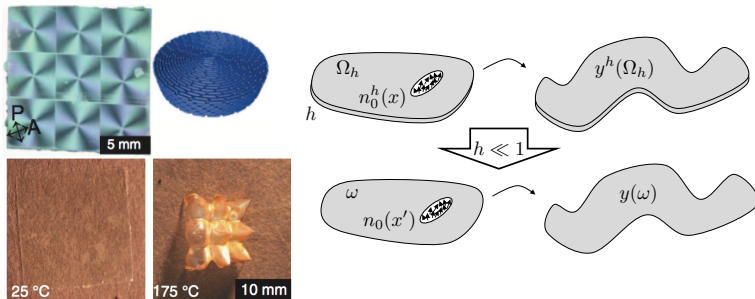


# Deformation of thin nematic elastomer sheets with controlled heterogeneity

Paul Plucinsky, Marius Lemm and Kaushik Bhattacharya

- Actuation of complex shape. Can we understand by dimension reduction?

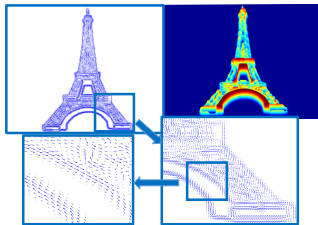
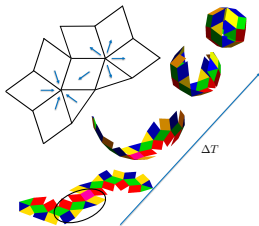


- Salient feature to low energy deformations of nematic sheets:

$$(\nabla' y)^T \nabla' y = r^{-1/3} (I_{2 \times 2} + (r-1) n'_0 \otimes n'_0) =: \ell'_{n_0} \quad \text{a.e. on } \omega$$

# A richness to shape changing actuation

- Nonisometric Origami and lifted surfaces amenable to actuation:



- Actuating origami experimentally:

