

UIC JOINT COLLOQUIUM

Departments of Physics & Chemistry

Wednesday, October 30, 2019

“Protein and RNA Folding and Binding in the Cell”

Prof. Martin Gruebele

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While many proteins and RNAs are quite stable or form stable complexes, others are more weakly folded or transiently bound. For such “quinary structure,” the solvation environment can play an important role in structure, folding and function. I will discuss experimental examples, based on in-cell or in vivo time-resolved fluorescence microscopy, and computational examples, based on all-atom molecular dynamics simulation, where protein or RNA interactions or folding are modulated by the environment in the cell, leading to shifts in structure, stability or function compared to in vitro experiments. Sensitivity on the cellular environment provides tissues and organisms another way of tuning their phenotype, complementary to expression regulation, post-translational modification, and other such cellular mechanisms of control.

The Joint Colloquium will be held at 3pm in 238 SES.

**Refreshments will be served from 2:45 pm to 3pm outside of room 238 SES*