



# Faculty Application Advice

Michael West Jr.

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# Michael West Jr., PhD

- B.S. Mechanical Engineering, Yale University, 2018
- M.S. & PhD, Mechanical Engineering, MIT, 2020 & 2024
  - Focused on (upper-limb) human motor control, perception, and learning – using control theory to understand how humans produce movement.
  - Applications in dexterous robots and therapeutic robots.
- Post Doc in the HAMR Lab: Summer 2024 – present
  - Sensorimotor deficits post stroke and surgical skill acquisition.
- **Incoming Assistant Professor Georgia Tech, starting Summer 2027**
  - Applied in the fall '23 – spring '24 cycle to 24 Departments (BME, ME, EE, Robotics) across 9 schools.
  - 4 phone interviews → 4 in-person interviews → 2 job offers.



# “The currency of academia is excitement.”



# Before Applying

- Future faculty workshops
  - **Next Prof – Hosted by Georgia Tech, UC Berkeley, and University of Michigan**
  - Trailblazers @ Purdue, Focus @ Georgia Tech, RIT, University of Wisconsin
- Conferences
- Invited Talks/ Seminars



# Written Application

- CV is important. But do not tell yourself no!

## **PEER-REVIEWED JOURNAL PUBLICATIONS**

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1. **West, A. M.** & Hogan, N. (In Preparation). Reach-and-Grasp Synergies differ from Manipulation Synergies. *Journal of Neurophysiology*.
2. **West, A. M.**, Huber, M.E., & Hogan, N. (2022). [Role of Path Information in Visual Perception of Joint Stiffness](#). *PLOS Computational Biology*.
3. **West, A. M.**, Hermus, J., Huber, M., Maurice, P., Sternad, D., & Hogan, N. (2022). [Dynamic Primitives Limit Human Force Regulation during Motion](#). *IEEE Robotics and Automation Letters (RA-L)*.

## **PEER-REVIEWED CONFERENCE PUBLICATIONS**

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1. **West, A. M.**, Tessari, F. & Hogan, N. (Under Review) The Study of Dexterous Hand Manipulation: A Synergy-Based Complexity Index. *IEEE International Conference of Robotics and Automation (ICRA)*.
2. **West, A. M.**, Tessari, F., & Hogan, N. (2023). [The Study of Complex Manipulation via Kinematic Hand Synergies: The Effects of Data Pre-Processing](#). In *IEEE International Conference on Rehabilitation Robotics: [proceedings]*



# Written Application

- Research Statement
  - Mixed feedback on the ratio of prior work vs future work.
  - Must be clear on who you are as a researcher. What is your approach? What is your application area?
- **Teaching (and Mentoring) Statement**
  - What is your teaching (and mentoring) philosophy? How have/will you implement this?
  - Center for Teaching and Learning can help you develop this (over time).
- DEI/Service Statement
  - What does DEI mean to you?
  - What service initiatives are you interested in? Show evidence.
  - What service initiatives will you participate in or help develop at their university.
- Cover Letter
  - This should connect your entire application together. It should highlight the most impressive parts of your application.
  - Do last. BUT NOT AT THE LAST MINUTE!



# Zoom Interview – General

- ~20-45 minutes with the search committee (any other relevant faculty who might choose to come).
- **Goal: Show maturity and generate excitement.**
- Will ask about **research** and maybe teaching and maybe maybe DEI/service.
- May allow a few slides. There will be an amount of time given or max number of slides for this. Stick to the time/slide limit.



# Zoom Interview – Tips

- Research:
  - You should have a 3 sentence (max) summary of who you are as a researcher. Include your **approach**, **expertise**, and **impact area**.
  - May discuss one previous project and one future project. **EMPHASIZE IMPACT.**
- Teaching/ Mentoring Philosophy:
  - Draw from application.
  - Highlight specific courses you can teach. Highlight a course you can create.
- DEI:
  - Draw from application.
  - Highlight specific initiatives that exist. Highlight specific initiatives you can create.



