



# Hamilton Institute

## **Multi-Target Tracking in Visual Images – Finding, Following and Identifying Football Players During a Game**

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### *Abstract*

Successful multi-target tracking requires solving two problems - localising the targets and labelling their identity. An isolated target's identity can be unambiguously preserved from one frame to the next. However, for long sequences of many moving targets, like a football game, grouping scenarios will occur in which identity labellings cannot be maintained reliably by using continuity of motion or appearance.

In this talk I'll describe how a graph structure can be built and used to describe the interactions that occur. Given this platform, I'll present two separate strategies for labelling the identity of the nodes of this graph. Results will be shown from an international football match captured by a multi-camera rig that produces a wide screen video that is full stationary view of the pitch.

**Venue:** Seminar Room, Hamilton Institute, Rye Hall  
NUI Maynooth

**Time:** 1.00 - 2.00pm (followed by tea/coffee)

Travel directions are available at [www.hamilton.ie](http://www.hamilton.ie)



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