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DOCUMENTARY FILMMAKING WORKSHOP IN MADEIRA, BY PROFESSOR NANCY SCHIESARI OF UT AUSTIN

- **Professor Nancy Schiesari of UT Austin gave a workshop on documentary filmmaking using narrative strategies for finding and creating voice, point of view, and story structure, December 12-16, in Madeira.**

Workshop Abstract

Today more than ever, documentary filmmaking has evolved to use a hybrid of methodologies to communicate with its audience. As a documentary filmmaker I continuously borrow techniques from fiction to build story, character, point of view and content. Over five days of presentations and workshops we will explore the interface between narration, interviews, music, actualite and archive footage, and how these elements can be manipulated to enhance the receptivity and viewing experience of the audience.

Professor Nancy Schiesari is a Producer/Director/Cinematographer and a Professor of Radio-TV-Film, at the University of Texas at Austin. Nancy is an experienced director, producer and cinematographer on both broadcast documentaries and award-winning independent films. Her latest full-length documentary, Canine Soldiers, premiered at the Austin Film Festival in 2016. Cactus Jack, Lone Star on Capitol Hill aired on PBS in

February, 2016. *Tattooed Under Fire* aired nationwide on PBS in 2009. "Hansel Mieth-Vagabond Photographer" premiered on PBS' *Independent Lens* in 2003, and on the Canadian and Australian Broadcast Corporation. She also directed *History Man*, a half hour profile on Martin Scorsese, for BBC 4, London, 2004.

Nancy also comes with twenty years experience as a Director of Photography on over 30 documentaries and feature films broadcast for England's Channel 4, BBC, ABC, National Geographic, and PBS. Nancy has filmed in Europe, the U.S, Africa, India, Pakistan, Iceland, and Latin America. She was nominated for a 2002 Television Emmy for outstanding cinematography on *The Human Face* (producer John Cleese). Among her work as cinematographer is Barbara Sonenberg's *Regret to Inform*, 1998, nominated for an Oscar, and Pratibha Parmar's and Alice Walker's *Warrior Marks*, Channel Four, London. Her work as a narrative director includes *Loaves and Fishes*, which premiered in 2000 at the South by Southwest Film Festival, screened at the International Latino Film Festival in Los Angeles, and broadcast on PBS' experimental film series "The Territory" in 2001. Nancy graduated with an MFA from the Royal College, London and is a professor in production in the Radio, Television and Film Department at the University of Texas at Austin.

INTERNET OF THINGS AND EDUCATION, BY PROFESSOR PAUL RESTA, AT FCT/UNL



Internet of Things and Education, By Professor Paul Resta, at FCTUNL

■ On December 7, Professor Paul Resta of UT Austin gave, at FCT/UNL, a presentation entitled "The Internet of Things and Education: How the ubiquitous connection of physical objects will transform pedagogy and policy".

With an audience of about 40 attendants Professor Paul Resta talked about how education can adapt and gain from mobile devices and their usage.

Workshop Abstract

As we move toward a state of ubiquitous connectedness, it is important that educators understand how the Internet of Things (IoT) may be used to optimize benefits to learners. This presentation will discuss (1) current trends of IoT in education and its implications for pedagogy, practice, and policy; and (2) the role of educators in helping to shape policy in order to maximize gains and minimize the risks of IoT in education.

Professor Paul Resta is Ruth Knight Millikan Centennial Professorship in Learning Technology, Department of Curriculum and Instruction, College of Education, The University of Texas at Austin.

Professor Resta teaches advanced graduate courses in learning technology, instructional systems design, online learning, technology planning, and computer-supported collaborative learning at the University of Texas at Austin. He is the Founding President of the International Society for Technology in Education, the world's

largest educational technology organization, and also served as President of the International Council for Computers in Education. Dr. Resta currently serves as the President of the International Jury for the United Nations Education, Scientific and Cultural Organization (UNESCO) King Hamad Bin Isa Al-Khalifa Prize for the Use of Information and Communication Technologies in Education and was recently honored by the UNESCO Director-General for his leadership at the award ceremony in Paris.

