

New Perspectives 2021



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Scientific Computing Division and Me

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In this talk I will give a brief overview of the Scientific Computing Division (SCD), with the emphasis on the Artificial Intelligence (AI) Projects and work done in this area. Finally, I will briefly talk about my position and work as part of the SCD. My background is in astrophysics and I currently work on several projects leveraging AI as a tool for scientific discovery. I am interested in understanding evolution of matter in the Universe from galaxies to large-scale structures. I focus on building robust deep learning algorithm that will allow us to combine data from large-scale simulation with observations from big astronomical surveys. I am interested in understanding how observational effects and details of our modeling affect the performance of our ML algorithms, how can we quantify these uncertainties and ultimately build models we can trust and use with future large-scale surveys like The Vera C. Rubin Observatory Legacy Survey of Space and Time or The Nancy Grace Roman Space Telescope.

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