

Presenting Research Papers in English at a Colloquium

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



Salle Quémada, CLA – Université de Franche-Comté
Monday 20th of March and Monday 27th of March 2023

Monday March 20th – 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 –Ouassim BOUKHENNOUFA, PhD Student, AS2M Department, DATA-PHM Team, FEMTO-ST, UBFC
Contribution to diagnostics and prognosis of hyperparathyroidism based on expert knowledge and artificial intelligence data fusion

Hyperparathyroidism is a medical condition that affects the parathyroid glands, which are small glands located in the neck near the thyroid gland. These glands play an important role in regulating the levels of calcium in the blood and bones. The glands of people with hyperparathyroidism, become overactive and produce too much of the parathyroid hormone. To diagnose this disease, we aim to create a medical tool that will help doctors in their work. This tool will have images as inputs - MRI, CT scans, etc, - and will give clues to doctors on how to diagnose hyperparathyroidism. The objective is not to replace the work of doctors but only to help them in their tasks. Until now, the diagnosis is done 100% manually by medical experts. Using artificial intelligence, we want to assist doctors in their work. The doctors will only take care of giving a more accurate diagnosis and prognosis. By achieving this, we will gain in terms of time and precision. The final objective is to give patients the best medical assistance possible.

9:35-10 am – Chloe DROZD, PhD Student, UFR STAPS, EA3920

Effects of a supervised exercise program on insomnia in patients with non-metastatic breast cancer during chemotherapy / FATSOMCAN study

In patients with breast cancer, insomnia is frequent and affects 69% of patients treated with chemotherapy, a level twice as high as the general population. It causes fatigue, that adds to cancer related-fatigue. Cancer diagnosis and side effects of treatment can be a cause of insomnia. The objectives of our study are to quantify insomnia and evaluate its evolution during chemotherapy treatment while investigating the effects of a supervised exercise program.

10 am - Break

10:15-10:40 am – Aiman ZINAOU, PhD Student, Nano-optics Department, FEMTO-ST, UBFC
Integrated photonics on a LINBO3 with a low-energy manufacturing consumption

Integrated photonics is the science that studies the propagation of light in a confined medium. This medium is quite special and is characterized by many properties that give it the ability to modulate the light or generate other types of light which we called second harmonic generation. "Lithium Niobate" is one of those materials that presents significant physical properties: electro-optic, acousto-optic, piezo-electric and non-linear. This makes it very attractive in several applications in data-com with high-speed modulators, frequency converters for quantum applications and optical sensors. The real challenge remains to reduce the size of the devices based on this material to a micronic size while keeping a high performance. In the meantime, the energy cost of manufacturing must be reduced to overcome the environmental challenges.

Closing Remarks.

Monday March 27th – 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 – Morgan Lyphout, PhD student, LINC, UFBC and University of New Mexico

Doing Two Things at Once : Can Novel Tasks Be Performed Automatically ?

According to prevailing theories of dual-task interference, two unpracticed and arbitrary tasks cannot be performed simultaneously. Instead, we propose that people are fully capable of doing two things concurrently so long as the tasks are sufficiently prepared. This hypothesis was tested in two dual-task experiments. In Experiment 1, participants completed a classic dual-task experiment. In Experiment 2, another group received the same tasks and instructions, but the procedure was modified so as to boost preparation on the second task, which is known to be neglected while dual-tasking. If dual-task interference stems from insufficient task preparation, this new procedure should promote efficient parallel processing of the tasks. However, if it is caused by an absolute limitation inherent to our cognitive system, no one should manage to perform the tasks concurrently. Is the human mind able to process two novel tasks at once ?

9:35-10 am – Charlotte Bredy-Maux, PhD student, LNiT, UBFC

The Problems with Materno-Foetal Surveillance during Labour and How AI Could Make it Safer.

In France, the newborn mortality rate has been stagnating at 3 per 1, 000 live births since the late 1990's. There has been no new data since 2018 and the macro-statistical history of the last two decades leaves one blind before the different individual risk factors associated to those newborns deaths up to their first 28 days of extra-uterine life. Moreover, the last European and French population-scale surveys i.e., Euro-Perista and the National Perinatal Survey respectively, give no insights on why France sits in the last quartile of the 28 EU-members studied.

Materno-foetal infections, pre-eclampsia, transfers in intensive-care units and more urgently hypoxic-ischemic hypoxia are more and more responsible for deterioration in quality of life of newborns. De facto, the state of materno-foetal surveillance is empirically based on few reliable data, with no epidemiological references and through the lens of a unique tool that is the electro-cardiogram (ECG). To this end, a Supervisory Control And Data Acquisition System (SCADA) has been built in order to feed a novel System of Artificial Intelligence dedicated to the prediction of newborn mortality risk factors.

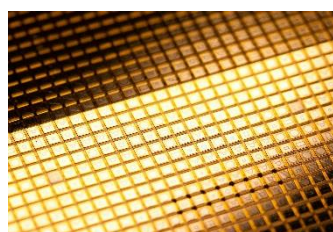
10 am - Break

10:15-10:40 am – Jeremy BORGES, PhD student, Centre Lucien Febvre, UBFC

The Bolsheviks and the political work among Muslim women of the Soviet Caucasus from 1920 to 1930

In 1917, the Bolsheviks, Lenin's party, took power in Russia. But the red tide didn't stop there and the whole former Russian Empire went into eruption. Many people, who had been colonized before by the Russians, also revolted. But after many events, the Caucasus people finally joined by 1921 what would become the new Soviet Union. To show its commitment to break with colonization, the new government wanted to better the lives of Caucasus inhabitants and especially those of the most oppressed half of the population: women. More difficult to reach because of a gender segregated environment, it's only after the revolution that Bolshevik leadership finally was able to exercise an influence on women. Industrial unions and political parties, unable to attract women, were insufficient. Bolshevik leadership needed a new method. Many laws were decreed such as the right to vote, maternity leave or the right to abortion. But law was often difficult to enforce, so Bolshevik women activists founded a type of feminist organization: The Zhenotdel, tasked to connect with Soviet women, and in this area, the most numerous were those of the Muslim national minorities. The goal was helping them access education, employment, culture, and full citizenship. My aim is to study the policies carried out by the party in the Caucasus, to extract from the sources the theory and concrete practice of the work carried out by the women's section of the party.

Closing Remarks.



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