Recent professional activities include: General and Local Chair of the 2016 International Conference on Advanced Learning Technologies; Co-Founder and Chair of National Collaborative for Digital Equity; Principal Investigator of the Presidential Timeline project funded by the U.S. National Archives; Principal Investigator of Agent-Based Simulation Environment for Math Success in Secondary Education; Organizer and Chair of the First Invitational Summit on Educational Data Visualization, May, 2014. Dr. Resta also has served on a number of national and international advisory boards including Microsoft Corporation's Partners in Learning program, Blackboard Corporation's National Advisory Council, and as a member of the board of the International Laboratory of Advanced Educational Technologies.

MINISTER OF SCIENCE, TECHNOLOGY AND HIGHER EDUCATION VISITS UT AUSTIN

■ In November, the Portuguese Minister of Science, Technology and Higher Education, Manuel Heitor, visited UT Austin where he reinforced the strategic vectors for the evolution of UT Austin-Portugal Program and the partnership in the AIR Center project.

[@ Ciência PT](#)

ADVISORY BOARD MEMBERS @ UT AUSTIN

■ The UT Austin Portugal Program Advisory Board members visited UT Austin where they met with FCT's President, Paulo Ferrão.



Advisory Board members with FCT's President, Paulo Ferrão, and two UT Austin Portugal Program alumni

WORKSHOP VALUE@NANO – VALUE CREATION FROM EMERGING KNOWLEDGE

■ From December 5 to 7, about 50 participants attended, at the Double Tree by Hilton Lisbon Hotel, the Value@nano Workshop, organized under Emerging Technologies initiative of UT Austin | Portugal CoLab program.



Workshop Value@nano - Value Creation from Emerging Knowledge

The main topic of the workshop was the innovative transformation of knowledge into value with a specific focus on the commercialization of new technology.

Value Creation from Emerging Knowledge, is about raising awareness. The main topic of the workshop was the innovative transformation of knowledge into value with a specific focus on the commercialization of new technology. The workshop began by examining concepts associated with technology commercialization and then took a deeper dive into the channels value creation from emerging knowledge, namely contract research, licensing and spin-offs. A series of case studies were presented throughout the workshop and practical exercise in ideation were performed.

Concepts were introduced that improve and accelerate the commercialization process, from decisions made by scientists at the research bench, through the development, patenting, and licensing of new technologies, to the formation of technology ventures.

Objectives

The workshop had the following objectives:

- To understand the key concepts and options in technology commercialization.
- To understand how to assess technologies for their commercialization potential.

- To understand the steps that a technology goes through in the journey from the laboratory to the marketplace.
- To explore the commercialization channels leading to value creation from emerging knowledge.

The panel of speaker included:

Michael J. Sailor, Distinguished Professor of Chemistry and Biochemistry at the University of California, San Diego;

Angus I. Kingon, Professor of Engineering, and Barrett Hazeltine University Professor of Entrepreneurship and Organizational Studies at Brown University since 2008;

Ian M. Reaney, Professor at the Department of Materials Science and Engineering, University of Sheffield;

Paul Thurk, Managing Director with ARCH, joining in 2000 via a two-year Kauffman Fellowship with the Partnership;

Pim Groen, full Professor at the faculty of Aerospace Engineering on the chair “SMART Materials” next to his work at the Holst Centre.

Leigh Canham, Honorary Professor at the University of Birmingham with over 30 years of wide ranging research in silicon technology;

Brian A. Korgel, T. Brockett Hudson Professor of Chemical Engineering at the University of Texas at Austin;

Pedro Vilarinho, CEO of Act – a “lab to market” venture engine that aims at supporting the creation of technology based startups from R&D activities developed within Portuguese R&D organisations;

Bernie Rickinson, Chief Executive of the Institute of Materials, Minerals and Mining (IOM3).

The Emerging Technologies initiative of UT Austin| Portugal CoLab program has 3 main goals:

(i) to create new knowledge in the area of Emerging Technologies / Nanotechnologies;

(ii) to educate & train next generation of thought leaders in the field;

(iii) to catalyze economic development, by fostering rapid commercialization of new nanotechnology developments, especially those made at academic institutions; and work with industry in Portugal to explore new products and the creation of new nanotechnologies.

