

Presenting Research Papers in English at a Colloquium

A Simulation at the CLA (Centre for Applied Linguistics)
Université de Franche-Comté / COMUE UBFC



Quemada Lecture Hall
Monday March 16th & Monday March 23rd 2020

Monday March 16th – Programme

Each presentation will be followed by questions from the audience.

8:50 am - Doors open

9:05 am - Welcome and Introduction

9:10-9:35 am - Aflah Elouneh

PhD student in Biomechanics, FEMTO-ST institute, Applied Mechanics Department. UMR 6174 CNRS UFC/ENSMM/UTBM
Inverse Identification of Heterogeneous Skin Parameters

Keloid scars are considered to be benign skin tumors that can grow beyond the initial limits of a wound. The appearance of keloids exclusively in certain anatomical areas attests to the influence of mechanical stress as one of the driving factors. Thus, a mechanical characterization of a keloid scar needs to be conducted in order to understand the keloid better and, ultimately, to prevent its growth. Part of our work consisted in simulating a uniaxial tensile test. The scarred skin was modelled as a bi-material 2D-structure. By using artificial data, the material parameters of both the keloid and the healthy skin medium were identified through a FEMU-based open-source framework. The results show that at least four material parameters can be identified accurately using only a uniaxial test.

9:35-10 am - Ibrahim Tawbe, PhD student in Economics, CRESE laboratory. EA 3190/UFC/UFR SJEPG

The Social Value of Information and Environmental Regulation

Environment-related issues have gained greater importance over the past three decades. Increasingly strict regulations and pressure from different economic agents mean that a pollutant must provide more information on its productive practices and its ecological performance. After the traditional (legal) regulatory approach widely used in the 1970s, and that based on economic instruments in the 1980s, over the past few years we have been witnessing, both internationally and nationally, the emergence of a new form of environmental governance. This is based on the dissemination of environmental information (regulation by revelation). By imposing new legal rules allowing access to environmental information, this governance aims to enforce the general principle of the "right to know" of each citizen and to protect everyone's right to a healthy environment. The goal is to enrich the debate on the social value of public environmental information and to suggest new complementary mechanisms aimed at protecting the environment as much as possible.

10 am: Break (Complementary Refreshments)

10:15-10:40 am - Florian Renosi, PhD student in biology, UMR1098 RIGHT INSERM/UFC/EFS BFC

Genetic heterogeneity of Blastic plasmacytoid Dendritic Cell Neoplasms

Blastic plasmacytoid Dendritic Cell (pDC) Neoplasm (BPDCN) is a rare and aggressive form of leukemia, characterized by almost constant relapses. In oncology, tumor cells acquire mutations that give them a proliferative advantage over normal cells, by altering some biological networks. Understanding these networks has allowed the medical world to develop targeted therapies in an increasing number of patients. However, this has not been possible in BPDCN, because the frequency and association of mutations remain uncertain. In this study, mutations and gene expression profiles were obtained for 13 cases. Chromosome losses and mutations are very frequent and diverse, evoking both myeloid and lymphoid neoplasms. Moreover, the gene expression profiles were compared to other acute leukemia and normal pDCs: BPDCN appears closer to normal pDCs and leukemia derived from B-cells than other leukemia. In addition, we also identified two groups of BPDCN with distinct outcomes and prognosis, so we now aim to confirm this on a validation cohort of more cases (n=30).

10:40-11:05 am - Hanae El Gouj, PhD student in Geography and planning, UMR 6049, ThéMA laboratory / UBFC

Morphogenesis of road network and mobility: Understanding past patterns to plan future cities.

Road network construction is the result of a subtle balance between specific accessibility to space and rapid access to important or strategic points. To evaluate and improve territorial accessibility, it is fundamental to understand how road networks change in relation to mobility modes and activity locations. Planning decisions imply disparities in territorial access that can be seen in network morphology and affect territorial development.

The objective of my thesis is to conduct a morphological analysis of road patterns through time, focusing on the Besançon and Pontarlier agglomerations (Haut-Doubs), in order to understand their logic of development, in relation to transport modes used. First, studying the morphology of old networks and their transformation subsequent to cars becoming the main mode of transportation will allow us to understand mechanisms leading to changes. Then, the observed morphogenesis will be modeled through adapting network forms to different functional evolution. Finally, this work aims to suggest different future scenarios for possible road network morphological transformations.

