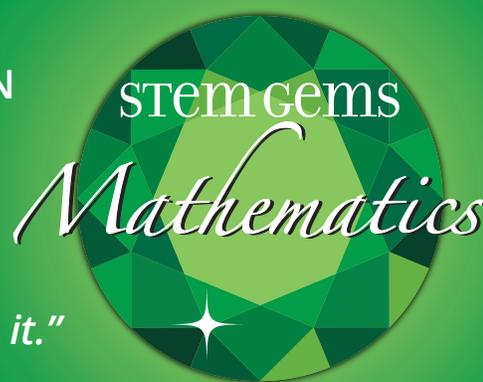


STEM Gem Career:
NETWORK SYSTEMS MATHEMATICIAN

STEM Gem:
ANNA NAGURNEY

“Math is like a sport – the more you use your muscles, the better you get at it.”



Is a career as a Network Systems Mathematician in your future? Have you ever wondered how relief organizations like the Red Cross organize resources for recover after hurricanes, wildfires, and other natural disasters? STEM Gem Anna Nagurney fell in love with network systems because of its applications, especially optimization. Read her story and digest. Watch one of her videos. Then, with your STEM Gems Tribe, **discuss, explore, reflect,** and **act.**

DISCUSS

1. How do Network Systems Mathematicians like Professor Nagurney make a difference in the world?
2. What experiences did Professor Nagurney have that led to her pursuit of a career as a Network Systems Mathematician?
3. What is Professor Nagurney's educational background?
4. What are some of the challenges that Professor Nagurney faced along her journey?
5. What are some of Professor Nagurney's key accomplishments?
6. What inspired you most about Professor Nagurney's story?
7. Professor Nagurney says: *“Math is like a sport – the more you use your muscles, the better you get at it.”* She wasn't born a gifted mathematician. Just like a sport, it took daily practice for her to become great at math. Do you dedicate time on a daily basis to practice and become great at math? Why is daily practice so important?

EXPLORE

1. To pursue a career as a Network Systems Mathematician, what college majors should you consider? What colleges and universities have programs in these areas?
2. What companies hire Network Systems Mathematicians? What is the salary range for a Network Systems Mathematician?
3. What classes should you take in middle and high school to prepare for college and a career as a Network Systems Mathematician?
4. Name at least two other women Network Systems Mathematicians. How are they similar to Professor Nagurney?
5. What professional organizations support women in Mathematics? What programs are available for middle and high school students?

REFLECT

Professor Nagurney's 7th grade math teacher had a lasting impact on her. This special teacher believed in her and gave her the confidence to know that she could be anything she wanted to be. Reflect on your teachers, past and present. How have they impacted you? What can you do to build a stronger bond with them?

ACT

It's time to step outside your comfort zone. Name one concrete thing you will do before your next meeting that will have you one step closer to becoming a STEM Gem. Blog about it. Include it in your written or photo journal. Hold yourself accountable.

Work hard. Be brave. Stay curious.

BE A GEM!

Stephanie Espy

P.S. I'd love to hear about your journey. Share on Facebook, Twitter, or Instagram and tag @STEMGemsBook #STEMGemsTribe, or email me at tribe@STEMGemsBook.com.