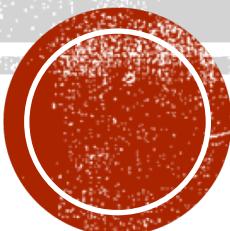


# **TEACHING FOCUSED CAREER OPPORTUNITIES**

Jo Hardin  
Pomona College  
May 15, 2020



- small liberal arts college
  - low acceptance rate
  - large endowment
- 
- autonomy over classes (topics, books, etc.)
  - student mentors & graders
  - smart & motivated students
  - very high student contact hours
- 
- vast majority of my mental energy & time go toward pedagogy

## LIFE AT POMONA



# LIBERAL ARTS COLLEGES

- undergraduate only (usually)
- teaching highly valued
- curriculum development, pedagogical research
- small class sizes
- close student-faculty interaction
- undergraduate research opportunities
- increasing emphasis on statistics & data science



# TEACHING UNIVERSITIES

- committed to quality undergraduate teaching
- similar student-faculty interaction to liberal arts colleges
- larger classes
- heavier teaching loads



# RESEARCH UNIVERSITIES

- Professor of the Practice or Professor of Teaching
- long-term / permanent / tenure-track positions with primary responsibility in education
- emphasis on excellence in teaching and other instruction-related activities
- expected to engage in professional activity and service related to the pedagogical mission of the university
- 4 - 8 classes per year



# TWO THINGS I WAS NERVOUS ABOUT:

## **research**

- would I ever think of an interesting question?
- would I ever be able to publish in “good enough” journals?

## **grant writing**

- did I need to write grants?
- what if I couldn’t get grants?

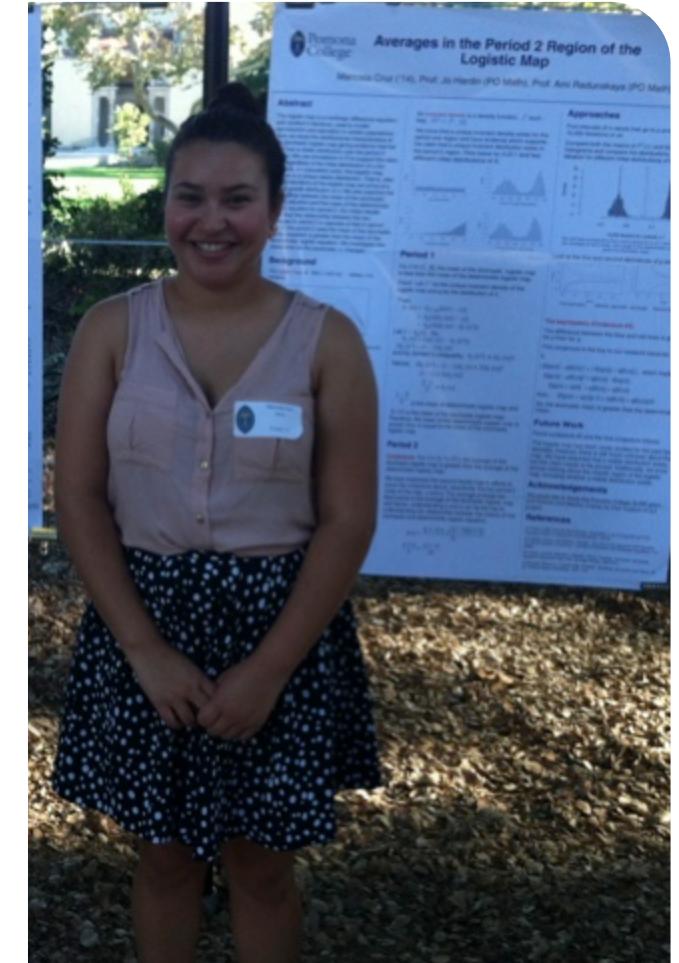


# RESEARCH WITH UNDERGRADUATES

- **your own research agenda**
- computational
- pedagogical
- consulting

Research Circle: Long-term Averages of the Stochastic Logistic Map

- group of 6 students
- students received 2 credits
- met weekly two hours together + two hours students only



