



Colloquium

The Institute Colloquium: Cybergenetics: Feedback control of living cells

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Host:

Norbert Wiener's 1948 *Cybernetics* presented a vision unifying the study of control and communication in the animal and the machine. Predating the discovery of the structure of DNA and the ensuing molecular biology revolution, applications in the life sciences at the time were limited. Today, the confluence of modern genetic manipulation techniques, powerful measurement technologies, and advanced analysis methods is enabling a new area of research in which systems and control notions are used for regulating cellular processes at the gene level. This presentation describes novel analytical and experimental work that demonstrates how *de novo* control systems can be interfaced with living cells and used to control their dynamic behavior. The feedback systems can either be realized on a computer (*in-silico* control) or through genetically encoded parts (*in-vivo* control). The two approaches will be compared and contrasted, and applications in biotechnology and therapeutics will be described.

Monday, April 7, 2014 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.