, Welcome and introduction

2:15 pm – 3:00 pm Iuri Frosio, Research in videogames: use of deep learning for saliency estimation and cheating prevention

3:00 pm – 3:30 pm Discussion

Wednesday 30th June, 2021

Event Room, Technopole, via Vivarelli, 2, 41125 Modena

Due to limited seating, [REGISTRATION IS REQUIRED](#).

Those who can attend the seminar will receive an email the day before (June 29th).

The seminar will be broadcast in streaming [HERE](#).

