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**Jan-Eric Sulzbach\*** (jsulzbach@hawk.iit.edu). *Modeling non-isothermal chemical reactions.*

In this talk we present a new framework modeling non-isothermal fluids. This framework combines ideas from non-equilibrium thermodynamics with an energetic variational approach. In particular, we focus on the application to a chemical reaction-diffusion system and show the well-posedness of the system close to equilibrium. (Received January 10, 2022)