One of the things that greatly intrigued me is how everything affects everything in a globular cluster. I especially want to learn more about how the numerous interactions between the objects can change the energy that is within the system, and therefore changing the energy that is upholding the globular cluster. It surprises me that even a change in the smallest of things can produce such a heavy impact on a large scale: the cluster’s behaviour.

Additionally, another one of the things that interests me the most is dense stellar systems. This is because I am greatly intrigued by the method through which scientists have to follow through, in order for programmers to model these dense stellar systems. I would like to know more about how they would go about writing the hydrodynamics code, the stellar evolution code, and the stellar dynamics code. Not only do they need to model the systems using this code, they need to model the complexities and small details as well in order for us to understand the systems in more depth.

Another thing that greatly intrigues me is the creation of virtual observatories for simulations, since that would play such a crucial role to provide data for researchers and modellers. Due to this interest, I further researched about the Millennium run, which is an N-body simulation that helped many scientists visualise and understand how galaxies formed and the evolution of the ways in which matter was distributed around the universe.

One of the things I am still confused about is how the GRAPE special purpose hardware was developed and how it is able to take in these gargantuan quantities of data, since it simulates using ‘more than 100,000 particles pas core collapse’. If it were possible to visit Tokyo University I would like to know, in a simplified way, how the engineers went about designing such fantastic hardware.