# NAC Physics and Theatre Symposium Sessions

**Physics and Theatre: The black hole of the human heart**
At the birth of classical theatre, the Greek word *physics* meant all of nature, from the stars to humans. Physics has come to mean the branch of science concerned with motion, energy and matter. In the 21st century, physics symbolizes humans' incredible ability to come to know our world, such as the mystery of cosmic dark energy, and to control it, as in the atomic bomb.

Yet for all this outward focus, physics is a human enterprise. As a science focused on control and absolute knowing, the practice of physics reveals, as perhaps no other human pursuit, the intersection of mind and matter, of our intellectual and emotional selves. Ancient Greek actors wore masks to help the audience understand the character's role. Today, playwrights use physics and physicists to shine light on the essence of the human nature in all its complexity and simplicity.

The three physics-inspired plays in this NAC series share a remarkable confluence of themes: loss, love, identity, the desire for relationship, and the effort to connect across time and space to solve something that's unresolvable and ultimately unknowable. The plays invite us to explore what the nature the atom or the cosmos tells us about friendship, trust, memory, and ultimately, the nature of the human heart.

Each of the *Physics and Theatre* symposium sessions is a dynamic discussion related to one of the plays, among a panel of physicists and theatre artists.

**1. The Nature of Uncertainty**
Michael Frayn's *Copenhagen* revolves around the conundrum of what's actually knowable in both physics and human relationships. For physicists, not only do they explore the unknown, but the ultimate use of their discoveries, including for war, is always unknowable to them—and beyond their control. In this session we take a fascinating deep dive into the way secrets and uncertainty shape physics, friendships, history and ethics.

**2. Mind and Matter**
Most physicists dismiss, or deride, the integration of physics and psychology as explored in *Entangled*. For them, "quantum psychology" is rampant speculation by non-physicists. However, today, one scientific frontier is biophysics, the application of physics to understanding life, including the brain/mind. In this session we explore why some physicists are afraid of "quantum psychology"—and what's involved in bridging the borderlands of physics and psyche.

**3. The "I" in physics: The Inner Lives of Physicists**
*Frequencies* dazzles by merging virtual reality technology with a deeply personal story of loss, love and identity. The question of the individual is central to the theatre, but in the practise of science, does the "I" matter? Does identity matter in physics? Would someone other than Einstein have discovered general relativity? In this session we delve into the intriguing relationship between the experience of self, identity, personal belief and the practice of physics and theatre.