Doosoo Yoon

Researcher in Astrophysics @ University of Amsterdam

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Profile	Dedicated and experienced **computational astrophysicist** with the knowledge of code development and data analysis. Competent in problem-solving with scientific thoughts, managing & analyzing big data, and developing numerical algorithms with a verity of code languages. Keen to leverage my knowledge and experience into Software Engineer in high-tech drone service.

Skillset

- statistical analysis, data visualization, experiment design, modeling, high performance computing
- Languages in expert: C/C++, Fortran, CUDA, Python (matplotlib, numpy/scipy, pandas, scikit-learn), R, SQL, Git, Linux shell scripts

Research & Work Experience

Postdoctoral Researcher - University of Amsterdam, 2018-2022.03
- developed a GPU-enabled physics code to explore complicated evolution of accretion flows around black hole
- wrote visualization/analysis Python 3 pipeline to extract physics from simulations
- led a collaboration with international researchers that resulted in 3 publications in scientific journals
- as a member of the `Event Horizon Telescope Collaboration` (global collaboration with > 200 researchers), examined theoretical models of black hole images and acquired **strong ability to collaborate and work in a team environment**
- advised two PhD students and one master student to build their research projects of black hole accretion
- organized the group meetings and the group blog that was designed to communicate with the public readers

PIFI Postdoctoral Research fellow - Shanghai Astronomical Observatory, 2015-2018
- modeled supermassive black hole by applying a high-performance plasma physics code
- managed and analyzed large-scale simulation data by developing tools in Python 3 and C++
- led research projects of black hole that resulted in 4 journal papers
- awarded an AAS and IOP Publishing China one of Top 1% Cited Papers Award in the Astrophysical Journal

Research Assistant - University of Wisconsin-Madison, 2009-2015
- developed theoretical black hole jet models by applying an open-source, high-performance plasma physics code and conducted the comparative studies with observations
- led research projects collaborating with international researchers that resulted in 4 journal papers
- conducted teaching Assistant, which led discuss sections including planetarium courses, helping students understanding fundamental physics

Education

PhD, Astronomy, **University of Wisconsin-Madison**, 2015
- Thesis Topic: *"Headwinds and Bow shocks: The Interaction of Relativistic Outflows from Compact Objects with Interstellar Matter"*
- conducted numerical research projects which compared simulated black hole models with observations

MS, Physics and Astronomy, **Seoul National University**, 2008
- Thesis Topic: *"Evolution of Self-gravitating Gaseous Disks in Barred Galaxies"*

BA, Physics and Astronomy, **Seoul National University**, 2006
- Thesis Topic: *"Growth of Self-gravitating Structures in Models of Galactic Gas Disk"*