

Massive stars and Supernovae: Meeting to celebrate the 65th birthday of Nidia Morrell.

5-9 November 2018

Bariloche, Argentina

Massive stars definitely play the leading role among the cast that dictates the evolution of the Universe as we know it. Outnumbered and outlived by all their less massive support players they still manage to impose their character by dramatically transforming the stage at early times via their powerful stellar winds through an outstanding finale in core-collapse supernova explosions. Since early age, massive stars violently disrupt the interstellar medium where they were born. They erode and compress the molecular material and ionize atoms of different species, allowing to derive properties of galaxies at cosmological distances. On top of that, massive stars explode as core-collapse supernovae, and along with their thermonuclear counterparts (type Ia supernovae), are the main source of chemical enrichment as they yield the materials produced in its core and further process elements during their final blast. The connection between supernovae of different types and their stellar progenitors is currently under debate.

Multiplicity rate for these stars is detected at a rate high enough to make it a factor that has to be included when elaborating models and/or scenarios to account for any parameter derivation from observations. The implications that close binarity has in the evolution of massive stars since formation through post-main-sequence stages need further refinements of statistics in the distribution of orbital parameters and evolution models including stellar-wind interactions and mass transfer. The advent of unprecedented volumes of data on massive stars from upcoming surveys set up an excellent opportunity for intense and fruitful discussions to devise the best strategies to identify and tackle pressing issues. Throughout her active career, Nidia Morrell has dedicated to improve our knowledge on most of the topics recently outlined. Either as a passionate observer, a dedicated teacher and supervisor or an enthralling collaborator, Nidia definitely makes a difference for all of us who have the pleasure of working with her.

In this conference, we aim to review and discuss all present knowledge about massive stars and supernovae, with a view toward the coordination of efforts to advance our understanding of this important subject in years to come.

Weblink: <http://nidiafest.fcaglp.unlp.edu.ar/>

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