

Trailblazing: From ASP (MSc Student) to PDRA in Extragalactic Astrophysics

Friday, September 29, 2023 1:35 PM (10 minutes)

“One of the most enduring and fundamental questions in modern astrophysics is understanding how galaxies form and evolve through cosmic time. Key to this question is understanding the interplay and feedback between star-formation (SF) and accretion onto supermassive black holes (SMBHs). High sensitivity, high angular resolution radio

observations are a crucial part of these investigations, uniquely providing spatially resolved tracers of SF and accretion (Active Galactic Nuclei, AGN) in high redshift galaxies. I use radio interferometry and the Very Long Baseline Interferometry (VLBI) techniques to disentangle AGN contribution from SF processes over a range of redshifts, using unprecedented large field-of-view, ultra-deep and high-resolution radio imaging provided by radio instruments such as the eMERLIN, the European VLBI Network and the Very Large Array.

At Newcastle, I am working on the Quasar Feedback Survey and using radio observations from facilities such as the eMERLIN, VLA and LOFAR to establish how quasars feedback on their host galaxies.

Besides research work, I am passionate about education and mentorship. I founded the programme “Elimisha Msichana Elimisha Jamii, EMEJA” (Swahili for 39;Educate a Girl, Educate the entire Community39;), a mentorship programme addressing the issue of gender disparity and equality in education among young schoolgirls in rural areas of Kenya and Uganda. EMEJA is working with the local communities and positively tackling some of the social issues (e.g., teenage pregnancies, early marriages, low STEM uptake) hampering girls’ education via Astronomy outreach, mentorship, targeted STEM workshops and scholarships opportunities, guided by long-term student tracking and monitoring. The overarching objective for this programme is to ensure a 100% primary-secondary education transition for these schoolgirls.”

Abstract Category

Presenter: NJERI, Ann

Session Classification: Parallel Session on “Early Career African Physicists”