



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE: 4796

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at **Dipartimento di Informatica**

Scientist- in - charge: **Prof.ssa Lanzarotti**

[Alessandro D'Amelio]

CURRICULUM VITAE

PERSONAL INFORMATION

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| Surname | D'Amelio |
| Name | Alessandro |
| Date of birth | [30, 07, 1992] |

PRESENT OCCUPATION

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| Appointment | Structure |
| PhD. Candidate | Dipartimento di Informatica - Università degli Studi di Milano |

EDUCATION AND TRAINING

| Degree | Course of studies | University | year of achievement of the degree |
|--------|-------------------|----------------------------------|-----------------------------------|
| Degree | Informatica | Università degli Studi di Milano | 2016/2017 |

FOREIGN LANGUAGES

| Languages | level of knowledge |
|-----------|--------------------|
| English | C1 |

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

| Year | Description of award |
|------|---|
| 2017 | PhD Scholarship, Università degli Studi di Milano |



TRAINING OR RESEARCH ACTIVITY

Novembre 2017 - present

Università degli Studi di Milano, Dipartimento di Informatica

As a member of the PHuSe Lab Research Group I have been involved in research topics concerning the understanding of human behaviour as expressed by its behavioural signals (physiological signals, facial signals, eye movements) with the aim of advancing natural interfaces, social interaction, affective computing, health and wellbeing. In particular, my research project dealt with the development of a computational model of attentive eye guidance on visual stimuli. The problem of understanding human visual attentional mechanisms has a long history rooted in computational psychology and neurobiology. However, in the last couple of decades, the problem of predicting attention allocation on a visual stimuli has started to catch the interest of the computer vision and pattern recognition community, pushed by the fast growing number of possible applications (autonomous driving, image/video compression, robotics). A fresh view on the problem is proposed; in particular the dynamics of the attention deployment is modelled as a stochastic foraging problem, thus taking advantage of the bulk of knowledge gained in the Ecology literature. Following such rationale, a full computational model is proposed. It involves the description of the stochastic decision mechanism associated to the selection of relevant information, through the principles of Optimal Foraging Theory (OFT). Moreover, a mechanistic description of eye movements is provided by means of a Stochastic Differential Equation (SDE).

PROJECT ACTIVITY

| Year | Project |
|------|--|
| 2017 | "Interpreting emotions: a computational tool integrating facial expressions and biosignals based shape analysis and bayesian networks", funded by MIUR through the Fondo per Investimenti della Ricerca di Base (FIRB) |
| 2019 | "Stairway to Elders: Bridging space, time and emotions in their social environment for wellbeing", funded by Fondazione Cariplo through Bando "Ricerca Sociale sull'invecchiamento: persone, luoghi e relazioni". |

CONGRESSES AND SEMINARS

| Date | Title | Place |
|----------------------------|---|-----------------|
| 20 November 2019 | Seminar at University of Essex A Probabilistic Model of Visual Attention and Eye Movements | Colchester, UK |
| 7 - 11 October 2019 | International Symposium on Formal Methods Gender Recognition in the Wild with Small Sample Size-A Dictionary Learning Approach | Porto, Portugal |
| 20 May 2019 | PervasiveHealth'19: 13th EAI International Conference on Pervasive Computing Technologies for Healthcare Social traits from stochastic paths in the core affect space | Trento, Italy |



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| 8 - 14 September 2018 | European Conference on Computer Vision (ECCV) Workshops, 2018 | Munich, Germany |
| Give ear to my face: modelling multimodal attention to social interactions | | |

PUBLICATIONS

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| Articles in journals |
| Boccignone, G., Conte, D., Cuculo, V., D'Amelio, A. , Grossi, G., & Lanzarotti, R. (2020). <i>An Open Framework for Remote-PPG Methods and their Assessment</i> <i>IEEE Access</i> |
| Boccignone, G., Cuculo, V., D'Amelio, A. , Grossi, G., & Lanzarotti, R. (2020). <i>On Gaze Deployment to Audio-Visual Cues of Social Interactions</i> . <i>IEEE Access</i> , 8, 161630-161654. |
| Bursic, S., Boccignone, G., Ferrara, A., D'Amelio, A. , & Lanzarotti, R. (2020). <i>Improving the Accuracy of Automatic Facial Expression Recognition in Speaking Subjects with Deep Learning</i> . <i>Applied Sciences</i> , 10(11), 4002. |
| Cuculo, V., D'Amelio, A. , Grossi, G., Lanzarotti, R., & Lin, J. (2019). <i>Robust single-sample face recognition by sparsity-driven sub-dictionary learning using deep features</i> . <i>Sensors</i> , 19(1), 146. |
| Boccignone, G., Conte, D., Cuculo, V., D'Amelio, A. , Grossi, G., & Lanzarotti, R. (2018). <i>Deep construction of an affective latent space via multimodal enactment</i> . <i>IEEE Transactions on Cognitive and Developmental Systems</i> , 10(4), 865-880. |

