



■ Welcome Note from CoLab Directors

While the first year of CoLab focused on building personal awareness and relations among professors and staff across select universities and the private sector within Portugal and between Portugal and UT-Austin, the second and third years focused on building value-added and potentially sustainable education and research programs and activities within Digital Media, Advanced Computing and Mathematics academic programs as well as within the University Technology Enterprise Network (UTEN). Many of these programs and activities have been presented in CoLabSquare and include the pursuit of joint degrees in Portugal and competitively selected collaborative research projects. Following is a brief list of select programmatic activities:

Digital Media - Future Places Festival, the Digital Media Summer Institute, The international School for Digital Transformation and the Digital Media Internship Program, as well as lectures with well known UT Austin faculty (Rosental Alves, Don Turnbull, Sharon Strover and Gary Chapman, among others).

Mathematics - Summer School for Graduate students in Portugal, NSF Summer Workshop for Portuguese Undergrads in Austin, Luis Caffarelli lectures at University of Porto and Coimbra, MAMOS workshop in Austin.

Advanced Computing - TACC workshops in Coimbra (2008), Lisbon and Porto (2009) with Jay Boisseau and the Multicore Processing workshop in Braga with Keshav Pingali, Internships at ICES and TACC for Portuguese students.

UTEN - Assessment of Portuguese university IP portfolios for learning and for possible international business development; UTEN and FCT sponsored TT workshops involving UT-Austin, MIT, General Electric, INPI, and Fraunhofer Institute; training and Internships for Portuguese TTOs in Texas, and The International Conference on Technology Policy and Innovation at Porto in July 13-14.

At the end of year 3 and moving into year 4 CoLab is focusing on developing cross-program research and education opportunities that leverage the exceptional talent and capabilities of motivated professors, students, and staff as well as institutional-based infrastructure to build world class and sustainable programs and activities within and across all CoLab Programs and with Portuguese and international industry.

António Câmara
Portugal

David Gibson
UT-Austin

MARK YOUR CALENDARS:

- **COLAB MATHEMATICS SUMMER SCHOOL and WORKSHOP (MATHEMATICS)**, Lisbon, Portugal - July 13 to 24 – for more information visit <http://kinetic.ptmat.fc.ul.pt/>
 - **Key Note speaker July 23, 5:00 pm:** António Câmara (New University de Lisboa and Y-Dreams): “*Digital Media and Mathematics*”
- **FIRST INTERNATIONAL SCHOOL ON DIGITAL TRANSFORMATION (DIGITAL MEDIA)** - University of Porto, Porto, Portugal – July 19th to 24th – For more information visit <http://www.digitaltransformationschool.org/>
- **MATHEMATICS SUMMER WORKSHOP FOR UNDERGRADUATES (MATHEMATICS)** - University of Texas at Austin, Texas – July 19th to August 8th – For more information please visit <http://www.ma.utexas.edu/users/lexing/RTG/school2009/>
- **SOUND AND MUSIC COMPUTING 2009 (DIGITAL MEDIA)** - Casa da Música, Porto, Portugal – July 23rd to 25th – For more information on how to attend visit <http://smc2009.smcnetwork.org/>

■ COLAB News Center

The University of Porto reformulates its **Multimedia Masters**

The University of Porto has reformulated its Multimedia Masters to contemplate the following areas: Culture and Arte, Education, Interactive Music and Sound Design and Technology.

The masters will be given jointly by the School of Fine Arts, School of Sciences, School of Engineering, School of Economy and School of Letters. This masters aims to create new knowledge in the area of New Media, where the students brings the culture learned in the first cycle and gets to share different cultures from the various team members that are created by the different subjects and workshops.

For more information regarding this Masters and its areas, enrollment and study plan please visit the following site: <http://sicc.fe.up.pt/mmup/>.

UT Austin | Portugal supports 6th Sound and Music Computing Conference 2009 in Porto

The UT Austin|Portugal Program is supporting the 6th Sound and Music Computing Conference. After previous editions in Paris, Salerno, Marseille, Lefkada and Berlin, it will be held between 23 and 25 July 2009 at the Casa da Música in Porto, Portugal.

