Lucien **Maman**

PhD Student · Social signal processing/Affective computing · Deep Learning

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Education

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

PhD on the Automated Analysis of Cohesion in Small Groups Interactions — *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** for 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)
- **Keywords:** Affective Computing, Deep Learning, Keras, Machine learning, Multimodal data, Python, R, Social Signal Processing, Tensorflow

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 A.I. business advisor - Supervised by Prof. Irene Moulitsas
- **Keywords:** C, C++, High Performance Computing, Java

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.
Keywords: Agile methodology, Cloud computing, Java, Ruby, Ruby on Rails, Scrum master, Terraform

- 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.
Keywords: App development, Java, Node JS., Python, Rivescript, Swift

- 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 three MSc students — *Télécom Paris, France*

LEVEL: MASTER — *Mar. 2020 - Aug. 2020 (6 months), and Apr. 2021 - Sept. 2021 (6 months), and Apr. 2022 - Jul. 2022 (4 months)*

- Development of features and baseline models to predict variations of cohesion using motion capture data.
- Integration of leadership information in computational models of cohesion.
- Integration of the attention phenomenon in computational 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

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.	*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*