Samir Kušmić

Curriculum Vitae

I am currently a research student at University of Heidelberg and Max Planck Institute for Nuclear Physics. I have a thirst for knowledge, especially with the Universe. I want to help contribute to our understanding of galaxy populations and galactic evolution, and also have considerable impact with cosmology. My current plan is to understand research techniques in multiple bands of light, starting with gamma-ray astronomy here.

Education

2015–2019 **University of Louisville, Kentucky**, *Bachelor of Science*, Major: Physics with Astrophysics concentration, Minor: Mathematics.
summa cum laude, College of Arts and Sciences

Research Projects

2018 **Morphological Parameters of Galaxies at** $z \sim 8$, *University of Louisville*, Department of Physics and Astronomy.
We looked at high-redshift galaxies and applied scale-invariant morphology analysis towards the. We attempt to see if there are any trends and if further morphological application is viable for high-redshift surveys. Paper in prep.

2017 **Measuring Sizes & Shapes of Galaxies.**, *University of Louisville*, Department of Physics and Astronomy.
We looked at morphologies and metrics of galaxies in the CANDELS field in order to understand how viable Source Extractor is at getting parameters. With our research, we try to see if Source Extractor is a good first look for the new, larger surveys that we expect in the coming decade. Research presented at AAS, ACC Meeting of the Minds, and CUWiP. Paper in prep.

Extracurricular

2017–2019 **Society of Women in Physics and Astronomy**, *University of Louisville*, Held Office of – Chamberlain (Treasurer).
My objective was budgeting and fund-raising for the group. I would carefully work a budget and present and plan ideas in order to secure funds for the group's future.

2017–2018 **Society of Physics Students**, *University of Louisville*, Held Office of – Social Officer.
My objective was to organize social events for fellow students to hang out and get to know each other. I also had the responsibility to organize the chapter's lab visits.

Awards and Achievements

2019 **Fulbright Fellowship Semi-finalist**

2018 **William Marshal Bullitt Scholar, University of Louisville:** Given to astronomy students with an exceptional undergraduate in studies and research.

2018 **Bullitt Best Paper Award in Astronomy, University of Louisville:** annual award for best astronomy paper in the university. My paper was my research poster over my work with Dr. Holwerda: Morphological Parameters of Galaxies as $z \sim 8$.

2018 **Joined ΣΠΣ (Sigma Pi Sigma) Physics Honors Society**

2018 **James T. Drautman Award Co-Recipient, University of Louisville Department of Physics and Astronomy:** Annual award given to excellent sophomores and juniors of the department.

2017 **Bullitt Best Paper Award in Astronomy Co-Recipient, University of Louisville:** annual award for best astronomy paper in the university. My paper was my research poster over my work with Dr. Holwerda: Measuring the Sizes & Shapes of Galaxies.

2016–2018 **Academic Commonwealth Scholarship, University of Louisville:** Continual financial award of 2800 US$ for as long as I achieve a GPA of a 3.0

2015–2016 **Trustees Scholar, University of Louisville:** Awarded a one semester of financial aid of 2000 US$

2015–2019 **University of Louisville College of Arts and Sciences Dean's List**

Publications

2019 **Morphological Parameters of Galaxies at z ∼ 8 in the BoRG and CANDELS Survey**, 2019RNAAS...3..134K

Teaching Experience

2017–2019 **Undergraduate Teaching Assistant**, *University of Louisville PRIMES Program*, Louisville, KY.
This position had different experiences for every semester I was in it. I taught in a laboratory and I helped offer students office hours for the elementary astronomy class. As well, I taught and I helped students during recitation for the freshman calculus-based physics for classical mechanics, rotational and wave motion, and thermodynamics.

2016–2017 **CRLA-Certified Level 2 Tutor**, *University of Louisville REACH Center*, Louisville, KY.
Responsibilities included planning small group sessions, mediating student interaction, facilitating student learning in many introductory physics courses, assessing the progress of each individual student, and providing end-of-course study session prior to finals.

References

Dr. Benne Holwerda, *University of Louisville*, Associate Professor.

Dr. Gerard Williger, *University of Louisville*, Associate Professor.

Dr. Joanna Bridge, *University of Louisville*, Postdoctoral Researcher.