



# Hamilton Institute

## Optimization and Optimality in Systems Biology

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***Abstract:***

Optimization is a key methodology in engineering. Since engineering approaches to systems biology are playing a significant rôle in the rapid evolution of systems biology, it is expected that mathematical optimization methods will contribute in a significant way to advances in systems biology. Similarly, it is also expected that optimality conditions will be useful to unravel the design principles of biological systems.

In this talk, I will highlight several topics where optimization has already made significant contributions. Examples will be given where optimization methods are used for topics ranging from model building and optimal experimental design to metabolic engineering and synthetic biology. Finally, several perspectives for future research are outlined.

**Venue:** Seminar Room, Hamilton Institute, Rye Hall, NUI Maynooth

**Time:** 2.00 - 3.00pm (followed by tea/coffee)

Travel directions are available at [www.hamilton.ie](http://www.hamilton.ie)