Maricela Cruz



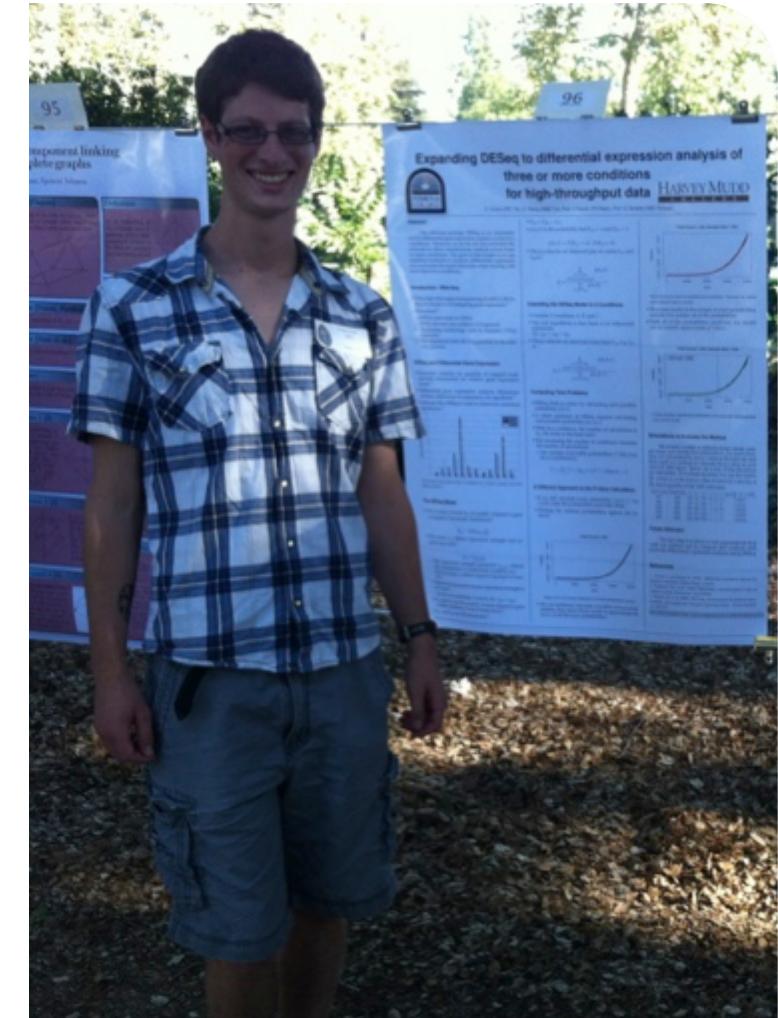
# RESEARCH WITH UNDERGRADUATES

- your own research agenda
- computational
- pedagogical
- consulting

Selecting between-sample RNA-Seq normalization methods from the perspective of their assumptions

Ciaran Evans ✉, Johanna Hardin, Daniel M Stoebel

*Briefings in Bioinformatics*, Volume 19, Issue 5, September 2018, Pages 776–792,  
<https://doi.org/10.1093/bib/bbx008>



Ciaran Evans  
PTT fellow!