To support the aim to rapidly and effectively promote commercialization of new nanotechnology developments CoLab is organizing a set of workshops focused on:

- WS1: Value Creation from Emerging Knowledge
- WS2: Communicating Technology to the Market
- WS3: Going from the Lab to the Market

More Information here: valuenano.web.ua.pt

WORKSHOP "MATHEMATICS OF COMPLEX SYSTEMS: FROM PRECISION MEDICINE TO SMART CITIES"

The CoLab Workshop "Mathematics of Complex Systems: from precision medicine to smart cities" was held at the Department of Mathematics of the University of Coimbra, Portugal, on December 5-6.

This Workshop gathered together 70 scientists and researchers of different areas of the UT Austin – Portugal community who wish to be involved in the emerging field of complexity theory, in particular in the understanding of the nature and the behaviour of complex systems, such as cities or cells. This meeting was an opportunity to reinforce the Portuguese scientific and technological outreach, strengthening our scientific interactions and making new connections with established experts of the different topics covered in this event. At the end everybody agreed that this was a very inspiring and successful event, both for scientific interaction and informal discussions.



Workshop "Mathematics of Complex Systems _ from precision medicine to smart cities".

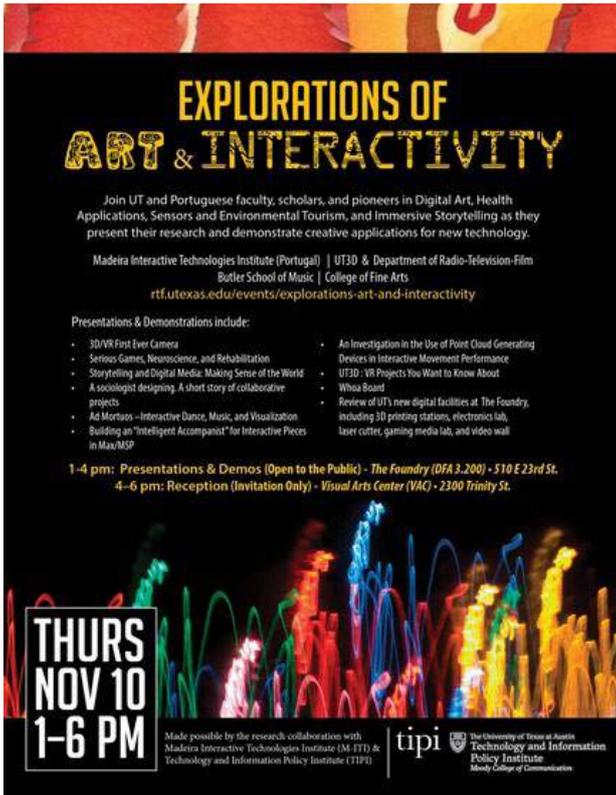
Scientific Committee: A. Araujo (CMUC), L. Caffarelli (UT Austin), I. Gamba (UT Austin), J.M. Urbano (CMUC), J. Videman (IST-UL).

Local Organizing Committee: A. Araujo (CMUC), J. Gouveia (CMUC), R. Barreiro (IP-Setúbal), V. Quítalo (CMUC).

Sponsored by: UT Austin - Portugal Program and CMUC (Centre for Mathematics, University of Coimbra).

Website: <http://www.mat.uc.pt/colab2016/>

TIPI WELCOMED MADEIRA DELEGATION



- TIPI had the pleasure of welcoming a Madeira delegation from M-ITI of 12 faculty, post-docs and graduate students to Austin for a busy week of making research connections in our event entitled, Explorations of Art and Interactivity.

The week culminated in a wonderful event at UT's Foundry in which faculty and students from diverse departments within UT had a chance to show their expertise in the fields of endeavor including Digital Art, Health Applications, Sensors and the Environment.

UT AUSTIN | PORTUGAL WORKSHOP ON NONLINEAR MECHANICS AND APPLICATIONS IN LIFE SCIENCES

- October 27-29, 2016, Instituto Superior Técnico, University of Lisbon, Portugal (<http://cemat.tecnico.ulisboa.pt/NMLS2016/>)

This Workshop reinforced the Portuguese competences in Nonlinear Mechanics and in complex problems arising from applications to the mathematical modelling and simulations in the Life Sciences.

The Workshop provided a place to exchange recent developments, discoveries and progresses in this challenging research field.

The main goal was to bring together doctoral candidates, postdoctoral scientists and graduates interested in the field, giving them the opportunity to make scientific interactions and new connections with established experts in the interdisciplinary topics covered by the event. Another important goal of the Workshop was to promote collaboration between members of the different areas of the UT Austin|Portugal community.