The Sound and Music Computing Conference is a privileged forum in Europe for the promotion of international exchanges around Sound and Music Computing. The 2009 edition is organised by the Institute for Systems and Computer Engineering of Porto: (**INESC Porto**), the Research Center for Science and Technology in Art (**CITAR**) of the Universidade Católica Portuguesa in Porto, the School of Music and Performing Arts (**ESMAE**), **Casa da Música**, and the **Department of Electrical and Computer Engineering** of the Faculty of Engineering of the University of Porto. This edition also has the support of other institutions, including the Polytechnic Institute of Porto, the Catholic University and the University of Porto. The conference consists of 3 full



days of music and science, featuring world-class speakers, oral and poster presentations of the latest SMC "inspirational" sessions and an exciting music program, specially compiled by 4 invited music curators (Pauline Oliveros, Evan Parker, Nicolas Collins and Robert Rowe). There will be eight concerts in total featuring the state-of-the-art in electronic music performance. The full conference program can be consulted at <http://smc2009.smcnetwork.org/programme>.

At the conference, Bruce Pennycook (UT Austin) will deliver a keynote speech entitled "Who will turn the knobs when I die?". This presentation will focus on some issues affecting interactive music composition and performance. Bruce will also present his piece "Sketches", on July 23rd at 7pm, on the Room 2 of Casa da Música and will do a presentation in the inspirational session on Algorithmic Composition and Interactive Music which will be chaired by Carlos Guedes (ESMAE).

ADVANCED COMPUTING: collaborative work takes 13 researchers to Austin on Monday 13th July

Two separate but integrated set of activities take 13 faculty and students to UT Austin in mid July: 1-week project meetings for 5 visitors, and a 5-week stay in internships at ICES and TACC.

Three faculties, João Sobral, Luis Santos (both from UMinho) and Miguel Monteiro (UNL), plus 2 researchers in the same collaborative project funded by CoLab (project PRIA, Parallel Programming Refinements for Irregular Applications) travel to Austin to discuss and advance their research activities with the Austin team led by Keshav Pingali.

The remaining 8 students/researchers, seven from UMinho and one from UNL, go for internships at UT Austin to practice advanced techniques next to

faculties at ICES or research staff at TACC. Some are pre-PhD students with research grants; others are MSc students that attended a track with a set of courses in advanced computing (from numerical methods to parallel computing and deployment of cluster and grids). João Sobral is also coaching this group, since he was one of their lecturers in the MSc courses.

The expectations for these internships are quite high, particularly after the very positive experience most these visitors experienced during the TACC Spring Course at UPorto last May and later at the Multicore Advanced Seminar at UMinho this June. Let's wish them a very fruitful stay in Austin!"

■ Mathematics organizes SUMMER SCHOOL and WORKSHOP in Lisbon with Keynote speech from António Câmara

The Colab Mathematics Summer School is a yearly event that aims at bringing together Ph.D. students and junior faculty with well known experts in the several areas of mathematics.

This is two-week summer program to be held this coming July 2009 in Lisbon, Portugal. The week of July 13 to 17 will feature a summer school for graduate students and postdocs, with lectures by E. Carlen (Rutgers Univ.), P. Degond (Univ. P. Sabatier, Toulouse, France), I. M. Gamba (The Univ. of Texas at Austin), M. Katsoulakis (Univ. of Massachusetts, Amherst) and R. Pego (Carnegie Mellon Univ.).

The following week of July 20 to 24 will hold a workshop featuring lectures on recent progress in this field. The list of confirmed workshop speakers is appended below.

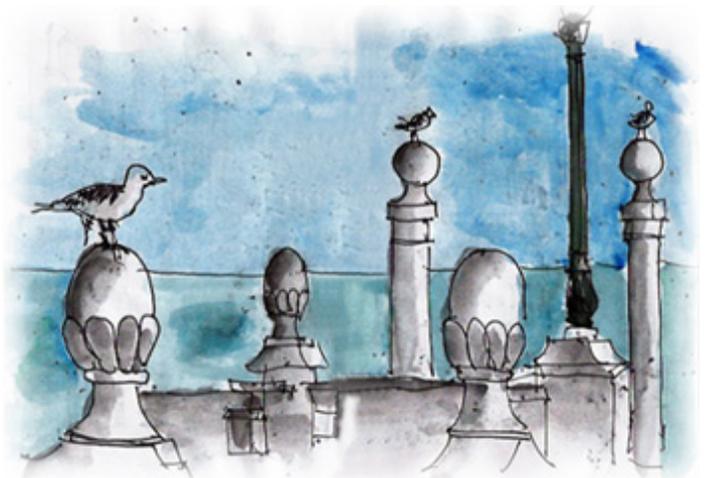
In addition, Dr Antonio Camara, Executive Officer (CEO) of YDreams and Professor at the New University of Lisbon in Portugal will deliver a public lecture on July 23 at 5:00pm, titled "Digital Media and Mathematics" (more details on this events can be found below).