Taking into account transitions in energy and ecology and keeping sustainable development in mind, territorial planning will benefit greatly from a better understanding of road pattern transformations and their impact on accessibility and mobility.

Closing Remarks.

Monday March 23rd – Programme

Each presentation will be followed by questions from the audience.

8:50 am - Doors open

9:05 am - Welcome and Introduction

9:10-9:35 am - Chahrazad Benbalit

PhD student in Chemistry, UTINAM institute UMR 6213 CNRS-UBFC NCM / EA 4267 PEPITE

Manufacturing of silver nanowires/PVDF self-supporting thin flexible electrode membranes.

Flexible electrodes are playing an increasing role in medical applications, such as ECG (electrocardiography) or TENS (Transcutaneous electrical nerve stimulation). This is due to comfort in use and thus their suitability for health monitoring under movement and during sport. The development of manufacturing methods and materials in this field is further driven by the emerging field of flexible robotics. Polymer nanocomposite materials are particularly promising in this field, offering a broad range of mechanical properties, manufacturing and formulation techniques to implement desired properties such as electrical conductivity, mechanical flexibility and stretchability, and water resistance or water repellence. Polymers, such as polyvinylidene fluoride (PVDF), are promising for this approach as stable, flexible, thin membranes can be produced on a large scale. We have compared different up-scalable manufacturing techniques of thin electrode membranes based on PVDF as a function of silver nanowire loads, using electrospinning, spincoating, and drop casting techniques. The membranes we produced were analysed by electrical four-point probing, optical microscopy, atomic force microscopy, as well as stability tests under bending, stretching, and water exposure.

9:35-10 am - El hadj Kane

PhD Student in Economics, University of Franche-Comté/CRESE/EA 3190

Online auctions versus posted price mechanisms: An empirical study for the second-hand watch market.

This presentation analyzes the seller's choice between online auctions and posted price mechanisms. Using a dataset of 13,982 second-hand watch listings on the eBay platform, we compare sellers' expected revenue using each mechanism. Firstly, we find that eBay auctions have a greater sale probability for some categories of watches, but lead on average to lower prices compared to posted price mechanisms. Secondly, we find that professional eBay sellers get higher sales prices than occasional sellers, regardless of the value of the watch for sale. We then show that these higher sales prices cannot only be explained by the type of sellers alone. We estimate an econometric model to analyse the determinants of an eBay auction price. Our estimates show that professional sellers set longer durations, attract more bidders, and therefore receive more bids compared to occasional sellers. On the other hand, we find that auctions are more sensitive to the negative effect of the competitive environment as the value of the auctioned watch decreases. Thus, an eBay seller who chooses an auction is better off from making the auction more attractive (setting long duration or reducing the starting bid for example) when the value of the watch is sufficiently high. Conversely for less expensive watches, revenue decreases with the number of simultaneous competing mechanisms, for both competing auctions and posted price mechanisms. In this latter case, a seller can increase revenue by reducing the auction's duration. This strategy means the sale is less exposed to competition.

10 am: Break (Complementary Refreshments)

10:15-10:40 am - Yacine Mokhtari

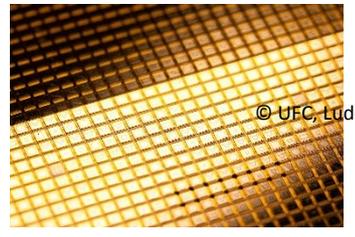
PhD student in mathematics, mathematics laboratory of Besançon/UBFC. UMR CNRS 6623

Stability and Control of Dynamical Systems

Many phenomena in various fields (physics, chemistry, biology...) are naturally unstable. The output from the system may be infinite even though the input to the system was finite. Also, systems that are unstable often incur a certain amount of physical damage, which can become costly. Controlling a system means applying some degree of force to guarantee that the output reaches a desired state at a desired time.

In this presentation, I will give a brief introduction to the concepts of both stability and controllability.

Closing Remarks.



© UFC, Ludovic Goda

For further information, please contact:
caroline.roussilhes@univ-fcomte.fr
james.coady@univ-fcomte.fr