45 participants, mostly from Portugal, but also from Germany, Italy, Czech Republic, Brazil, Lebanon and UT Austin participated in the Workshop with invited lectures.



UT Austin Portugal Workshop on Nonlinear Mechanics and Applications in Life Sciences

FUTUREPLACES 2016 BRINGS RECORD PARTICIPATION, NEW PARTNERSHIPS AND FULL SUPPORT FROM THE MINISTRY OF SCIENCE

■ The ninth consecutive edition of the FuturePlaces, Medialab for Citizenship, took place in Porto between the 18th and 22nd of October, 2016. Curated by Heitor Alvelos, a lot of the work developed this year focused on issues of heritage, memory and rediscovery: new partner Ephemera / José Pacheco Pereira organised a documentary exhibition of student activism at the University of Oporto in the 1960s and 1970s, as well as conducting a full workshop on arcane copy machines; Dolores Wilber of DePaul University presented her documentary film “147 Pianos”; and University of Porto Vice-Rector Maria de Fátima Marinho chose FuturePlaces for the public launch of the U. Porto Digital Museum network.



The Digital Media Doctoral Symposium welcomed Patricia Aufderheide of American University, whose keynote “Collaborative Creativity: How to Share the Challenge of Imagining the Future” reflected and cast light on much of the research currently in progress on the PhD in Digital Media program. A visit to Openfield, a gallery space managed by Digital Media students and graduates, concluded the day’s work.

A total of eleven Citizen Labs were offered, with topics ranging from video games to copyright challenges, from utopian design to experimental film. The debriefing event, entitled “The Academy of Citizens”, connected the various workshops into future research opportunities.

Throughout the above events, there was still time for radio broadcasts, guided tours, laptop remixes, avant-garde karaoke, a video games arcade room, a round table on virtual reality, a showcase of MA Multimedia work, interactive installations, a virtual political demonstration, and the premiere of Gravitas, a sound piece stemming from last year’s FuturePlaces closing concert, with visuals provided by partner project Museum of Ransom.

As in previous years, most activities took place at UPTEC PINC (the Creative Industries Incubator of U.Porto) and Passos Manuel cinema. Besides the Digital Media community, a large host of students and citizens were actively engaged throughout the medialab, including PhD Design / ID+ researchers, BA and MA students from ESAD Matosinhos, ESAD.CR, IPCA, FEUP and FBAUP. There were over two hundred participants and visitors in total throughout the five days.

FuturePlaces was also honoured to welcome the visit of the Minister of Science, Technology and Higher Education, Manuel Heitor, who publicly supported the project as a template for the necessary relationship between technology, society and culture; in addition, both Mayors of Oporto and Lisbon, Rui Moreira and Fernando Medina, honoured us by attending the opening event.

All FUTUREPLACES photos by [Luís Barbosa](#).



■ The second edition of PLUNC took place between 29 September and 2 October, 2016. In this second edition, we sought to stabilize and optimize the structure and concept of PLUNC festival, solidifying the roots planted in the first edition, in order to allow its growth in future editions and affirm the festival in the national and international scene. We kept the two structural concepts that define the identity of the festival. The approximation and path between the shores of Almada and Lisbon and the focus on interactivity as one of the areas in digital art and new media.

In 2015 we had the focus on Zach Lieberman. For the second edition, we chose as artists in focus Christa Sommerer and Laurent Mignonneau, pioneering artists of interactive art, which will be at the festival to a small retrospective of their work (“Portrait on the Fly”, “The Value of Art”, “Eau de Jardin” and “Phototropy”) and a masterclass.



Their works were in dialogue with projects from other guest artists and works resulting from an international open call, so we could witness its contamination, questioning and thus making room for reflection.

It was an edition with a strong speculative nature, with the workshops and talks by James Auger, with his reflection on the concept of “smart”, and Ben Grosser, investigating what computer systems know about us and the effects of software in our lives. Regarding the exhibitions some of the highlights were the works “Transiconmorphosis” by Emilio Vavarella and Fito Segrera, “CAPTCHA-T” by anaa colectivo and “Sea Battle” by Tiago Rorke proposing and reflecting on ambiguous communication systems in the near future, whether this communication is between humans, machines or humans and machines. The last two works promoted an interaction between both shores of the river.

