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The need for speed - massive stellar multiplicity and clusters in the context of multiple star formation

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Massive stars (those greater than 8 solar masses) are hugely important objects in our Universe. They synthesise heavy elements through and produce huge amounts of ionising radiation and distribute this into the interstellar medium and laying the groundwork for the creation of stellar systems with complex chemistry like our own. Their protostellar outflows, stellar winds and supernovae feedback shape their local star forming regions and further affect the formation of future stellar systems. The influence of a massive star can be irrevocably changed by their multiplicity and the larger a star's mass, the more likely it is to be in a multiple system, with O stars almost exclusively existing in at least a binary system. In this talk, I will describe what we know about massive stars and their multiplicity, discuss the open questions associated with the assembly of massive multiple systems and describe how cluster environments play a critical role in the evolution of this multiplicity.

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Session Classification: Multiplicity in clustered environments