This program is sponsored by the CoLab UT Austin/Portugal program (<http://www.math.utaustinportugal.org>). It is also supported by the ICTI Carnegie Mellon University/Portugal partnership, **CIM** and **CMAF**.

We invite graduate students and postdocs to apply for funding for the first and second week of the program. There might be some partial funding available. Updated information about the program and Registration applications can be found

at: <http://kinetic.ptmat.fc.ul.pt>. Please register NOW! Both events will take place at the Interdisciplinary Complex of the University of Lisbon, <http://www.ciul.ul.pt>

The themes of this program are analytical, numerical, and probabilistic issues related to dynamical properties of complex systems, with connection to natural and social sciences. In addition to the particle systems underlying classical kinetic theory, examples of such systems that have been studied recently include statistical modeling of rapid granular flows, coalescence-breakage models for jet-bubble flows, mixtures undergoing chemical reactions, swarming behavior in social animals, traffic networks (e.g., vehicular traffic on highways, TCP traffic on the internet, traffic of goods on supply chains), and economic models related to information sharing in large populations, as well as applications to climate modeling via stochastic methods.



■ Summer Institute courses winding up

We have had a very busy summer so far. The Summer Institute once again conducted classes in Lisbon and Porto for enrolled graduate students, individuals associated with our industrial affiliates, or interested individuals meeting the course qualifications. We offered two-week, intensive courses in the areas of Online Journalism (Rosental Alves), Screenwriting (Richard Lewis), Convergent Hollywood (Bryan Sebok), Technology and Culture (Craig Watkins), and Digital Documentary Production

SUMMER INSTITUTE 2009
DIGITAL MEDIA

(Nancy Schiesari). This blend of production and theoretical course topics provided people with a broad range of instruction and research opportunities.

The Summer Institute courses in Porto are still ongoing. Subjects have included Online Journalism (Rosental Alves again), Advanced Animation (Geoff Marslett), Collaborative Documentary (Karen Kocher), Film Preservation and Historiography (Caroline Frick), Sound for Picture: Production and Post (Andy Garrison), Screenwriting for New Media (Stuart Kelban), and Creating and Designing Interactive Media (Bruce Pennycook). We anticipate that this training will lead to interesting projects and establish the foundation for some longer and more complex content creation and research investigations. Some early discussions with ZON are in the works regarding longer and polished media products for broad consumption.

Titles and topics planned for the International School on Digital Transformation

The International School on Digital Transformation is almost here, beginning in Porto on July 19. Twenty distinguished researchers, teachers, activists, and entrepreneurs from around the world have submitted an array of noteworthy topics for discussion, addressing issues such as digital rights management and the open standards software movement, the emergence of telecenters and e-governance in East Africa, and privacy advocacy.

Titles include:

"Legal and Technical Control and Resistance on the Internet," by Sunil Abraham of the Centre for Internet and Society in Bangalore. Abraham will examine how political and market influences have acted to stifle the growth of online Open Standards.

Rui Barros of INESC Porto will present "Technology Issues and Small Municipalities," studying the politics of technology issues from a local perspective and looking at citizenship, democracy, and digital inclusion for civil servants and citizens.

"Facilitating Participation and Deliberation at the Urban Level," by Fiorella De Cendio of the University of Milan, addresses the development of community and civic networks, drawing upon examples from Milan, smaller cities such as Vigevano, and in developing countries.

"The Useful Myth of the Obama Campaign" will be addressed by Micah Sifry, co-founder of the Personal Democ-

racy Forum and editor of TechPresident.com. Sifry will discuss how despite common opinion, the Obama presidential campaign was actually an example of a top-down political campaign, and teaches important lessons about participatory politics.