The festival kept 4 of the venues from the first edition (FCT/UNL, FBAUL, Casa da Cerca and Ginjal Terrasse) and added a new one Fundação Portuguesa das Comunicações - Museu das Comunicações. This space welcomed the main exhibition, as well as the opening session and 1 workshop. The new space has proved to be an asset for the festival

Festival in numbers:

- 4 days
- 5 venues
- 23 international artists and guests
- 10 interactive installations / 4 workshops / 3 performances / 8 artists talks / 1 masterclass / 1 conference
- 45 projects received in the Open Call, from which we selected 9 projects: 6 interactive installations, 2 performances and 1 workshop

PLUNC 2016 edition confirmed the relevance and importance of the existence of such a festival in Lisbon and Almada. There was an evolution in the dynamics of spectators and increase of public with almost 1500 spectators. Both editions have allowed the creation of a sustainable small-scale festival with potential for growth. The feedback expressed by the artists is extremely positive both in terms of the conditions and organization of the festival and in terms of programming.

“um quotidiano / an everyday” project selected as finalist of the “Postcards from Portugal”

‘um quotidiano / an everyday’, a participatory mobile photography project led by Cláudio Reis, Digital media PhD student, has been selected as one of the finalists of the ‘Postcards from Portugal - Future Memories’ Prize.

‘um quotidiano / an everyday’ was on display until 5th November at the ‘Encontros da Imagem’ International Photography Festival, the biggest photography event in Portugal.

Exhibition ‘Postcards from Portugal - Future Memories’
Encontros da Imagem 2016 - Casa Rolão
Avenida Central, 118-124, 4710-229 Braga

Further info:

<http://encontrosdaimagem.com>

<http://umquotidiano.tumblr.com>

<https://www.facebook.com/umquotidiano/>

<https://www.instagram.com/umquotidiano/>



PhD Conclusions

ANA FIGUEIRAS

Thesis title: How to tell stories using visualization: strategies towards Narrative Visualization

My PhD research focused on applying storytelling techniques to information visualization. The interest in studying the relationship between storytelling/narrative and information visualization was born from the fact that narrative is international, transhistorical, transcultural, and conveys information in a memorable way. Moreover, since narrative is not exclusive to one medium, they can also be used in visualization.

Although it might not seem, the use of storytelling in visualization is not exactly new, and some examples of what we now call narrative visualization were created way before the term was coined in 2010 by Segel and Heer. One of the most memorable examples is for sure Minard’s map of the Napoleonic invasion of Russia. Minard’s “Carte figurative des pertes successives en hommes de l’Armée Française dans la campagne de Russie 1812-1813” tells the story of a catastrophic war where 412 thousand men (98% of the army) lost their lives (only 100 thousand reached Moscow and only 10



thousand returned home) and about the impact that the cold weather and the rivers had in the number of deaths registered.

In my thesis I depart from the premise raised with Minard’s map, that visualizations are able to tell stories, and explore what strategies can be used to introduce storytelling in visualizations. These strategies range from adding short stories or narrative elements using annotations and using time to introduce the feeling of storytelling or story-flow, to more complex strategies such as gamification.

The main goals of my PhD dissertation were to understand what are the best techniques to tell stories in a more visual way, which elements have to be present in order to have an effective storytelling, and which types of visualizations are more appealing to users. My work was focused on online visualizations that include some degree of interaction. The strategies researched can be applied to any area where storytelling can play a part on the explanation of data, such as marketing and education. However, because of my background, my research was biased towards information visualization in journalism. My dissertation also includes a project entitled *ReThinking Visualization* (available at <http://rethinkingvis.com/>) that aims at understanding the elements that compose a visualization, in order to help the detection of patterns in visualizations.

TERESA VIEIRA

Thesis Title: “Blood Flow-Parameterized Texture Method for Rendering Facial Expressions”

Teresa Vieira defended her PhD dissertation on December 14th, 2016 at Faculdade de Engenharia da Universidade do Porto with a thesis entitled: “Blood Flow-Parameterized Texture Method for Rendering Facial Expressions”.

