



Helen Czerski

AUTHOR · MEDIA PERSONALITY

Climate and energy decisions now turn on a physical system most boards have never been taught to read. The ocean sets the weather, moves the carbon, routes the trade and absorbs the heat, yet it enters strategy only as a line item or a disclosure. Leaders need someone who can translate that system into decisions without flattening the science.

Helen Czerski is an ocean physicist at UCL who helps senior leaders understand the physical system behind climate, weather and the ocean economy, and what it means for strategy.

Helen Czerski's 2026 Biography

Why organisations work with Helen Czerski

- She is an active research physicist inside the climate system, not a commentator on it. Her UCL work on bubbles at the ocean surface sits at the heart of how the atmosphere and ocean exchange heat and carbon, which gives her climate framing a physical basis that reads differently to a board than general sustainability narrative.
- Blue Machine gives her a defensible thesis audiences can hold onto: the ocean as a single connected engine that drives weather, food, trade and energy. That framing turns abstract climate discussion into something leaders can map to their own exposure.
- The Institute of Physics awarded her the 2018 Kelvin Medal specifically for translating physics to a mass audience. Few speakers pair that level of academic recognition with a track record on primetime BBC science.
- She has reached general business and policy audiences as the Wall Street Journal's "Everyday Physics" columnist and as co-host of BBC Radio 4's Rare Earth, which means she is used to explaining physics to readers and listeners who did not choose the subject.
- She treats curiosity as a leadership input. Her Storm in a Teacup thesis, that the rules governing the universe are visible in ordinary objects, lands as a practical argument for how technical organisations should see, question and investigate.

Biography highlights

- Associate Professor, Department of Mechanical Engineering, University College London, leading research on oceanic bubble physics, air-sea gas transfer and bubble acoustics.
- Natural Sciences (Physics) at Churchill College, Cambridge, followed by a PhD in experimental explosives physics; postdoctoral work at Scripps Institution of Oceanography and URI's Graduate School of Oceanography.

AVAILABLE FOR

- Speaking
- TV and Media

HELEN'S SPEAKING THEMES

- Climate Action and Sustainability
- Energy Transition
- Risk Management
- Scenario Planning & Strategic Foresight
- Storytelling & Business Communication

- Author of *Storm in a Teacup: The Physics of Everyday Life* and *Blue Machine: How the Ocean Shapes Our World* (Penguin / W.W. Norton).
- 2024 Wainwright Prize for Writing on Conservation for *Blue Machine*.
- 2018 William Thomson, Lord Kelvin Medal and Prize from the Institute of Physics for public communication of physics.
- BBC science presenter across *Orbit*, *Operation Iceberg*, *Super Senses*, *Colour: The Spectrum of Science and Sound Waves*; co-host of *Rare Earth* on BBC Radio 4; former “Everyday Physics” columnist at *The Wall Street Journal*.

Biography

The ocean is a physical engine that routes most of the planet’s heat, carbon and weather, and it is almost entirely absent from the way boards discuss climate. Helen Czerski’s work at University College London, where she leads research on breaking waves and bubbles at the ocean surface, sits precisely at the interface where that engine does its work. The research is technical. The implications are strategic.

Blue Machine, her 2024 Wainwright Prize-winning book, is the public form of that argument. It treats the ocean as one connected system that moves nutrients, ships, storms and carbon, and explains why every industry with a coastline, a fleet or a climate commitment is already inside it. For leaders wrestling with transition plans, physical risk disclosures or supply chain exposure, Czerski offers a vocabulary that is physical rather than political.

Her earlier book, *Storm in a Teacup*, established the method: start with something visible, coffee stains, popcorn, a magnet on a fridge, and work outward to the physics that governs how the world operates. That method earned her the 2018 Kelvin Medal from the Institute of Physics for public communication, and it carried through ten years of primetime BBC science including *Orbit*, *Operation Iceberg* and *Super Senses*, alongside her “Everyday Physics” column at *The Wall Street Journal* and co-hosting *Rare Earth* on BBC Radio 4.

What she brings into a room is the rare combination of a working research scientist and a public explainer who has spent a decade translating physics for audiences that did not sign up to hear it. For an organisation trying to move from sustainability language to physical reality, that translation is the point.

Key speaking topics

- Ocean physics and the climate system
- The ocean economy and physical risk
- Science of the energy transition
- Everyday physics for decision-makers
- Curiosity and scientific thinking in organisations
- Communicating technical complexity to non-technical audiences

Ideal for

- Boards and executive teams setting climate, sustainability or transition strategy
- Energy, shipping, insurance and infrastructure leaders exposed to ocean and weather systems
- CTOs, heads of R&D and engineering leaders investing in technical capability

- Conferences where a serious science keynote needs to land with a mixed commercial audience

Audience outcomes

- A working mental model of the ocean as a single physical system that connects weather, carbon, food and trade
- A sharper read on where climate and transition narratives rest on solid physics and where they do not
- Language for talking about physical risk and scientific uncertainty without defaulting to jargon or slogans
- A renewed case for curiosity as a disciplined practice inside technical and commercial teams

Helen Czerski's 2026 talks & topics

Blue Machine: how the ocean shapes our world

A keynote built on the thesis of her Wainwright Prize-winning book, treating the ocean as a connected engine behind weather, climate, food and trade.

Key takeaways:

- How ocean currents, heat and carbon uptake set the boundary conditions for climate strategy
- Why industries with coastlines, fleets or supply chains are already inside the ocean system, whether they frame it that way or not
- What the physics says about which climate narratives are robust and which are marketing

Storm in a Teacup: the physics of everyday life

A talk that uses ordinary objects to unlock the scientific principles that govern technology, nature and the systems organisations depend on.

Key takeaways:

- How the rules of physics visible in daily objects map onto industrial and technical problems
- Why curiosity about small things is a disciplined method, not a personality trait
- How scientific thinking can be brought into commercial teams without requiring a physics background

The science of bubbles

A talk drawn directly from her UCL research programme on breaking waves and air-sea exchange.

Key takeaways:

- Why bubbles at the ocean surface matter for climate, weather and carbon uptake
- How a narrowly defined research problem connects to global-scale environmental questions
- What it looks like to do field science in the open ocean and why that evidence base matters

Helen Czerski's Videos

