



# Laboratory for Computer Vision, Virtual and Augmented Reality

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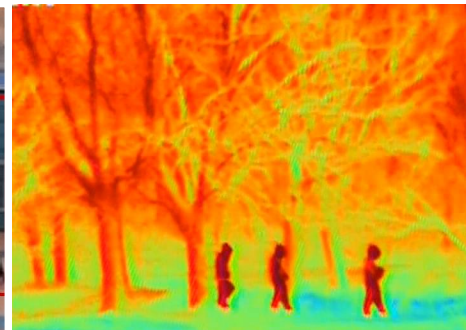
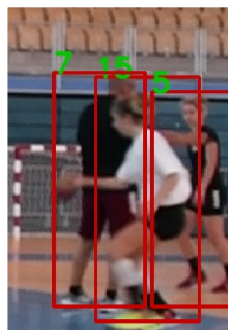


**Assoc. Prof. Marina Ivasic-Kos**

Head of the Department of Informatics University of Rijeka,  
Head of Laboratory for Computer Vision, Virtual and Augmented  
Reality at Centre for Artificial Intelligence, University of Rijeka

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- **Research focus:** basic and applied research in the field of computer vision related to image and video analysis that enable interpretation and understanding of the visual world
- **Goal:**
  - develop methods and algorithmic solutions for computer vision tasks
    - image classification, object/person detection and tracking, action and activity recognition, scene understanding and image interpretation
  - combine vision-based technology with virtual and augmented reality in a variety of applications
- **Current application domains: sports analysis, surveillance, medicine**



# Active projects



**AIRI**

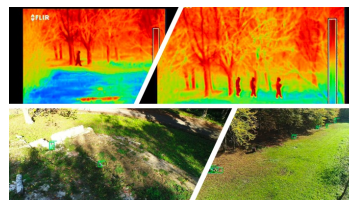
Center for Artificial Intelligence  
and Cybersecurity

Automatic recognition of actions and activities  
in multimedia content from sports domain  
(RAASS)

Project for Career Development of Young  
Researchers – Training of New Ph.D.s,  
mentor: Marina Ivasic-Kos

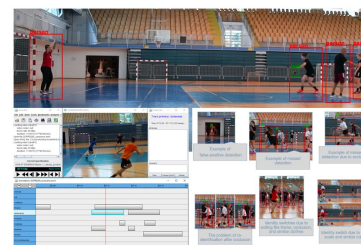


Knowledge-based Approach to Crowd Analysis  
in Video Surveillance



Automatic recognition of sports techniques in young  
and recreational athletes for style improvement

