

3rd Signal Processing and Monitoring (SPaM) in Labour Workshop

Porto, Portugal

28-30 October 2019

MONDAY (28TH OCT)

8:20 REGISTRATION & COFFEE

8:45 – 9:00 WELCOME

9:00 – 10:40 TRANSABDOMINAL MONITORING

9:00-9:40 Rik Vullings, Eindhoven University of Technology, The Netherlands

Technology development for improved CTG acquisition, complemented with fetal electrocardiography

9:40-10:10 Hau-tieng Wu, Duke University, USA

Long-term non-invasive fetal ECG morphology analysis from few channels

10:10-10:40 Elizabeth Rendon-Morales/Rodrigo Aviles-Espinosa, Sussex University, UK

Detection of early fetal cardiac electrical activity from the maternal abdomen noninvasively using electric potential sensors.

10:40 – 11:10 COFFEE BREAK

11:10 – 12:20 AUTOMATED CTG ANALYSIS

11:10 – 11:45 Antoniya Georgieva, University of Oxford, UK

Big data for intrapartum fetal monitoring: OxSys developments

11:45 – 12:20 Phillip Warrick, PeriGen, Canada

CTG analysis/outcome prediction

12:20 – 13:20 LUNCH

13:20 – 14:30 ANIMAL DATA MEETS HUMAN DATA: AUTOMATED CTG ANALYSIS

13:20-13:45 Massimo Rivolta, Università degli Studi di Milano, Italy

Acceleration and Deceleration Capacities during labour

13:45-14:05 Antoniya Georgieva, University of Oxford, UK

Computerized fetal heart rate metrics: validation of Deceleration Area and Decelerative Capacity on experimental data from cord occlusions in the chronically instrumented fetal sheep

14:05-14:30 Stephane Roux, ENS Lyon, France

Analysis of sheep fetal heart variability response to umbilical cord occlusions

14:30 – 15:00 LOW RESOURCE SETTINGS & CONTINUOUS FETAL HEART RATE MONITORING

Solveig Haukås Haaland, Laerdal, Norway

Moyo: experience with continuous fetal heart rate monitoring in low resource settings

15:00 – 16:00 FETAL HEART RATE ANALYSIS (GENERAL)

15:00-15:30 Martin Frasch, University of Washington, USA

Heart rate variability code: does it exist and can we hack it?

15:30 – 16:00 William Fifer, Columbia University, USA

Longitudinal fetal HR monitoring in the Safe Passage study : sex and sleep state differences

16:00 – 16:30 COFFEE BREAK

16:30 -19:30 SOCIAL PROGRAM (START FROM WORKSHOP VENUE AND GO TO CITY CENTER)

See details at the end of this programme

TUESDAY (29TH OCT)

9:00 – 10:40 AUTOMATED CTG ANALYSIS

9:00-9:40 Maria Signorini, Politecnico di Milano, Italy

Data mining and artificial intelligence in fetal monitoring

9:40-10:20 Ines Nunes & Hernâni Gonçalves, University of Porto, Portugal

Sisporto Developments/Updates

10:20-10:40 Malin Holzmänn, Karolinska Institutet, Sweden

Intrapartum short term variability and deceleration area, can we develop instead of reinvent the wheel?

10:40– 11:10 COFFEE BREAK

11:10 – 12:30 CTG ANALYSIS

11:10-11:50 Diogo Ayres-de-Campos, University of Lisbon, Portugal

CTG (+ STAN) classification – where are we now? where do we go?

11:50-12:30 Barry Schifrin, USA

The precepts of fetal monitoring - what questions are we asking, what questions should we be asking and what responses are we expecting?

12:30 – 13:30 LUNCH

13:30 – 15:05 THE CLINICAL PERSPECTIVE

13:30-14:10 Ana Alarcon, St Joan De Deu Barcelona Hospital, Spain

The neonatologist's perspective and HIE

14:10-14:25 Malin Holzmänn, Karolinska Institutet, Sweden

Is there any rationale for admission CTG in the post-metaanalysis era? – reflections from a Swedish context

14:25-15:05 Austin Ugwumadu, St George's University, UK

Non-reactive FHR patterns - what is the role of indirect, non-hypoxic ischaemic players...?

