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SSC 2315

**DR. MINORU KOYAMA**

Assistant Professor,

Biological Sciences, Cells and Systems Biology, Neuroscience

University of Toronto, Scarborough

**TOPIC: Illuminating the neuronal basis of behavioural development in zebrafish**

Dr. Koyama received his Ph.D. at the University of Tokyo in the lab of Dr. Yasushi Miyashita, studying the cortical areas involved in eye movements in primates using functional MRI. Then he joined the lab of Dr. Joseph Fetcho at Cornell as a postdoc to study the cellular basis of behavior in zebrafish. In his lab, Dr. Koyama studied the hindbrain escape circuit and identified a circuit motif for binary behavioural choice using in vivo whole-cell recording, circuit modelling, and femtosecond laser ablation. Fascinated by the rapid development of zebrafish behaviour, he joined the Janelia Research Campus as a Fellow to study how the brain develops to support increasingly complex behaviour. At Janelia, he revealed a novel developmental organization in the locomotor circuits that supports the diversification and sophistication of locomotor repertoire. Through collaborations with tool developers, he also established a series of new optical and genetic tools, including circuit optogenetics, in vivo high-resolution microscopy, and voltage imaging. With these tools in hand, his lab at UTSC aims to understand the development of increasingly complex behaviour by visualizing and interrogating the entire process of circuit maturation that contributes to behavioural development in a living vertebrate. The lab currently focuses on understanding how sequentially emerging locomotor circuits get integrated together and developing new genetic tools to study the development of these circuits.

All welcome to attend  
Refreshments will be served

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