

Public lecture - July 23, 2009

Digital Media & Mathematics

by António S. Câmara

YDreams (CEO) and New University of Lisboa

Lecture's Abstract: YDreams has developed YVision, a platform for digital media including computer vision, embodied interaction, embodied agents and simulation. The mathematics underlying these components will be reviewed.

YVision addresses "normal" digital media problems.

YDreams has been working in three challenging problems that are beyond "normalcy". They include:

- Providing each city driver with an optimal route using information processed from traffic cameras and other sensors;
 - Helping a famous soccer coach in optimizing space for his team, both on offense and defense, using video images;
 - Translate partial differential equations into chemical reactions to enable chemical computing in any surface.
- These problems will be defined and our engineering approach to solve them presented. Hopefully, mathematicians will have better ideas.

Time & location: July 23, 2009 -- 5:00pm

Complexo Interdisciplinar da Universidade de Lisboa, Anfiteatro

<http://www.ciul.ul.pt>

Sponsored by SUMMER SCHOOL and WORKSHOP
Kinetics and Statistical Methods for Complex Particle Systems

<http://kinetic.ptmat.fc.ul.pt/>

Lisbon, Portugal - July 13 to 24, 2009

COLAB Austin/Portugal MATHEMATICS partnership

ICTI-CMU/Portugal - CIM - CMAF

António S. Câmara is currently Chief Executive Officer (CEO) of YDreams. He obtained a PhD at Virginia Tech (1982) and was a Post-Doctoral Associate at Massachusetts Institute of Technology (MIT) in 1983. Since 1983, he has been a Professor at the New University of Lisbon in Portugal with stints as Visiting Professor at Cornell University (1988-90) and MIT (1998-99). He was the recipient of the prestigious **Prémio Pessoa** in December 2006.

António Câmara has been a pioneer in the area of geographic information systems having led the development of innovative virtual reality, multimedia and mobile applications. He has over 150 international publications including the books Spatial Multimedia and Virtual Reality published by Taylor & Francis (1999), and Environmental Systems published by Oxford University Press (2002).



He has been the Principal or Co-Principal Investigator in more than thirty sponsored research projects in Portugal and USA. He is currently co-chairing the **Portugal-University of Texas at Austin** agreement. He was Senior Consultant for the Expo98 project (1993-98) that renovated 225 ha of land for the World Fair held in Lisbon in 1998. **António Câmara** inspired Digital Portugal, an interactive fly-over the whole country, used by 1.5 million people at the event and was also a Senior Consultant of the National Geographic Information System project (1986-2000) that became the first spatial data infrastructure in the Internet in 1995.

António Câmara co-founded YDreams in June 2000 and has been its CEO since that date.

YDreams is now a world leader in gestural and mobile interfaces with global clients such as NOKIA, Vodafone, Coca-Cola, Santander Bank, Unilever and many others. YDreams solutions have been featured on Wired, Business Week, The Economist, New York Times, Financial Times, CNBC Europe, France 24 and CNN.

António Câmara is also an avid tennis player, a sport he played for Portugal's Under 18 and 21 national teams.