

April 15th, 2025

To whom it may concern,

I am writing this letter to assist you in understanding Yilun LIN's performance in the Astrophysics and Simulations Methods for Galaxy Formation Online Research Seminar. I have included a program summary for your reference to provide an idea of what the student has accomplished in this program.

The program covered the most basic concepts of cosmology, structure formation, and computational galaxy formation. The students have learned the basic theoretical concepts of the evolution of the Universe and also learned techniques on how to solve the relevant equations numerically using state-of-the-art simulation codes. In problem sets and the final project, the students have performed cosmological simulations and analyzed publicly available large galaxy formation simulations using Python. The course offered a balanced overview of theoretical cosmology and numerical simulation methods. For the final project, the students analyzed galaxy stellar properties of the IllustrisTNG data. Furthermore, they also ran their own cosmological simulations and studied its properties in detail.

Yilun demonstrated exceptional engagement throughout the course. He consistently contributed meaningful insights during class discussions and maintained a high level of attentiveness. His enthusiasm and proactive attitude made a strong impression on both peers and instructors.

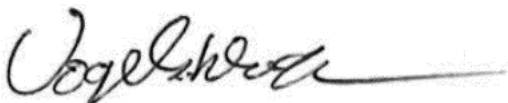
After each lecture, students were required to respond to some questions and present their ideas with slides later on. Yilun demonstrated a solid understanding of the key concepts covered in class, whose responses were relevant and well-reasoned, and the slide designs were neat and functional.

By the end of the program, every student, together with their team members, worked on a final project comprising an oral presentation and a written report, in which process they applied what they learned in the program to practice. Yilun and his teammates completed a project on the impact of star formation rates on the reionization process during the epoch of reionization. Their presentation demonstrated commendable research findings and an overall solid grasp of the topic. The written report was strong, with impressive data analysis and clear connections to current observational work. The introduction was especially well-done. Overall, the group showed a good balance of research, analysis, and teamwork.

Yilun served as the group leader and was responsible for both data analysis and a significant portion of the written report. He demonstrated strong analytical thinking and effectively communicated the project's findings in writing.

I hope you will find this letter useful in evaluating Yilun LIN's academic performance as a reference.

Sincerely,



Mark Vogelsberger
Professor of Physics
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Hui Xu
Senior Advisor, Academic Committee
Path Academics