

Thessaloniki Presentation

Jett Jay Johnson Jr



Who am I?

- I am Jett Jay Johnson Junior
- AREN 2025
- Adventurer, fortune-seeker



Thessaloniki – CVEN 311 – Fluid Dynamics

- Old, cultural, and tactical city of Greece
- We are being taught by Francisco Olivera (the GOAT!)
 - Associate Professor, Civil & Environmental Engineering
- He encouraged us to engage in a combination of academic excellence, practical knowledge, and meaningful cultural experiences



Fluid elements when they hit a sharp corner:

“we ball 🌀🌀🌀🌀🌀”

Navier-stokes got terms like:

"nonlinear convective acceleration"

bro just say the fluid is gaslighting itself

Boundary layer separation?

nah the fluid just said

“it’s not me, it’s you” and emotionally disconnected from the surface

“Why’s the flow reversing in the pipe?”

bro that’s not reverse flow it’s just

💀 backpressure riz

I told the TA my simulation had divergence

he said

“fix your timestep”

bro my **life** has divergence, tf you want me to do, lower my **dt**?

Woah! This fluid mechanics stuff is soooo cool!!

Navier-Stokes Equations

Continuity Equation

$$\nabla \cdot \vec{V} = 0$$

Momentum Equations

$$\rho \frac{D\vec{V}}{Dt} = -\nabla p + \rho \vec{g} + \mu \nabla^2 \vec{V}$$

u_0

y

x

$u(y)$

δ

5 years later...

Now his mind has become turbulent

Derivation and Nondimensionalization of the Equation

$$\frac{\partial u'}{\partial t'} + u' \frac{\partial u'}{\partial x'} + v' \frac{\partial u'}{\partial y'} = \frac{1}{\text{Re}} \left(\frac{\partial^2 u'}{\partial x'^2} + \frac{\partial^2 u'}{\partial y'^2} \right)$$
$$\frac{\partial v'}{\partial t'} + u' \frac{\partial v'}{\partial x'} + v' \frac{\partial v'}{\partial y'} = \frac{1}{\text{Re}} \left(\frac{\partial^2 v'}{\partial x'^2} + \frac{\partial^2 v'}{\partial y'^2} \right)$$

Viscous Fluid Flow

Turbulent Flows

👉 Met 🥰 My 🤪 Roomie 🥰

- Taylor Six, EVEN
- Pathfinder
- Balcony Buddy
- He got a 100



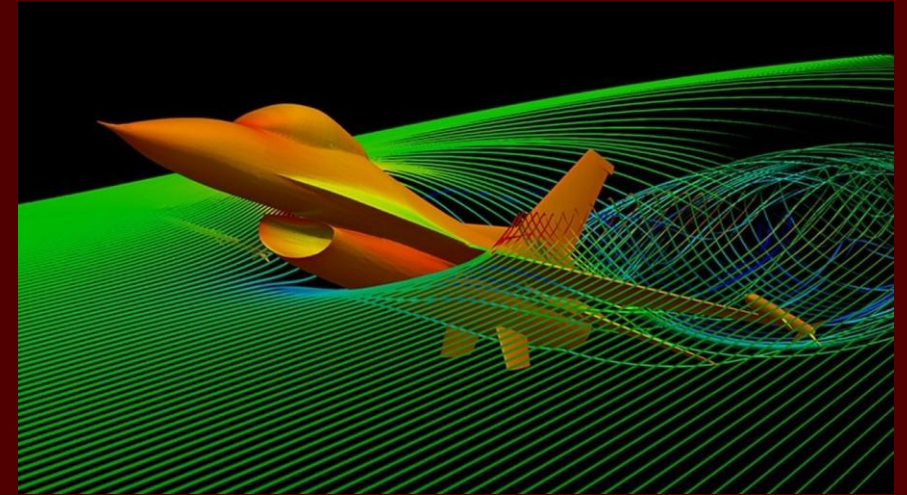
My Awesome TA!

- Kat Liepman, AREN, Aggie Catholic and Academic Weapon
 - *applause*
- Always ready to help
- Knows the area like a local, has all the information and connections
- Working overtime for our student needs



The Class

- We blew through the material in the 1st week
 - Overachievers on the 1st exam
- 2nd week had more difficult problems
 - We're still ready to kick butt on exam 2
- Olivera and Liepman were a dynamic duo for education
- We soared through the class



My Favorite Trips and Visits

Welcome Dinner

- We experienced a long serenade of different cultural music, and even got involved
- We were delivered round after round of food
- There was a tremendous amount of comradery as we got to know each other better and bond for hours



Cooking Class

- The grocery store/restaurant had a mix of a soul and modern aesthetic
- Some of my favorite food items on the trip
- We got to make our food, eat it, and be introduced to the mythical Ouzo



