

## KEYNOTE TALK

### Mind wandering as spontaneous thought: A dynamic framework

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**Topic:** Mind-wandering has recently come to occupy a central position in cognitive psychology and neuroscience. Most theories and research so far have examined it in terms task-unrelated or stimulus-independent mental contents that occur at particular moments of time. A defining feature of mind-wandering, however, are its dynamics: how thought moves over time.

In this talk, I will introduce a dynamic framework for understanding mind-wandering and its neural basis. I propose that mind-wandering is best understood as a member of a larger family of spontaneous thought processes – a family that also includes creative thought and dreaming. I will distinguish between two types of constraints on thought – deliberate and automatic – that can reduce thought’s spontaneous movement. Within this framework, fluctuations between spontaneous, automatic, and deliberate modes of thinking correspond to changing interactions among large-scale brain networks. Finally, the framework situates spontaneous thought within a broader conceptual space that allows its comparison to goal-directed thought, as well as to clinical disorders that make thought excessively constrained – such as in rumination and anxiety, or excessively variable – such as in ADHD.

**Biosketch:** Associate Professor in the Psychology Department and the Brain Research Centre at the University of British Columbia. Her work on the functions of the anterior prefrontal cortex (PFC) has linked this part of the brain to the uniquely human mental processes of introspection and meta-awareness. Dr. Christoff’s most recent work focuses on examining spontaneous forms of thought, such as memories and thought streams occurring in the form of mind wandering. She is also interested in examining meditation-based thought phenomena such as mindfulness, and developing clinical applications for fMRI using real-time fMRI feedback to train modulation of activation in specific brain regions. <http://psych.ubc.ca/persons/kalina-christoff/>