Lucien **Maman**

PhD Student · Social signal processing/Affective computing

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Education

LTCI, Télécom Paris, Institut Polytechnique de Paris
Paris, France

PHD ON THE MULTIMODAL GROUPS' ANALYSIS FOR AUTOMATED COHESION ESTIMATION
Jun. 2019 - PRESENT

- **Supervised by**: Prof. Laurence Likforman-Sulem, Prof. Mohamed Chetouani and Prof. Giovanna Varni
- **International collaborations**: Collection of the GAME-ON dataset
- **Member of the Scientific committee** of the International Workshop on Corpora And Tools for Social skills annotation (CATS2021)
- **Reviewer** for international conferences and workshops (e.g., the International Conference on Multimodal Interaction)

Cranfield University
Cranfield, U.K.

MSc COMPUTATIONAL & SOFTWARE TECHNIQUES IN ENGINEERING
Sep. 2016 - Sep. 2017

- **Award Overall Mark**: 75/100
- **Master thesis**: Development and improvement of the features of an artificially intelligent business advisor - Supervised by Prof. Irene Moulitsas

ESTIA (Ecole Supérieure des Technologies Industrielles Avancées)
Biarritz, France

ENGINEERING DEGREE
Sep. 2014 - Sep. 2017

- **Group projects**: Creation of an application and a module to control the light in a room via a smartphone ; Development of a robot in a hospital environment (CAD) and its interface (JAVA SWING)

Experience

Grabyo
London, U.K.

VIDEO ENGINEER
Oct. 2017 - Jun. 2019

Grabyo is a browser-based live video production suite integrated with popular social media platforms such as Facebook, YouTube and Instagram. The cloud-based technology is used by major sports federations and media companies to produce professional-quality live streams and video clips for digital audiences.

- Improved the security over the key components of the platform.
- Reduced the monthly cost of the global architecture by £10k by implementing a new workflow.
- Developed a new search feature using image recognition and AWS services to give context to videos.

BRiN (now Bizversity)
Gold Coast, Australia

MOBILE APPLICATION DEVELOPER INTERN
Apr. 2017 - Aug. 2017

BRiN is the world's first artificially intelligent business advisor, designed to educate and support entrepreneur's needs. They sponsored and allowed me to use my results to write my MSc thesis.

- Bug corrections and testing in iOS and Android platforms.
- Improved the chat using Rivescript, Python and Node JS.
- Integrated the voice recognition feature.

R&D department of the Exploration and Production section at TOTAL
Pau, France

ENERGY ENGINEER INTERN
May 2016 - Aug. 2016

Established in 1924, TOTAL is one of the seven "Supermajor" oil companies in the world. Its businesses cover the entire oil and gas chain.

- **Internship program**: How can we produce water from the air using energy resources on site?
- Studied the existing water production systems and energy audits and pre-sized solar panels.
- Set up experiments to confirm the study results.

SPORT CONTROLE
Biarritz, France

RESEARCH ENGINEER INTERN
Feb. 2015 - Apr. 2015

Founded in 2008, SPORT CONTROLE is a small consulting sports medical company that develops and tests innovative products to meet demand in the field of sport, leisure and well-being.

- Marketing (benchmarking, mapping, meeting the client's requirements), setting up a new project to test a helmet which minimises micro-trauma linked to sport activities.
- Designing a test bench to test the helmets by dropping them and carrying out the test.

Teaching

Supervision of two MSc students   *Télécom Paris, France*

Level: Master   *Mar. 2020 - Aug. 2020 (6 months) and*
                                                          Apr. 2021 - Sept. 2021 (6 months)

- Development of features and baseline models to predict variations of cohesion using motion capture data
- Integration of leadership information in models of cohesion

Teaching associate   *Télécom Paris, France*

Level: Bachelor / Number of student per session: around 30   *128 hours - Jun. 2019 - Jun. 2022*

- Software engineering supervisor of 5 groups for PACT (Thematic collaborative learning project), for 3 consecutive academic years
- Hidden Markov Model with Prof. Laurence Likforman-Sulem, for 3 consecutive academic years
- Bayesian inference with Prof. Laurence Likforman-Sulem, for 2 consecutive academic years
- k-nearest neighbors algorithm with Prof. Laurence Likforman-Sulem for 2 academic years
- Neural Networks with Prof. Chloé Clavel and Prof. Giovanna Varni for 2 academic years
- Gestural and mobile interactions with Prof. Giovanna Varni

Scientific Collaborations

International

The GAME-ON dataset

Available upon request   *Jun. 2019 - Jul. 2020*

GAME-ON is a multimodal dataset composed of more than 11 hours of video, audio, and motion capture data. It has been designed for studying groups' dynamics and cohesion in particular.

The data collection and its design have been done in collaboration with Eleonora Ceccaldi and Prof. Gualtiero Volpe from the University of Genoa (Italy), Prof. Nale Lehmann-Willenbrock from the University of Hamburg (Germany), Prof. Mohamed Chetouani from the Sorbonne University (France) and Prof. Laurence Likforman-Sulem, Prof. Giovanna Varni and myself from Télécom Paris (France).

Publications

Journals

2020	**Maman, L.,** Ceccaldi, E., Lehmann-Willenbrock, N., Likforman-Sulem, L., Chetouani, M., Volpe, G. & Varni, G. 2020. GAME-ON: A Multimodal Dataset for Cohesion and Group Analysis. IEEE Access, 8: 124185-124203. 2020.	*Published*

Conferences

2021	**Maman, L.,** Likforman-Sulem, L., Chetouani, M. and Varni, G. 2021. Exploiting the Interplay Between Social and Task Dimensions of Cohesion to Predict its Dynamics Leveraging Social Sciences. In 23rd International Conference on Multimodal Interaction (ICMI '21), Canada - Best Paper Award	*Published*
2021	Sabry, S., **Maman, L.** and Varni, G. 2021. 7. An Exploratory Computational Study on the Effect of Emergent Leadership on Social and Task Cohesion. In Companion Publication of the 2021 International Conference on Multimodal Interaction (ICMI '21 Companion), Canada.	*Published*
2021	**Maman, L.,** Chetouani, M., Likforman-Sulem, L. and Varni, G. 2021. Using Valence Emotion to Predict Group Cohesion's Dynamics: Top-down and Bottom-up Approaches. In 9th International Conference on Affective Computing and Intelligent Interaction (ACII), Japan.	*Published*
2020	Walocha, F., **Maman, L.,** Chetouani, M., Varni, G. 2020. Modeling Dynamics of Task and Social Cohesion from the Group Perspective Using Nonverbal Motion Capture-based Features. In Companion Publication of the 2020 International Conference on Multimodal Interaction (ICMI '20 Companion), Netherlands.	*Published*
2020	**Maman, L.,** 2020. Multimodal Groups' Analysis for Automated Cohesion Estimation. In Proceedings of the 2020 International Conference on Multimodal Interaction (ICMI '20), Netherlands.	*Published*
2020	**Maman, L.,** Varni, G. 2020. GRACE : Un projet portant sur l'étude automatique de la cohésion dans les petits groupes d'humain. Workshop sur les Affects, Compagnons artificiels et Interactions, France	*Published*