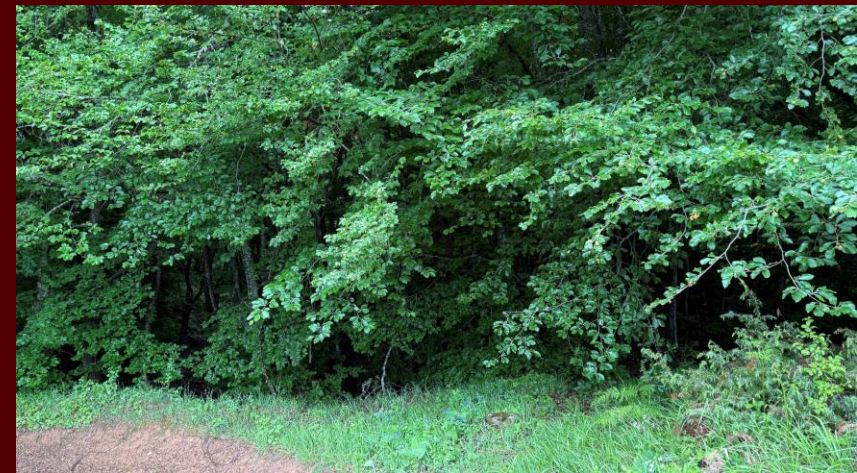
Independent Trips

- White Tower Restaurant
 - We ate at the same location multiple times
- Supporting the local economy
 - Checking out multiple vendors throughout the city
- Unique finds in the city
 - Finding more unique locations such as the scent shop



The Hike

- Bussing out – we had to take two busses out
- Start – we made our way up the mountains starting from a village
- Very northwestern America/Europe – it was cold, wet, and there was a lot of mist and dense vegetation
- The peak and view – we reached the top and had a great view of the city
- Exploring the top area and getting lost – we checked out some of the locations at the top of the peak
- Going down experiences – on the descent, we went down the road and encountered a bar and a monastery





