

Title: **What can we learn from the fish with a hundred colors?**

Speaker: Chen-Hui Chen (Associate Research Fellow, Institute of Cellular and Organismic Biology, Academia Sinica)

Summary:

Some vertebrate animals, such as teleost zebrafish and urodele amphibians, are able to regenerate complex tissues after major injuries. Understanding how and why natural regeneration occurs in these animals is the basis of my research program, as the answers may be applied to transform medicine as we know it. Currently, one of the key challenges in regenerative biology is to understand how individual cells within large populations are able to work together in a timely manner to fully restore complex tissues, with appropriate sizes, patterns, and functions. To fill the knowledge gaps, my laboratory is focused on developing new cell tagging tools and live imaging platforms in the zebrafish model for systems-level analyses of cell behavior on a whole animal scale. I will present two studies in this seminar to highlight our in toto imaging approaches and some unexpected findings that may have far-reaching implications.