PhD in Perception and Forecasting, Computer Vision and Machine Learning
At the Dept. of Computer Science, Sapienza University, Rome (Italy)
Call for expression of interest

The Perception and Intelligence Lab (PINLab) is seeking exceptional and highly motivated full-time Ph.D. students to **research on sequence modeling and forecasting for structured data and on meta-learning**, in collaboration with DSTech (www.dstech.it), multi-national company, leader in eCommerce and Digital Marketing.

Research work will leverage and define novel state-of-the-art models based on Deep Neural Networks, Transformer Networks, Graph and Spiking Neural Networks, addressing the network memory, learning, reasoning and adaptation capabilities, for the tasks of image recognition, sequence modelling, explainability and anomalies, as well as on meta-learning for sequence modelling and forecasting. Initial work will stand on most recent achievements from our team, published at TOP conferences and journals in the field:

- F Giuliari, I Hasan, M Cristani, F Galasso. Transformer Networks for Trajectory Forecasting. ICPR'20 (https://arxiv.org/abs/2003.08111)
- C Saltori, S Lathuilière, N Sebe, E Ricci, F Galasso. SF-UDA-3D: Source-Free Unsupervised Domain Adaptation for LiDAR-Based 3D Object Detection. 3DV'20 (https://arxiv.org/abs/2010.08243)
- B Munjal, S Amin, F Tombari, F Galasso. Query-guided End-to-End Person Search. *CVPR*'19. (https://arxiv.org/abs/1905.01203)
- I Hasan, F Setti, T Tsesmelis, V Belagiannis, S Amin, A Del Bue, M Cristani, F Galasso. Forecasting People Trajectories and Head Poses by Jointly Reasoning on Tracklets and Vislets. *TPAMI*'19 (https://arxiv.org/abs/1901.02000)
- I Hasan, F Setti, T Tsesmelis, A Del Bue, F Galasso, M Cristani. MX-LSTM: mixing tracklets and vislets to jointly forecast trajectories and head poses. *CVPR*'18 (https://arxiv.org/abs/1805.00652)

The PhD student will collaborate with scientists at the Dept. of Computer Science at Sapienza (https://www.di.uniroma1.it/en), a department of Excellence in Italy: #1 in Computer Science in Italy and #14 in Europe (http://csrankings.org/#/index?all&europe) for research on Artificial Intelligence, Robotics, Computer Vision and Natural Language Processing.

The Ph.D. work will include applied research and technological transfer to different contexts of the Fashion sector, improving organizational processes (such as product cataloging) and innovating the experience between Brands and Customers (such as recommendation systems). The Ph.D. student will spend part of his time at DStech (www.dstech.it) and collaborate with their R&D team, as well as with international partners, including CERTH in Thessaloniki.

We provide equal opportunities to all applicants and favour diversity. Any expertise or prior knowledge in computer vision and machine learning is welcome. Prior publication at international conferences is an advantage. Ability to program in Python/C/C++ is desirable, as well as prior experience with Pytorch and TensorFlow.

Submit your expression of interest by 18 March 2021
Direct your submission to Prof. Fabio Galasso (galasso@di.uniroma1.it), head of the PINLab.
Include your CV, cover letter, publication list and contact details of 2 referees.

Eligibility: Applicants need to have received or be about to receive their Master's degree by **31 March 2021**.