Post-doctoral position in LITIS laboratory at INSA de Rouen, France

Topic: I-7

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Project description:
The goal of this post-doc concerns the conception and the development of PEDESTRIAN DETECTION and TRACKING METHODS able to deal with occlusion problems in urban environments, with difficult lighting conditions and with cluttered background. The information to be process is acquired in both : visible and infra-red spectrum, with a stereovision system.

Concerning the pedestrian tracking, the goal is to improve the method proposed in our laboratory by B. Besbes, (2011]), method based on Mean Shift algorithm with interframe SURF feature matching. The evidential particle filtering [Klein, 2008] has therefore to be considered.

Classification techniques have also to be used, for robustness purposes, in order to deal with pedestrian intersection and occlusion problems. Recognition of urban infrastructure and others road obstacles would thus allow the prediction of the relative position and tracking of pedestrians.

Bibliography

Ph. D. Thesis


3. J. Klein « Suivi robuste d'objets dans les séquences d'images par fusion de sources, application au suivi de véhicules dans les scènes routières » (Ph. D. Thesis, 2008, LITIS Laboratory, Rouen, France)

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