Siva Vaidhyanathan of the University of Virginia will address "The Googlization of Everything," looking at how this single company has shaped expressions of community, identity, and knowledge.

Over 50 students and the organizers of the program in Austin and Porto look forward to these and other exciting presentation and discussion sessions.



UT Austin | Portugal Program launches Network of Creative Cities at Conference

The international Network of Creative Cities was launched on July 7th, at an event promoted by the UT Austin | Portugal Program, CCDR-LVT and the City of Lisbon.

The conference, which had the former Mayor of Austin, William Wynn, representing the city of Austin, took place at the Portugal Pavilion at Parque das Nações, in Lisbon. Austin is an international reference when it comes to creativity as a competitive and economic development factor.

The Network of the Creative Cities Conference also had the presence of the Portuguese Secretary of State for Science, Technology and Higher Education, Manuel Heitor, as well as Mayors and representatives of the most active municipalities in terms of creativity and innovation such as Guimarães, Óbidos, Paredes and others.

Also present were representatives of the New University of Lisbon and the Technical University of Lisbon, as well as the responsible for the Creative Cities Contest to discuss how the theme of the creativity is being developed in high schools and universities.

For more information on the event, as well as the presentations given at the conference, please visit the official website at <http://creativecitieslisbon.org>.



Former Mayor of Austin, Will Wynn speaks at Creative Cities Conference in Lisbon.



First Panel Speakers (From Left to Right: Rolando Borges Martins (Parque Expo), moderator António Câmara (UT Austin | Portugal Director) and Will Wynn (Former Mayor of Austin).



The Secretary of State for Science, Technology and Higher Education addresses the audience at The Creative Cities Conference.

■ UT Austin | Portugal Advanced Computing R&D Project gets Eureka endorsement

The Eureka network, the biggest R&D network in the world, has announced that it will endorse the UT Austin | Portugal Advanced Computing R&D project "SIMCARD - Cardiovascular Imaging, Modelling and Simulation".

This is the first R&D project of UT Austin | Portugal Program to be endorsed by the Eureka network. It is a highly interdisciplinary project aiming at the development, analysis and simulation of mathematical models of the cardiovascular system, built on virtual realistic geometries reconstructed from in vivo medical images. It involves large-scale computational simulations and requires collective expertise to address complex problems and a close connection between mathematics,

scientific computing and clinical experiments.

The project PI is Prof. Adélia Sequeira and the foreign teams involved in Eureka! 4990 SIMCARD, together with CEMAT (IST's Centro de Matemática e Aplicações) are: École Polytechnique Fédérale de Lausanne (EPFL), CMCS - Modelling and Scientific Computing Group of Prof. Alfio Quarteroni and the University of Texas at Austin (UTAustin), ICES - Institute for Computational Engineering and Sciences, through the groups of Prof. Thomas Hughes and Prof. Chandrajit Bajaj.

More information regarding the Eureka Network can be found at: <http://www.eureka.be/inaction/chair.do> and <http://www.eurekaneetwork.org/home.do>.

■ THE UTEN CORNER: S&T COMMERCIALISATION

UTEN Portugal University Technology Enterprise Network

Case Studies on Technology Transfer and Intellectual Property Protection from Fraunhofer discussed at UTEN Workshop #4

Over 50 professionals - among technology transfer officers, incubator managers, and entrepreneurs - participated in UTEN Workshop #4, which took place in Porto, from June 14 to June 16. This workshop was held at Círculo Universitário do Porto and was organized in collaboration with INESC Porto and Fraunhofer Portugal.

Over the two working days of the workshop, the members of UTEN had the opportunity to discuss Fraunhofer's experience in Technology Transfer and Intellectual Property Protection with nine experts from this institute.



The workshop opened with a presentation of the Fraunhofer bizdev model by Annette Braun (Director of International Business Development at Fraunhofer), followed by Dirk Elias (Executive Director of Fraunhofer Portugal) who presented Fraunhofer Portugal. This first session was completed by two presentations: "Stimulus budgeting - the Fraunhofer Financing Model and how it rewards industrial collaboration", by Torsten Nyncke (Program Manager Portugal) and "Bringing knowledge to the customer-Practical experiences from contract research for industry", by Sabine Krieg (Fraunhofer Institute for Interfacial Engineering and Biotechnology IGB).

