

Draft Minutes for the 1595th meeting of the Geological Society of Washington
December 6th, 2023
American Geophysical Union

President Kori Newman called the meeting to order at 20:00 EDT.

Attendance

There were 55 attendees.

Minutes

The meeting began with the approval of the minutes from the previous meeting (1593rd). The minutes of the 1593rd meeting had been posted online and a Minute's Minute was read aloud at the 1594th meeting.

Guests and New Members

No new members were announced. Four guests were introduced: Steve and Lynn Shirey, Carnegie Institute of Science; Anne Pommier, Carnegie Institute of Science; and Wriju Chowdhury, Smithsonian Institute.

Announcements

Kori Newman, outreach chair, announced a request for surplus swag from AGU to give as prizes for science fair awards.

Obituaries

No obituaries were read.

Informal Communication

No informal communications were read.

Formal Program

The formal program commenced at 20:16 EDT with First Vice President Dan Doctor introducing President Kori Newman. President Newman delivered her President's Address entitled "Geoscience Applications Supporting Improvements to Landmine Detection Systems."

Land mine detection has evolved from simple methods involving the use of sticks, metal detectors, and trained rats, to sophisticated instrumentation, like that deployed on Mine-Resistant Ambush Protected (MRAP) vehicles. The U.S. military utilized MRAPs, such as the Husky, to lead vehicle convoys in areas like Afghanistan where land mines and improvised explosive devices (IEDs) present a threat to vehicle movement. Vehicles are equipped with different types of sensors that detect anomalies indicative of the presence of land mines in real time while the convoy advances at a slow rate. One type of sensor used detects hyperbolic shapes in the subsurface and is sensitive to soil moisture. Another type of system uses sound and vibration imaging (SAVI) which involves a loudspeaker causing a land mine to vibrate at a particular resonant frequency and a laser to measure the vibration. Improvements to these technologies require better knowledge of the subsurface conditions, such as soil moisture, consolidation of sediment, and seismic imaging techniques. Geoscientists, therefore, have knowledge, skills, and experience that can directly benefit the development of defense applications.

Talk length: 54 minutes.

As per GSW tradition, no questions were asked after this Presidential address. President Newman adjourned the meeting at 19:10 EDT.

Respectfully submitted,
Graham Lederer