15:05 – 15:30 COFFEE BREAK

15:30 – 17:15 CTG ROUND TABLE DISCUSSION

Diogo Ayres-de-Campos; Austin Ugwumadu; Ana Alarcon; Barry Schifrin & Malin Holzmänn

17:15 – 17:35 Michel Haritopoulos on COST Action on fetal monitoring

19:00 – 22:00 NETWORKING DINNER: CRUISE IN A RABELO BOAT

See details at the end of this programme

9:00 – 10:00 KEYNOTE

Joao Bernardes, University of Porto, Portugal

The past and the future of automated CTG analysis

10:00 – 10:30 COFFEE BREAK

10:30 – 12:10 AUTOMATED CTG ANALYSIS

10:30-11:00 Samuel Boudet, Catholoc University of Lille, France

A benchmark for FHR morphological analysis methods based on an expert consensus comparison

11:00-11:40 Tomoaki Ikeda, Mie University of Graduate School of Medicine, Japan

Five-tier color-coded fetal heart rate interpretation and computer analysis with Trium CTG Online in Japan

11:40-12:10 Petar Djurich, Stony Brook University, USA

Analysis of FHR signals by deep Gaussian processes

12:10– 12:30 THE HISTORICAL PERSPECTIVE OF THIS WORKSHOP

Gerald Quirk, Stony Brook University, USA

A personal reflection

12:30 FINAL REMARKS AND GOOD-BYE

THE CLINICAL PERSPECTIVE – CTG ROUND TABLE OUTLINE

Aim: learn from existing CTGs and agree on the likely underlying pathophysiology. This will be to benefit the technical experts on the workshop by establishing what are the key characteristics in these specific CTGs that the automated algorithms should aim to detect.

Format:

Panellists to review and discuss the physiology behind a set of pre-selected cases with available intrapartum CTG and clinical data (as a very minimum gestation/pregnancy risk factors/cord gases/APGARS/HIE grade if applicable/type of delivery/labour risk factors such as thick meconium or obstetric catastrophe). The cases are submitted by panellists and a shortlist selected by Ines Nunes & Antoniya Georgieva.

Panellists:

Diogo Ayres-de-Campos; Austin Ugwumadu; Ana Alarcon; Barry Schiffrin; Malin Holzmann

Moderator:

Ines Nunes

SOCIAL PROGRAMME DETAILS

Sunday 27 Oct, 19:00-21:00 Informal get together

Get together after your trip to Porto and relax before the Workshop starts at the Tappas Caffé near the FMUP (workshop venue). Just pop-in and join for a drink! Tappas Caffé's speciality is oven-baked “francesinhas”, one of the most typical dish of Porto.

Address: Tappas Caffé
7674 F, Estrada da Circunvalação, 4200-162 Porto

Google maps: <https://www.google.pt/maps/place/Tappas+Caff%C3%A9+Porto/@41.183603,-8.6025307,17z/data=!3m1!4b1!4m5!3m4!1s0xd2464393838fa9b:0x9bdb709fadbc1ab!8m2!3d41.183603!4d-8.600342>



Monday 28 Oct, 16:30-19:30 Scavenger Hunt in the City Center on Monday (start from the workshop venue!)

The adventure starts at 17:30 at Avenida dos Aliados (Porto City center). We will travel by underground train from the Workshop venue to the Avenida dos Aliados (about 35 minutes). We will be divided into teams and each team will have a unique route for the peddy-papper (about 2 hours). All you need is your smartphone and internet access. You do not need to install any applications.

Tuesday 29th Oct, 19:00-22:00 Workshop Dinner

Come and discover the city of Porto from the Douro River! Partners and kids are welcome! It will be wonderful to see Porto by night from this beautiful dinner cruise in a Rabelo Boat. Appetizers, pre-selected menus and drinks included - 50 eur per person.

If you want to attend, please send an e-mail to csantos.cristina@gmail.com before **18th Oct**, saying how many people and food restrictions details. Payment should be done at the Workshop check-in desk (in cash please, there is a cash machine near by).

We will be at “Cais de Gaia” at 19:00 to board the rabelo boat.

