The 2019 EPS HEP Outreach Prize is awarded to Rob Appleby, Chris Edmonds and Robyn Watson for the Tactile Collider Project that brings particle physics to blind and visually impaired schoolchildren through touch and sound.

Rob Appleby, Chris Edmonds and Robyn Watson are the originators of the Tactile Collider Project. The project arose from their realisation that conventional museum-style exhibits, talks, TV and videos are not accessible to the visually impaired, since they rely so much on images. Rob, Chris and Robyn worked with the visually impaired community to find novel ways to explain and to give an understanding of particle physics through touch and sound.

The project experience covers particles, accelerators, the Higgs boson and magnets using solid models and binaural sound, for example the simulation of the decay of a Higgs boson to two photons. The project also utilises sonified signals from the real LHC. The experience includes CASSIE, a 3.5m scale model accelerator with beam pipe, dipoles, quadrupoles and RF cavities.

The Tactile Collider Project’s audience includes schools that cater for a substantial number of visually impaired children, who would otherwise have no opportunity for this sort of experience. The project also reaches adults through the teachers and parents that assist at the school sessions. The project has run at many schools across the UK and also at Music Festivals, open to normal sighted people who serve to raise awareness of the visually impaired and what can be done for them. The project will be based at CERN in the autumn of 2019.

The Tactile Collider Project is a unique project and reaches out to a part of the community that has previously not had the opportunity to experience particle physics.

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References
The project website http://tactilecollider.uk/
A radio piece can be found on https://www.bbc.co.uk/sounds/play/b09drjfn