Automation to build a database for recognition  
of sports actions in video



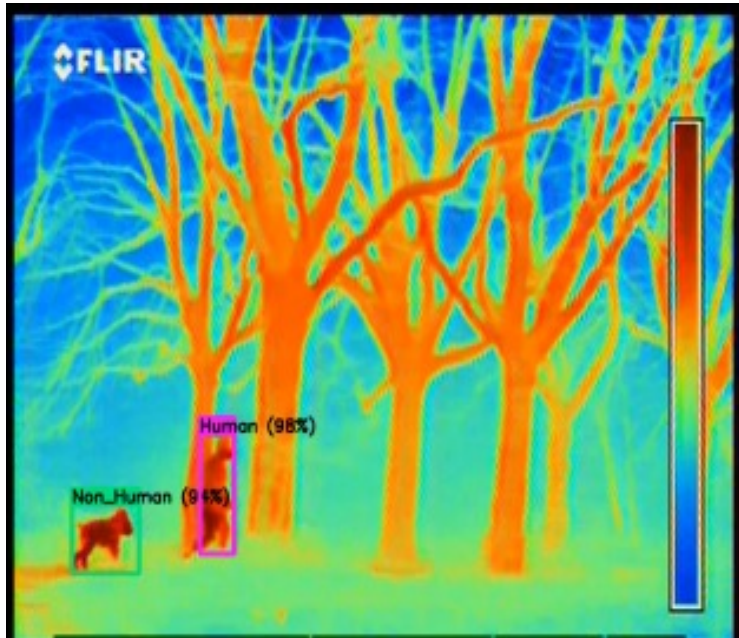
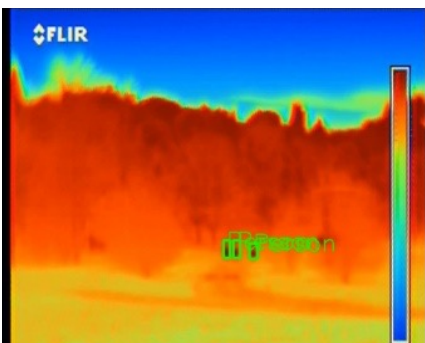
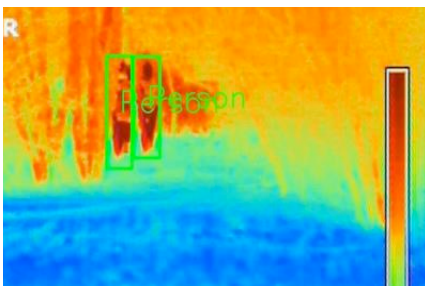
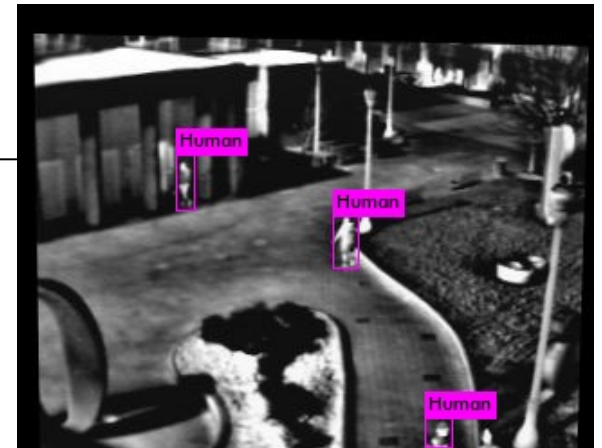
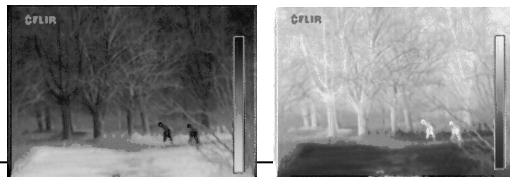
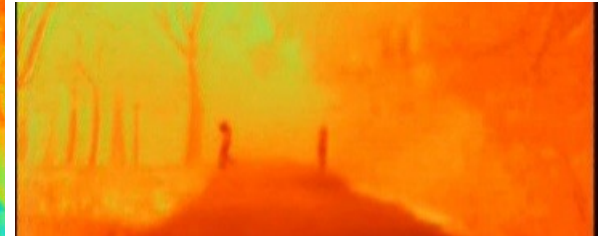


# Automatic recognition of actions and activities in multimedia content from the sports domain





# Person detection and recognition of activities in thermal images





# Detection of persons in drone images and assessment of their geolocation





# Project collaborators

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- Associate Prof. Marina Ivašić-Kos, PhD
- Assistant Prof. Miran Pobar, PhD



- Kristina Host, PhD student
- Martina Badurina, PhD student
- Ivan Šimac, PhD student



- Romeo Šajina, PhD student
- Ingrid Hrga, PhD student



- Matija Burić, PhD student
- Goran Paulin, PhD student
- Saša Sambolek, PhD student



- Prof. Jordi Gonzalez Sabaté, PhD
- Prof. Slobodan Ribarić, PhD



# Future work

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- Develop methods for small objects detection
- Improve methods of tracking people
- Improve the performance of the action recognition model (knowledge, rules)
- Develop methods for automatic summarization of videos
- Use augmented reality (AR) to generate scenes faster by placing computer-generated models in the real world







Thank you for attention!

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