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**PATCAST 2020**

**International Workshop on Pattern Forecasting**

https://sites.google.com/di.uniroma1.it/patcast

January 11th, 2021, Milan, Italy

in association with ICPR 2020

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>> PAPER submission: October 10th, 2020<<

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CALL FOR PAPERS

Anticipating patterns has become a crucial activity in the last years, due to the combined availability of huge amount of data, techniques for exploiting noisy information, transferring knowledge across domains, and the need of forecasting services within many heterogeneous domains, from computer science to environmental sciences, from economics to robotics and from bioinformatics to social sciences and humanities. A growing spectrum of applications in self-driving cars, weather forecasting, financial market prediction, real-time epidemic forecasting, and social network modeling needs to be explored within a same venue. This workshop aims therefore to identify commonalities, gather lessons learnt across domains, discuss modern and most successful techniques, and foster the exchange of new ideas, which may extend to other novel fields too.

The International Workshop on Pattern Forecasting addresses the general problem of forecasting patterns. This is not just limited to a specific domain, but rather intended as cross-fertilization of different disciplines. By doing so, it seeks to highlight possible general-purpose approaches which may be applied to a large span of data types, promoting and motivating further studies in specific directions. As an example, techniques for predicting the diffusion of epidemics are currently adopted to forecasting activities within social networks. We are convinced that many other hybridations are ready to be explored.

We plan a number of invited talks by senior scientists from different domains, an extensive poster session for stimulating collaborations among young researchers, and a final panel to gather the major challenges emerged in the day and the effective techniques. We anticipate fructuous discussion on the relation between techniques and challenges and on the adoption of techniques beyond those fields where they have been originally designed.

SCOPE

The workshop seeks contributions from researchers and practitioners from different domains, to share current best algorithms and practices, to foster discussion among diverse communities and to define common grounds for joint progress, within the general artificial intelligence and pattern recognition.

The topics of interest for the convention include, but are not limited to, the following areas:

- Forecasting in computer science, environmental sciences, economics, robotics, bioinformatics, social sciences, humanities
- Short term/long term prediction
- Structured input/structured output forecasting
- Distributed (cloud) forecasting
- Real-time forecasting
- Hierarchical forecasting
- Judgemental forecasting
- Integration of system dynamics and forecasting models
- Performance measurement
- Knowledge sharing and organisational learning
- Forecasting visual patterns/styles
- Pedestrian/vehicle trajectory forecasting
- Forecasting for Industry 4.0
- Predictive maintenance
- Weather forecasting
- Earthquakes/eruption forecasting
- Econometric Forecasting
- Financial Forecasting and Risk Analysis
- Forecasting and Planning Systems
- Forecasting Electricity Load and Prices
- Forecasting for Workforce Management
- Forecasting Support Systems (FSS)
- Intermittent Demand Forecasting (Forecasting of Count Series)
- Robot planning
- Intention prediction
- forecasting for genomics
- Virality/trend prediction into social networks
- Forecasting as product recommendation

IMPORTANT DATES

- Workshop date: January 11th
- Paper submission deadline: October 10st
- Paper author notification:  November 10th
- Camera-ready submission: November 15th
- Finalized workshop program: December 1st

INVITED SPEAKERS
- Pratik Prabhanjan Brahma, Volkswagen, Belmont, CA
- Thomas Brox, University of Freiburg, DE
- Carolina García Martos, Universidad Politécnica de Madrid, ES
- Marco Pavone, Stanford University, CA
- Giovanni Maria Farinella, University of Catania, IT
- Marco Bee, University of Trento, IT
- Dino Zardi, University of Trento, IT
- Novella Bartolini, Sapienza University, IT

ORGANIZATION
Workshop Organizers:
- Marco Cristani, University of Verona, marco.cristani@univr.it
- Kris Kitani, Carnegie Mellon University, kkitani@cs.cmu.edu
- Fabio Galasso, Sapienza University, galasso@di.uniroma1.it
- Siyu Tang, ETH Zürich, siyu.tang@tuebingen.mpg.de

PROGRAM COMMITTEE
Further to the organizers, a panel of external reviewers would be employed in the program committee, including:
- Sikandar Amin (OSRAM)
- Bharti Munjal (TUM)
- Nick Rhinehart (UC Berkeley)
- Wei-Chiu Ma (MIT)
- De-An Huang (Stanford)
- Namhoo Lee (Oxford) -
- Ye Yuan (CMU)
- Yan Zhang (MPI Intelligent Systems)
- Miao Liu (Georgia Tech)
- Qiuhong Ke (University of Melbourne)
- Giorgio Roffo (University of Glasgow)
- Francesco Setti (University of Verona)

SUBMISSION INSTRUCTIONS
Submissions must be formatted in accordance with the Springer's Computer Science Proceedings guidelines (https://www.springer.com/gp/computer-science/lncs/conference-proceedings-guidelines) as full paper (12-15 pages). Accepted manuscripts will be included in the ICPR 2020 Workshop Proceedings Springer volume. Once accepted, at least one author is expected to attend the event and present the paper. Papers will be presented as posters, since orals will be dedicated to invited talks.
Submission would be done via Microsoft CMT3:
https://cmt3.research.microsoft.com/PATCAST2021

RESOURCES
Webpage:
https://sites.google.com/di.uniroma1.it/patcast