

Title: The Marangoni Cocktail Swimmer

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Abstract: Avant garde cooking, or modern cooking using knowledge of physical and chemical processes, has gained tremendous popularity in the past 20 years. Focusing on science in cooking has introduced new food preparation techniques, revived old cooking methods, and led to novel dishes that aim to engage all the senses. In this presentation, we demonstrate the incorporation of the Marangoni effect, a well known and understood surface tension driven phenomena, into avant garde cuisine. Fueled by alcohol, a swimming vessel travels vigorously at the air-liquid interface. We describe the effect of vessel design and the type of alcoholic fuel on the vessel's speed and duration of motion. We created both reusable and edible boats, testing several materials for the edible boats that can be flavored and colored to best compliment a beverage or dish.