# RESEARCH WITH UNDERGRADUATES

- your own research agenda
- computational
- pedagogical
- consulting



OpenIntro

OpenIntro:

- learnr tutorials
- randomization – mathematical method comparison table / cheat sheet
- integrating the R homework assignments



Marie Tano



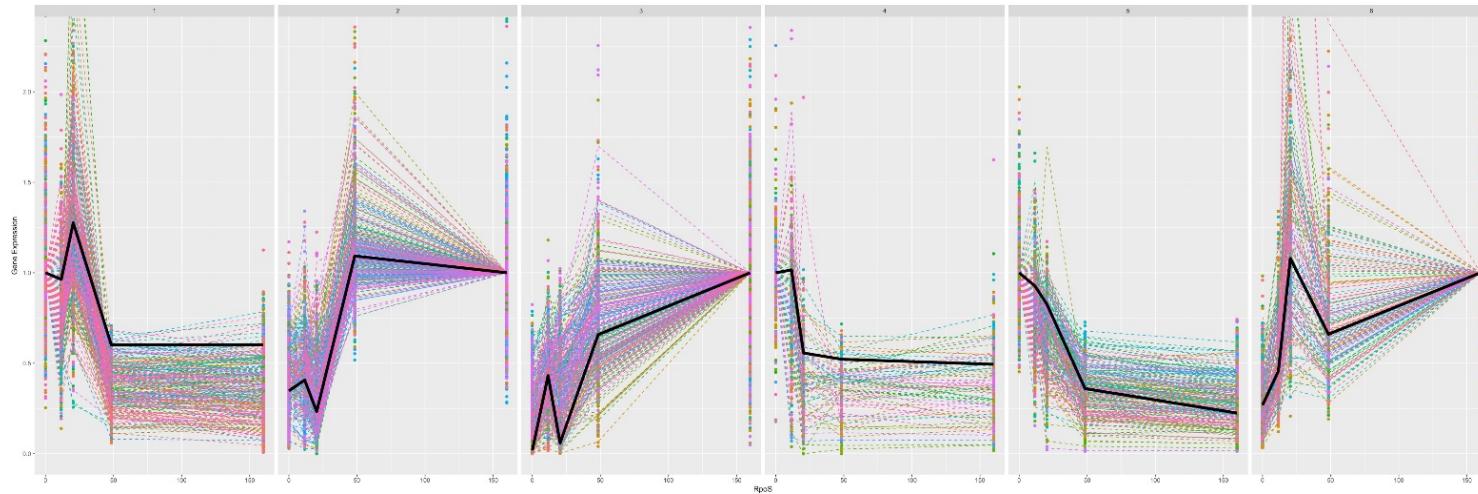
# RESEARCH WITH UNDERGRADUATES

- your own research agenda
- computational
- pedagogical
- **consulting**

Consulting project with a molecular biology colleague

- data viz skills
- communication skills
- real / applied problems

Madison Hobbs



# GRANT WRITING (?)

- Funding for you
- Funding for students
- Fantastic way to synthesize your research program
- Deadlines for staying on task



# GRANT WRITING (?)

- Funding for you
- Funding for students
- Fantastic way to synthesize your research program
- Deadlines for staying on task
- Research focused grants
- Teaching focused grants
- Student focused grants
- Discipline focused grants
- No grants



- Interactions with students
- Strong impact on students
  - future statisticians, data scientists
  - future leaders, scientists
- Creativity
  - courses, curriculum
- Educational research
- Statistical consulting, collaboration

**IT'S REWARDING!**



- teaching load
  - number of preparations?
  - class size?
- teaching support
  - graders
  - technology
- colleagues, collegiality
- what is expected, what is valued?
- requirements for scholarship, including what “counts”

## THINGS TO CONSIDER



# HOW DO I GET ONE OF THOSE JOBS?

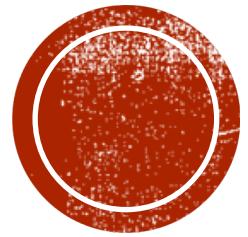
- Lots of teaching experience
- Teaching awards
- Develop an independent research program

- Preparing to Teach
- Work at your teaching, learning center
- Experiences with diverse groups

StatFest 2018



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<http://research.pomona.edu/johardin/>

Thank you!

# BREAKOUT QUESTION

- what is the part of being a professor which seems most **exciting**?
- what is the part of being a professor which seems most **daunting**?

