6. Student Spotlight: Agostiny Lontsi, University of Potsdam, Germany

For a large portion of his academic career, Agostiny Lontsi thought his future was in theoretical physics. He followed the mechanics track during his undergraduate physics program instead of geophysics because his university had limited connections with industry mentors, a relationship he greatly desired to have. After he completed his first graduate degree at the International Center for Theoretical Physics (ICTP) in Italy, he was accepted into a predoctoral program in Earth System Physics. Agostiny received the Abdus Salam International Center for Theoretical Physics Scholarship during his final graduate year at ICTP and then a second time to support him as he excelled in the preparatory program. It was then that he was welcomed into the Geophysics Ph.D. program at the University of Potsdam, where he continues to investigate applications of passive and active seismic methods.

Agostiny attended his first AGU Fall Meeting in 2014 and participated in the student volunteer program, allowing him to become better acquainted with the scientific community. This opportunity helped him network with several near-surface session chairs prior to his talk (NS43B-03) titled, "Full microtremor H/V(z,f) inversion for shallow subsurface characterization." The horizontal-to-vertical (H/V) spectral ratio is estimated using three-component ambient noise data, which can be used to extract 1-D shallow (upper 300 meters) velocity profiles. His motivation for this work is his desire to evolve theoretical physics into engineering seismology and industry applications such as supporting reservoir characterizations. In order to estimate the Green's function and reevaluate the H/V spectral ratio, Agostiny utilized both seismic interferometry theory and diffuse wavefield assumptions. This full-wavefield point of view has helped him overcome limitations associated with peak resonance frequency, Rayleigh wave ellipticity, and SH transfer function interpretations. His research has since been published in the 2015 *Geophysical Journal International* (doi:10.1093/gji/ggv132).

More recently, Agostiny has been actively involved in the near-surface community, attending events associated with the Society of Exploration Geophysicists (SEG) and the European Association of Geoscientists and Engineers (EAGE). He has participated in the EAGE Geological and Geophysical Boot Camps as well as the SEG Continuing Education Program on Engineering Seismology. For Agostiny, geophysics is a fascinating medley of complex problems and the natural earth environment. Thanks to the opportunities provided by AGU, SEG, EAGE, and the valuable mentoring he received from his committee chairs, he has been constantly motivated to transform his theoretical knowledge into a means to solve near-surface problems. After he completes his dissertation this year, he aims to secure an industry research position where he can continue to solve real-world problems and mentor future students. With his undergraduate needs in mind, he hopes to further bridge the gap between professionals and university students.

To learn more about his work in ambient seismic methods as related to industry problems, please contact Agostiny (alontsi@gmail.com).