## The 4th PUBLIC ExU COLLOQUIUM

March 8<sup>th</sup> (Sat.) ONLINE

TALK 10:00 - 11:00 (JST)

March 7<sup>th</sup> (Fri.) 17:00 - 18:00 (PST) March 8<sup>th</sup> (Sat.) 1:00 - 2:00 (UTC)

ONLINE CHAT TIME 11:00 - 12:00 (JST)

Registration required (click HERE)

Extreme Universe, JAPAN

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MEXT -KAKENHI- Grant-in-Aid for Transformative Research Areas (A)

The Natural Laws of Extreme Universe



Speaker Prof. Geoffrey Penington

UC Berkeley

## What's inside a black hole?

## **Abstract**

As Stephen Hawking famously showed, black holes are not actually black. Instead, they are a very dark grey, with quantum mechanical effects causing them to emit a faint glow called Hawking radiation. But Hawking's calculations also seemed to break one of the most sacred principles of physics, the conservation of information. Only in the last few years have we finally understand how information is saved after all. The story involves quantum entanglement, event horizons and spacetime wormholes. And it gets us closer than ever to understanding the inside of a black hole.

