
Hidden Figures: unveiling stellar companions to exoplanets hosts

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While the available sample of detected exoplanets and sub-stellar companions is reaching a size that would allow for proper statistics, the biases introduced by the detection methods and by the surveys' target selection processes are not properly understood nor accounted for. This is especially true when it comes to the multiplicity of the host stars: while most surveys have an explicit bias against multiple stars, they often fail to account for the fact that the final sample will be polluted by a number of binaries unknown at the time of selection. This introduces two main problems: a) Ignoring the multiplicity of a sample used to constrain the frequency of planets around single stars can lead to spurious results and b) since a large fraction of stars are observed in binary or higher order multiple systems, these systems cannot be ignored when trying to assess the global planet population of our Galaxy. In this talk I will summarise my past and current efforts to overcome these problems both from an observational and theoretical point of view and fully explore the impact of binarity on planet formation and occurrence.