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| Congress Proceedings |
| Bursic, S., D'Amelio, A. , Granato, M., Grossi, G. & Lanzarotti, R. "A Quantitative Evaluation Framework of Video De-Identification Methods" 25th International Conference on Pattern Recognition (ICPR 2021) (Accepted) |
| Boccignone, G., Cuculo, V. & D'Amelio, A. "How to Look Next? A Data-Driven Approach for Scanpath Prediction." <i>International Symposium on Formal Methods</i> . Springer, Cham, 2019. |
| D'Amelio, A. , Cuculo, V., & Bursic, S. (2019, October). <i>Gender Recognition in the Wild with Small Sample Size-A Dictionary Learning Approach</i> . In <i>International Symposium on Formal Methods</i> (pp. 162-169). Springer, Cham. |
| Bursic, S., Cuculo, V., & D'Amelio, A. (2019, October). <i>Anomaly detection from log files using unsupervised deep learning</i> . In <i>International Symposium on Formal Methods</i> (pp. 200-207). Springer, Cham. |
| Cuculo, V., D'Amelio, A. , Grossi, G., & Lanzarotti, R. (2019, September). <i>Worldly Eyes on Video: Learnt vs. Reactive Deployment of Attention to Dynamic Stimuli</i> . In <i>International Conference on Image Analysis and Processing</i> (pp. 128-138). Springer, Cham. |
| Boccignone, G., Cuculo, V., D'Amelio, A. (2019, September). <i>Problems with saliency maps</i> . In <i>International Conference on Image Analysis and Processing</i> (pp. 128-138). Springer, Cham. |
| Cuculo, V., & D'Amelio, A. (2019, August). <i>OpenFACS: an open source FACS-based 3D face animation system</i> . In <i>International Conference on Image and Graphics</i> (pp. 232-242). Springer, Cham. |
| Boccignone, G., Cuculo, V., D'Amelio, A. , & Lanzarotti, R. (2019, May). <i>Social traits from stochastic paths in the core affect space</i> . In <i>Proceedings of the 13th EAI International</i> |



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| <i>Conference on Pervasive Computing Technologies for Healthcare</i> (pp. 314-319). |
| Bodini, M., D'Amelio, A. , Grossi, G., Lanzarotti, R., & Lin, J. (2018, September). <i>Single sample face recognition by sparse recovery of deep-learned l1 features</i> . In <i>International Conference on Advanced Concepts for Intelligent Vision Systems</i> (pp. 297-308). Springer, Cham. |
| Cuculo, V., D'Amelio, A. , Lanzarotti, R., & Boccignone, G. (2018, June). <i>Personality gaze patterns unveiled via automatic relevance determination</i> . In <i>Federation of International Conferences on Software Technologies: Applications and Foundations</i> (pp. 171-184). Springer, Cham. |
| Boccignone, G., Cuculo, V., D'Amelio, A. , Grossi, G., & Lanzarotti, R. (2018). <i>Give ear to my face: modelling multimodal attention to social interactions</i> . In <i>Proceedings of the European Conference on Computer Vision (ECCV)</i> (pp. 0-0). |
| D'Amelio, A. , Cuculo, V., Grossi, G., Lanzarotti, R., & Lin, J. (2017, September). <i>A note on modelling a somatic motor space for affective facial expressions</i> . In <i>International Conference on Image Analysis and Processing</i> (pp. 181-188). Springer, Cham. |
| Ceruti, C., Cuculo, V., D'Amelio, A. , Grossi, G., & Lanzarotti, R. (2017, September). <i>Taking the hidden route: deep mapping of affect via 3D neural networks</i> . In <i>International Conference on Image Analysis and Processing</i> (pp. 189-196). Springer, Cham. |

OTHER INFORMATION

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| 15 October - 30 November 2019 | Visiting Student - University of Essex, UK (Under the guidance of Dr. Tom Foulsham) |
| 27 August - 28 September 2018 | Tutoring for the "Crash Course in Computer Science" for MS Degrees in Finance and Economics and Data Science and Economics - Dipartimento di Economia, Management e Metodi Quantitativi, Università degli Studi di Milano |
| 31 October - 20 December 2017 | Tutoring for the Course "3CFU Informatica" - Facoltà di Medicina e Chirurgia, Università degli Studi di Milano |

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: Milano, 01/12/2020

SIGNATURE