This dissertation presents a blood flow-inspired skin texture painting method that renders parameterized flushing to deliver more reliable skin animation than empirical methods. Currently, the hand work of painting blood flow-based textures for animation of facial expressions lacks guidelines that may assist artists. As consequence, their work is currently guesswork and labor-intensive.

We provide delta parameters that allow artists to paint differentiated flushed textures according to facial expressions. To create the proposed method, we have analyzed skin color changes from a database of 494 facial expressions. To collect the portraits database we conducted two experiments where we presented the participants with emotion-eliciting clips and photographed their reactions. The experiment design was approved by the University of Porto Ethics Committee. We have calculated skin color differences using the CIEDE2000 color difference formula, which provides the best correlation to human visual perception.

One of my main objectives during my research was to contribute to the growth of this research topic but also to provide techniques that could later be applied to visualization out side of the research community. And although there is still much space for improvement I believe that I made interesting contributions that can be used to move the research field further: I provided a a new interaction techniques taxonomy; a new typology for categorizing visualizations and several case studies to exemplify every type; I provided possible strategies for the introduction of storytelling in visualizations; and reviewed several techniques, tools, and guidelines to build visualizations.



The flexibility of the proposed method is illustrated with different character styles (photorealism, cartoon, and fantasy) and features.

Professional artists affirm it helps them render more realistic skin color than traditional empirical methods, as it replaces assumption work with quantifiable delta parameters for animation of flushed skin textures and expressions. Validation tests with undergraduate digital artists describe the provided method as useful, easier and more accurate than traditional skin texture painting methods. We have presented our method to artists

as an easy to follow, illustrated guide, to facilitate the incorporation of the method into their work process. The provided method is independent of the painting and animation software package and can also be applied to the animation of 2D characters.

Here is Teresa Vieira testimonial about the Digital Media PhD program: "This PhD program has provided me with unique work and research opportunities,

among the best universities and academics. Besides studying at FEUP and FCUP, I had the opportunity to visit and study in Austin for 3 months, which helped me prepare a research experiment that provided the results for this thesis. I am very grateful to all the people and professors working for the Digital Media program, which helped me to succeed along this steep journey and that work relentlessly to make this PhD program a reference of excellence on its field.

YAGO DE QUAY

Thesis Title: "The Development and Experience of Gesture and Brainwave Interaction in Audiovisual Performances."

I finally completed my doctoral studies after 4.5 years in the dual-degree program at UT Austin and FEUP. My dissertation is called "The Development and Experience of Gesture and Brainwave Interaction in Audiovisual Performances." In it, I explore media interaction strategies by looking at two of my performances. These performances featured audiovisual media that respond to a performer's gestures and brainwaves. The aim of my investigation is to improve our understanding of what factors influence interaction design within and across the performing arts. I argue that technology, collaborators, and transparency have a decisive impact on a performer's actions and interactive media. Furthermore, my findings suggest that synchronicity, elegance and visual feedback are important characteristics that can enhance the bond between the performer and audiovisual content. Lastly, I explain how universities and companies can improve research and development by together creating a live show.



JOÃO FILIPE BEIRA

Thesis Title: 3D [Embodied] Projection Mapping and Sensing Bodies: A Study in Interactive Dance Performance



ADRIANO JOSÉ BARBOSA BAÍA NAZARETH

Thesis Title: "Os programas de entretenimento em fluxo, na televisão generalista em Portugal: o modelo de organização e a sua valorização estética numa convergência de media"

MARTA FERRAZ

Thesis Title: "A Biosymtic (Biosymbiotic) Robotic Approach To Human Development and Evolution"



VÂNIA GUIOMAR DA SILVA GONÇALVES

Thesis Title: "Online video in the future internet age: business and policy dynamics"



Students Visits to UT Austin in January

Jacqueline Silva and Ilo Aguiar will visit UT Austin in January 2017.

Jacqueline is working on her doctorate and will engage in research regarding the Impact of Digital Media on Female Entrepreneurship.

Ilo is working on his doctorate and he will further his research aims in examining how readers interact and evaluate data visualizations in news media.



MORE OPPORTUNITIES can be found at FCT website: <http://www.fct.pt/concursos/>

USEFUL LINKS

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We want to hear from you! Want to share your doubts and concerns about something you read? Want to see other topics featured in next month's newsletter? Want to contribute with articles or art? Please send all your feedback to Carina Borges - cap.borges@fct.unl.pt