



## Colloquium

# The Institute Colloquium: Hybrid methods for defining the structure and function of c

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Host:

The myriad events that occur in living cells (replication, organellar assembly, transport, genome organization, transcription etc.) are to a large extent carried out through dynamic associations and assemblies of macromolecules. I will describe our efforts to develop and integrate sets of tools that are designed to throw light on the evolution, structure and function of these macromolecular machines.

At the very earliest stage of analysis, we define the precise ensembles of macromolecular players that make up the assemblies of interest. Mass spectrometry has become an increasingly enabling tool for this task, owing to its sensitivity and its ability to characterize the primary structures of endogenous proteins along with any modifications that may be present. At the next stage of analysis, we apply combined proteomic-biochemical approaches to gain insights into the architectures of protein complexes, especially those that are too large or too poorly behaved for traditional X-ray crystallographic diffraction or NMR spectroscopic analyses. Finally, we integrate data from all these sources to generate models that can provide insights into the evolution, structure and function of these remarkable macromolecular machines. I will to discuss current capabilities and limits of this approach as well as prospects for the future.

**Monday, October 7, 2013 04:30pm - 05:30pm**

Raiffeisen Lecture Hall, Central Building



This invitation is valid as a ticket for the ISTA Shuttle from and to Heiligenstadt Station. Please find a schedule of the ISTA Shuttle on our webpage: <https://ista.ac.at/en/campus/how-to-get-here/> The ISTA Shuttle bus is marked ISTA Shuttle (#142) and has the Institute Logo printed on the side.