The workshop's next session focused on the legal aspects of IP Management and Research Contracts, where "The role of IP in Research Organisations", "Research Commercialisation through Licensing Technology" and "The research contract" were discussed by other Fraunhofer experts: Lorenz Kaiser (Division Director of Legal Affairs) and Gisela Kern (Fraunhofer Legal Affairs). The second day of the workshop was dedicated to a third session: "Technology Transfer Mechanisms and Policies". Annette Braun opened with "Strategic planning of new patents and technologies at a Fraunhofer Institute", followed by Roman Götter (Managing Director of the Fraunhofer Academy) who discussed "Training for Specialists and Managers-The Fraunhofer Academy" and Patrick Hoyer (Fraunhofer Research Planning) who introduced the "Fraunhofer Innovation Clusters" regarding research-industry collaboration. Finally, Andreas Aepfelbacher (Fraunhofer Venture Group) presented "Technology Transfer through Spin-Off companies".



Following the tradition of the previous workshops organized by UTEN, after each presentation participants were encouraged to ask questions and discuss the themes with the Fraunhofer experts.

Executive Summary of Participants' Assessments of Workshop #4

To improve future workshops, UTEN staff administered an electronic survey to solicit feedback from participants. Twenty-five of 32 potential workshop participants answered the survey. About half of the respondents were university officials in technology transfer offices or GAPs, with smaller numbers of post-doctoral students, university officials, and industry representatives.

The large majority of participants (88%) said the workshop will help them to strengthen their technology transfer capabilities. Most participants (84%) agreed that the workshop provided information new to them and that they would be able to use the information in their jobs. In terms of improving their own skills, 19% of the participants thought the Workshop was extremely useful while 35% thought it was very useful and 42% felt it was useful. In summary, individuals who responded to the survey about the UTEN | Fraunhofer (INESCPorto) workshop were generally positive about all aspects of the event.

UTEN Researcher Workshop at Innovation Days, June 18, 2009

UTEN Austin presented a three-hour workshop for Researchers on Technology Transfer and Commercialization at Innovation Days. About 50 attendees heard from UTEN Austin staff and a Portuguese tech transfer/researcher panel on best practices in dealing with technology transfer offices in universities, and how researchers can best move their technologies forward toward licensing and commercialization. The workshop was led by the UTEN Austin team of Cliff Zintgraff, Heath Naquin, and Tom Gardner.



UTEN Program Manager Cliff Zintgraff talks with a researcher during the workshop.

UTEN Entrepreneur Workshop at Innovation Days, June 20, 2009



UTEN Assessment Team Lead Heath Naquin hears a new elevator pitch during a "speed pitch" exercise at the workshop.

UTEN Austin presented a three-hour workshop for Entrepreneurs on Global Market Strategy and Global Market Assessment at Innovation Days. About 50 attendees heard from UTEN Austin staff on global strategy, learned about rapid market assessment techniques, and started a global market assessment during the workshop. The session was led by the UTEN Austin team of Cliff Zintgraff, Heath Naquin, and Tom Gardner.

ONGOING OPPORTUNITIES

Digital Media:

INTERNSHIP OPPORTUNITIES IN AUSTIN COMPANIES

We have recently updated our internship program and encourage graduate students and early-career professionals interested in gaining hands-on experience working at Austin-based companies to apply. The program includes airfare to Austin, housing for up to 3 months, health insurance, and visa fees. We also list interns as "visiting researchers" at the University of Texas, which grants them access to the university library system, gyms, and other campus amenities as well as the city bus system. Those interested in applying can find more information about the program, including application procedures at <http://colab.ic2.utexas.edu/dm/internships/>.

Applications may be submitted at any time, but the minimum time for processing and placement is 4 months, so those interested must plan ahead. Internships will last a minimum of 6 weeks, and interns will be placed at digital media companies in Austin. During their time in Austin, interns will not only have the opportunity to learn about the digital media industry through their internship assignment, but will also be able to participate in professionalization and leadership training with University of Texas students enrolled in the Digital Media Leadership Program.

Useful links

<http://digitaltransformationschool.org/2009/>

www.ati.utexas.edu

www.austin-chamber.org

<http://colab.ic2.utexas.edu/dm/>

www.utenportugal.org

www.utaustinportugal.org

www.fct.mctes.pt

www.utexas.edu

www.ic2.org

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