Research Tree

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                                    Research Tree
                        ┌──────────────────┴──────────────────┐
                    Ph.D.                                   Postdoc
              (Columbia University)                 (University of Delaware)
          ┌──────────┴──────────┐                          │
     Multi-agent            Systemic                    Advanced
       systems                risk                     manufacturing
     ┌─────┴─────┐         ┌─────┴─────┐                    │
Optimal control   Thermodynamics   First-principle   Data-driven   Antibody production and
for decision-     for social        models            models       product quality models
making            systems
 ┌──┴──┐             │          ┌────┴────┐            │                    │
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Regulating emerging technologies **[?]**	Optimal degree of social influence **[?]**	Income inequality via game theory and stat mech **[?, ?]**	Process hazard analysis for financial systems **[?]**	Measuring risk based on financial statements **[?]**	Early warning system for disaster prevention **[?]**	Model-based process design of antibody production and glycosylation **[?]**

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