

Elementary Fluid Mechanics CEE 357-02
Fall 2019
HW 8 (Due December 13, 2019)

The Global Institute for Water Security at the University of Saskatchewan, Canada invites speakers in environmental sciences who discuss topics relating to global water security and how new discoveries are helping to improve water supply and water quality infrastructure and ecosystems. Below are some videos that rely on environmental fluid mechanics for analysis of their data and their interpretations on what is still left unknown in these various fields of research. Please **select two videos** and comment on the findings presented by the speakers through answering the 6 questions attached. Submit to my email by **11:59 PM on Friday, December 13th**.

Sally Thompson (UC Berkeley): Trying to understand four decades of hydrologic change in a rapidly urbanizing, minimally-monitored basin, in the context of a growing water crisis

<https://www.youtube.com/watch?v=gM8KENCWHMg>

Christina Tague (UC Santa Barbara): Forest ecohydrology and drought

<https://www.youtube.com/watch?v=wNi6Lgt-nRg>

Susan Hubbard (UC Berkeley): Effects of Climate Change on Watershed Dynamics

<https://www.youtube.com/watch?v=0XhtdK9D6wk&t=591s>

Ciaran Harman (Johns Hopkins University): The modern theory of catchment transit times and its discontents

<https://www.youtube.com/watch?v=NTUTusYTgHc&t=6s>

Steven Chapra (Tufts University): The future of water quality modeling in the face of climate change and mega urbanization.

<https://www.youtube.com/watch?v=vyT-h9vWhVw>

James Kirchner (ETH Zurich) : Breakthrough in water quality analysis

<https://www.youtube.com/watch?v=sfLqmvTQxFA>

Video 1:

1. Which video did you choose?

2. Describe why you were interested in the talk (topic, the speaker)?

3. Describe the aspect of Fluid Mechanics that you learned that seemed to be most relevant (or missing) from the speaker's presentation.

4. Does this connect with your future interests in your career at UMass (or in your expected job/research path)?

5. What question would you ask this speaker if you were in the audience?

6. Other comments?

Video 2:

1. Which video did you choose?

2. Describe why you were interested in the talk (topic, the speaker)?

3. Describe the aspect of Fluid Mechanics that you learned that seemed to be most relevant (or missing) from the speaker's presentation.

4. Does this connect with your future interests in your career at UMass (or in your expected job/research path)?

5. What question would you ask this speaker if you were in the audience?

6. Other comments?