

Spatiotemporal regulation of gene expression: from description to perturbation and back

invited speaker: Dr. Ivano Legnini

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Abstract: Gene expression is tightly regulated in time and space to ensure cellular homeostasis and, for example in development, to coordinate cellular transitions. To study these phenomena, we combine high-resolution sequencing technologies - such as long-read sequencing, single-cell RNA sequencing and spatial transcriptomics - with organoid models of neurodevelopment and optogenetic perturbations of gene expression. In this seminar, I will talk about our latest research efforts in the fields of spatiotemporal regulation of gene expression, with a particular focus on neurodevelopment and mRNA metabolism.