

Title (en)  
SYSTEM AND METHOD FOR NEUROMORPHIC VISUAL ACTIVITY CLASSIFICATION BASED ON FOVEATED DETECTION AND CONTEXTUAL FILTERING

Title (de)  
SYSTEM UND VERFAHREN ZUR KLASSIFIZIERUNG EINER NEUROMORPHEN VISUELLEN AKTIVITÄT AUF DER GRUNDLAGE VON FOVEA-DETEKTION UND KONTEXTFILTERUNG

Title (fr)  
SYSTÈME ET PROCÉDÉ DE CLASSIFICATION D'ACTIVITÉ VISUELLE NEUROMORPHIQUE FAISANT APPEL À UNE DÉTECTION FOVÉALE ET À UN FILTRAGE CONTEXTUEL

Publication  
**EP 3746938 A4 20211006 (EN)**

Application  
**EP 19748018 A 20190114**

Priority  
• US 201815883822 A 20180130  
• US 201862642959 P 20180314  
• US 201815947032 A 20180406  
• US 2019013513 W 20190114

Abstract (en)  
[origin: WO2019152177A2] Described is a system for visual activity recognition. In operation, the system detects a set of objects of interest (OI) in video data and determines an object classification for each object in the set of OI, the set including at least one OI. A corresponding activity track is formed for each object in the set of OI by tracking each object across frames. Using a feature extractor, the system determines a corresponding feature in the video data for each OI, which is then used to determine a corresponding initial activity classification for each OI. One or more OI are then detected in each activity track via foveation, with the initial object detection and foveated object detection thereafter being appended into a new detected-objects list. Finally, a final classification is provided for each activity track using the new detected-objects list and filtering the initial activity classification results using contextual logic.

IPC 8 full level  
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CPC (source: EP)  
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Citation (search report)  
• [Y] WO 2008098188 A2 20080814 - BEHAVIORAL RECOGNITION SYSTEMS [US], et al  
• [Y] ARUN HAMPAPUR ET AL: "Smart Video Surveillance [Exploring the concept of multiscale spatiotemporal tracking]", IEEE SIGNAL PROCESSING MAGAZINE, 1 March 2005 (2005-03-01), XP055347119, Retrieved from the Internet <URL:http://www.andrewsenior.com/papers/HampapurIEEEESP05.pdf> [retrieved on 20170217], DOI: 10.1109/MSP.2005.1406476  
• [A] PEIXOTO P ET AL: "A surveillance system combining peripheral and foveated motion tracking", PATTERN RECOGNITION, 1998. PROCEEDINGS. FOURTEENTH INTERNATIONAL CONFERENCE ON BRISBANE, QLD., AUSTRALIA 16-20 AUG. 1998, LOS ALAMITOS, CA, USA, IEEE COMPUT. SOC, US, vol. 1, 16 August 1998 (1998-08-16), pages 574 - 577, XP010297420, ISBN: 978-0-8186-8512-5, DOI: 10.1109/ICPR.1998.711208  
• See references of WO 2019152177A2

Designated contracting state (EPC)  
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