

Gold Medal (G) 2021– Professor Thorne Lay

Full citation

Distinguished Professor Thorne Lay (University of California, Santa Cruz) receives the Gold medal in recognition of his outstanding work in seismological analysis, which has had an exceptional impact on our perceptions of the structure and dynamics of the Earth.

His PhD studies of the structure of the deep mantle revealed a discontinuity a few hundred kilometres above the core-mantle boundary, implying great structural complexity with profound geodynamic consequences. This pioneering work has been the cornerstone for a diverse creative range of interdisciplinary studies in which he has been a leader, from mineral physics to the fate of subducted slabs and the potential genesis of mantle plumes.

In parallel research he has provided new insights into the rupture processes of the world's most devastating earthquakes and the generation of tsunamis. He has published hundreds of papers, inspiring generations of graduate students, post-docs and researchers all over the world.

He is one of the great leaders of the seismological community. His help was critical to the success of the Incorporated Research Institutions for Seismology (IRIS), which archives and distributes the world's earthquake data. He was elected Chair of IRIS's Board of Directors, has served on panels on Comprehensive Nuclear Test Ban Treaty Research, and was President of the International Association of Seismology and Physics of the Earth's Interior (IASPEI).

For these reasons Distinguished Professor Thorne Lay is awarded the Gold Medal.

Short Citation

Distinguished Professor Thorne Lay (University of California, Santa Cruz) receives the Gold medal in recognition of his outstanding work in seismological analysis, beginning with his discovery of a discontinuity a few hundred kilometres above the core-mantle boundary, which has had an exceptional impact on our perceptions of the structure and dynamics of the Earth. In parallel research he has provided new insights into the rupture processes of the world's most devastating earthquakes and the generation of tsunamis.