Meteora and Athens Trip

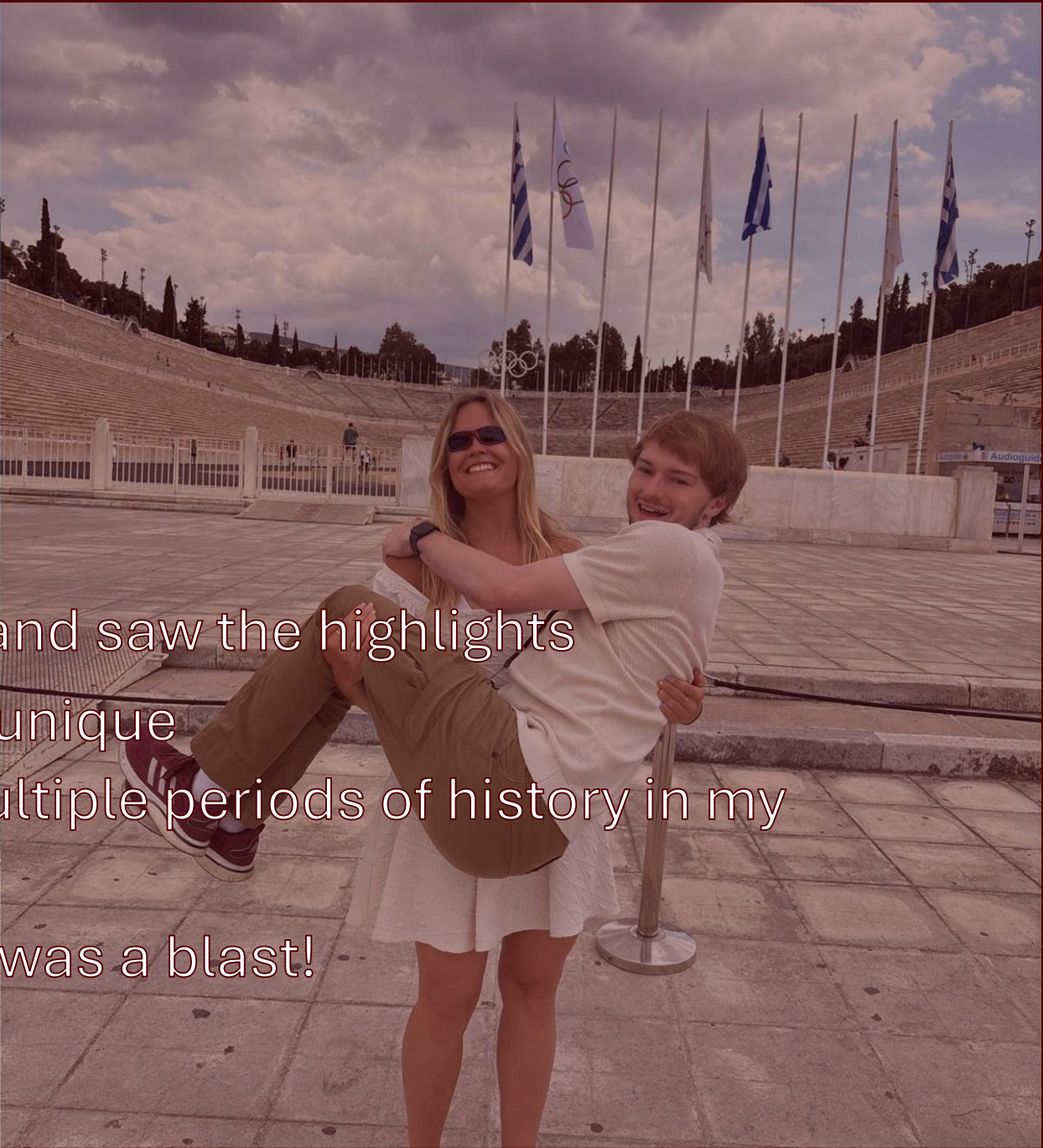
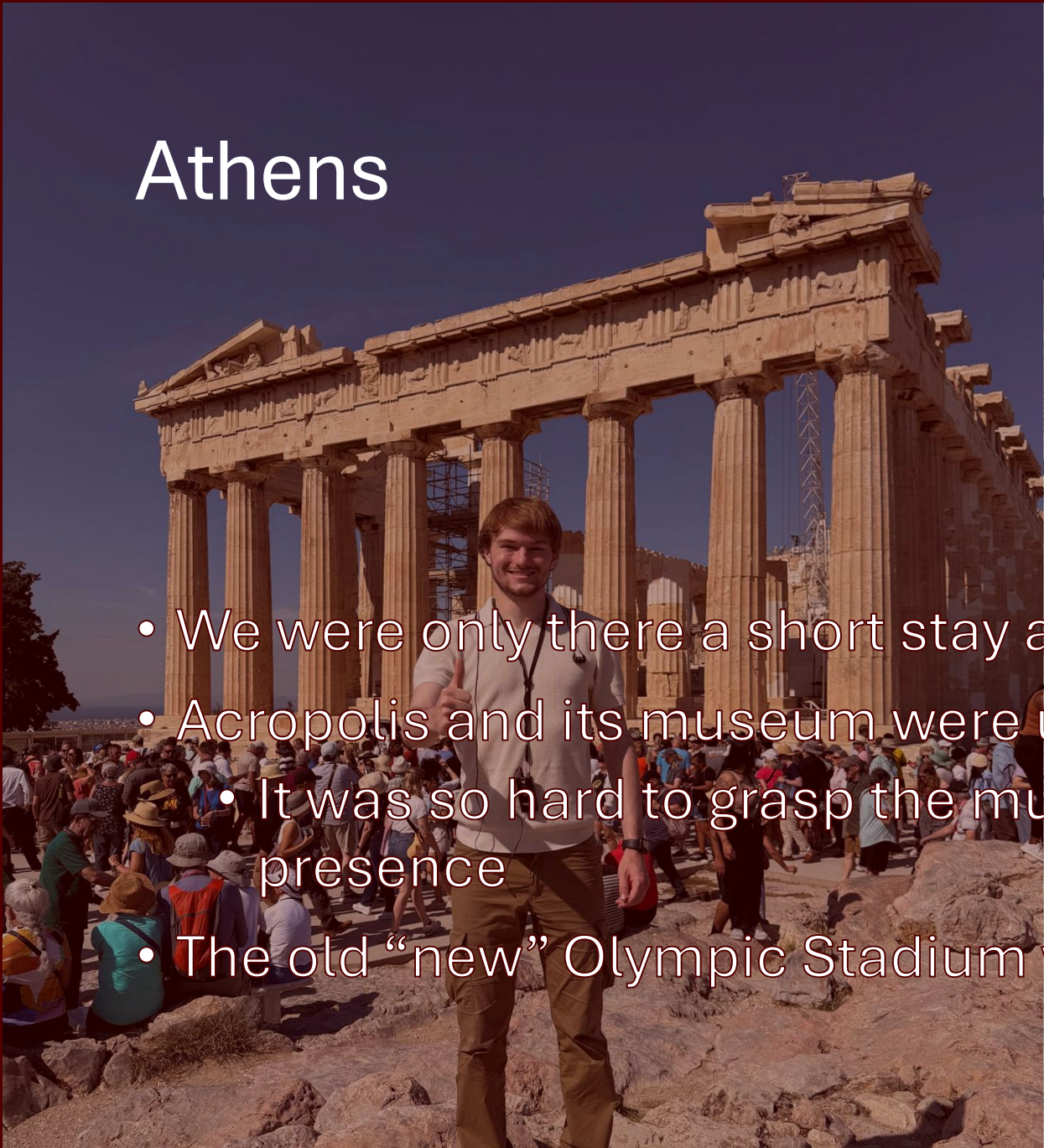
Meteora

- I had the privilege of seeing multiple beautiful monasteries.
- I got a first-hand look at Greek Orthodox Christianity
- And I think I got the best ring photos imaginable



Athens

- We were only there a short stay and saw the highlights
- Acropolis and its museum were unique
- It was so hard to grasp the multiple periods of history in my presence
- The old “new” Olympic Stadium was a blast!



Final Thoughts

- New friends have been made and we all got to know others better
- We got to experience a country in the middle of a major technological push
 - Many decaying buildings exist amongst the newer ones
 - The plumbing system and metro are great example of this push for modernization
- Going into summer, we have a great experience to kick it off
- The remainder of our academic tenure will be improved with this new perspective and experiences



Thank you for everything, Paco!

You kept the experience Dynamic!