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Pasquale Coscia, Francesco Castaldo, Francesco A.N. Palmieri, Alexandre Alahi, Silvio Savarese, Lamberto Ballan

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Pasquale Coscia[a,*], Francesco Castaldo[a], Francesco A. N. Palmieri[a], Alexandre Alahi[c], Silvio Savarese[b], Lamberto Ballan[d]

[a] *Dipartimento di Ingegneria Industriale e dell'Informazione, Università degli Studi della Campania "Luigi Vanvitelli", Via Roma 29, 81031 Aversa, Italy*
[b] *Computer Science Department, Stanford University, 353 Serra Mall, Stanford, CA 94305, United States*
[c] *School of Architecture, Civil and Environmental Engineering, Ecole Polytechnique Federale de Lausanne, Batiment GC, 1015 Lausanne, Switzerland*
[d] *Department of Mathematics "Tullio Levi-Civita", Università degli Studi di Padova, Via Trieste 63, 35121 Padova, Italy*

Abstract

Human ability to foresee the near future plays a key role in everyone's life to prevent potentially dangerous situations. To be able to make predictions is crucial when people have to interact with the surrounding environment. Modeling such capability can lead to the design of automated warning systems and provide moving robots with an intelligent way of interaction with changing situation. In this work we focus on a typical urban *human-scene* where we aim at predicting an agent's behavior using a stochastic model. In this approach we fuse the various factors that would contribute to a human motion in different contexts. Our method uses previously observed trajectories to build point-wise circular distributions that after combination, provide a statistical smooth prediction towards the most likely areas. More specifically, a ray-launching procedure, based on a semantic segmentation, gives a coarse scene representation for collision avoidance; a nearly-constant velocity dynamic model smooths the acceleration progression and knowledge of the agent's destination may further steer the path

*Corresponding author. Tel.: +39 081 5010372.
Email addresses: pasquale.coscia@unicampania.it (Pasquale Coscia), francesco.castaldo@unicampania.it (Francesco Castaldo), francesco.palmieri@unicampania.it (Francesco A. N. Palmieri), alexandre.alahi@epfl.ch (Alexandre Alahi), ssilvio@stanford.edu (Silvio Savarese), lamberto.ballan@unipd.it (Lamberto Ballan)