



# *Stanford Bio-X* **TALKS IN ENGLISH (T.I.E.)**

*Introducing a broad range of scientific research in the Stanford Bio-X community through jargon-free lectures and discussion.*

**FEBRUARY 22, 2021**

**12:00PM-1:00PM**

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**[HTTPS://BIOX.STANFORD.EDU/TIEFEB21](https://biox.stanford.edu/tiefeb21)**



**12:00PM**

**Jonas Cremer**  
Assistant Professor of Biology

***“Grow with the flow - bacterial biomass accumulation along the human intestine”***

As the wise pre-Socratic Heraclitus already stated: “Everything flows”. Underpinning Heraclitus’ insights, I will discuss the fundamentals of intestinal flow dynamics and how they determine the growth of bacteria along the human intestine. The journey will take us from eating habits to bowel movements and integrates thoughts on bacterial physiology and metabolism. I will discuss how we combine these different considerations to gain a more mechanistic understanding of the microbiota everyone talks about these days.



**12:30PM**

**Susan Holmes**  
Professor of Statistics, John Henry Samter Fellow in Undergraduate Education

***“Is this just a spelling error?”***

In analysing data from wastewater, the gut, oral or vaginal microbiomes the problem of deciding whether a new DNA sequence is a new variant or just a sequencing error or a contaminant from reagents requires probability calculations that incorporate prior information, I will give a summary of how we can use Bayesian methods to update our priors as data come in.