The speaker has provided the following abstracts:

1. Cosmos, Time, Memory

There is a deep connection between the flow of time that we experience in our lives and the wider evolution of the universe. Over the last several centuries, science has learned that the fundamental laws of nature don't work on the basis of cause and effect, and draw no distinction between past and future. They are undirected patterns, relating one moment to another. It is the specific history of our cosmos, from a smooth Big Bang to an expanding and cooling distribution of stars and galaxies, that gives time its sense of flowing.

1. The Stuff of Which We Are Made

There is much that we don't know about the universe, but there is also much that we do know -- and that knowledge includes a set of ingredients and rules that suffices to completely account for the stuff underlying our everyday experience. We are collections of vibrating quantum fields, obeying a set of laws known as the Core Theory. Future discoveries will teach us much about the nature of reality, but the basic picture of the particles and forces that make up you and me is secure.

1. Layers of Reality

When we look at the world, we don't see individual atoms and particles. The world we see is an image of macroscopic objects and causes. One of the most profound features of reality is that it appears to us in layers -- self-contained emergent descriptions at one level are consistent with, but autonomous from, what is going on down below. Different ways of talking about the world reveal fundamentally distinct kinds of concepts, each of which deserves to be called "real" if it accurately captures some part of the bigger picture

1. Simplicity, Complexity, Thought

How do such complex, organized creatures such as human beings arise from the impersonal workings of undirected laws of physics? The universe goes from orderly to disorderly, but complexity naturally increases along the way -- at least for a while, before gradually fading away. That's just as true for the universe as a whole as it is for mixing cream into coffee. The emergence of complicated, information-processing, self-aware structures such as ourselves is fascinating, but completely compatible with everything we understand about the underlying physical reality.

1. Our Place in the Universe

The universe is large, and we are small. The wider cosmos does not judge us, nor does it provide any guidance on the distinction between right and wrong, or how to live a good life. But as emergent higher-level creatures, possessing thought and volition, we have the ability to construct purpose and mattering for ourselves. Our lives are short against the span of cosmic history, but the fact that we contemplate our world and care about what happens to it brings meaning to our existence.