# Zoom Interview – Questions to be prepared to answer.

- How will you distinguish your research from your advisor(s)?
- What are the first 2-3 research projects you plan to pursue?
- **What funding agencies will fund this work?**
- **How large of a research group do you think you'll have?** Think about how you will manage mentoring this number of students.
- **Who is your research community?** Think about which conferences you and your students will regularly attend.
- **What classes would you be interested in teaching within our department (existing and those you'll create)?**
- What initial equipment might you buy with start up funds? Ballpark, how much does that cost?
- What will you become famous for?

# Zoom Interview – Questions you can ask.

- **Goal: show maturity.**
- How does the university view collaboration when evaluating tenure?  
*Because I think Prof. X and I can do great work in this area.*
- Does the department put more weight on agency vs industry/private funding?  
*Because I want there to be a translational focus on my research.*
- Is there available lab space in building Y?  
*Because I can envision Prof. Z's students might benefit from the equipment I plan to build in my lab.*
- As faculty in department A, can I advise or co-advise students in department B?  
*My research is quite interdisciplinary.*



# In Person Interview - General

- 1.5 – 2 days:
  - You will give two talks: a seminar, a vision/chalk talk.
  - You will have a BUNCH of one-on-one meetings with faculty (maybe staff and students).
  - You will have a dinner with a few of the faculty.
- **Goal: GENERATE EXCITEMENT!**
- It is a LONG day. Bring snacks and a water bottle.
- In most cases, you will be assigned a host; they are your friend.
  - If your host offers to meet with you before the interview take them up on the offer. They may give tips on how to prepare the talks. Alternatively, you can email to ask. However, be specific with your questions (length, target audience, Q&A).
- Assume everyone is always evaluating you (even at the dinner).
- Remember you are also interviewing them.

# In Person Interview – Before the interview

- Reach out to your host and request to meet with 10-15 faculty who you can have genuinely exciting discussions about research with.
  - Can ask to meet with specific staff (or student groups).
- Give at least two practice talks: (1) to experts in your field and (2) general technical audience who has not seen your work before.
- Once both talks are finalized, print a color copy of (1) your seminar talk (2) a summary of your seminary talk and (2) your chalk talk for one-on-one meetings.
- Obtain a copy of your schedule and research the faculty you're meeting with. Prepare 2-4 talking points about their research and potential collaborations.  
**GENERATE EXCITEMENT.**
- Prepare a one-page list of questions about life in the department/university/city.
- Practice your talk in the hotel the night before your interview (final check on timing).
- Save the phone numbers of administrative staff who set up your interview.



# In Person Interview – Seminar and Vision Talks

- Seminar:
  - ~40-45 minute research presentation + 10-20 minute Q&A.
  - Target audience is a lower-level graduate student in that department.
  - Mostly, prior research with some allusion to where the work can go into the future.
  - **EMPHASIZE IMPACT.** Can go into some details about research topics but do not over do it.
  - Prepare back-up slides to answer inevitable technical questions.
- Vision/Chalk Talk (Specifically ask about format prior to interview):
  - ~15-30 minute research presentation + 30-45 minute Q&A.
  - May give BREIF (1-slide) summary of prior works (for faculty who missed the seminar).
  - **Focus on future research.** Can highlight specific projects (**immediate**, medium, long-term).
    - **Highlight IMPACT.** Mention funding sources and potential collaborators.
    - Can discuss ideal student you will be looking to hire for these projects
  - Teaching: Draw from application. Highlight specific courses you can teach. Highlight a course you can create.
  - DEI/Service: Draw from application. Highlight specific initiatives that exist. Highlight specific initiatives you can create.



# In Person Interview – Day of Tips

- **GENERATE EXCITEMENT.**
- Make a check list of everything you need (laptop, usb, **charger**, notebook, clicker, printed slides, snacks, water etc.) and check it in the morning.
- Take notes of interesting points from your conversations with professors.
  - In my notebook, I also had my talking points for each professor written in there to help me during the conversation.



# In Person Interview – Questions you can ask

- Research: Administrative support, cost of students, **what makes the students unique**, shared facilities, **why do or don't students come here**
- Teaching: teaching load, TAs, new course development
- Departmental values: collaboration, valued funding agencies, bureaucracy, **mentorship, service**
- Tenure: timeline, tenure rate, what is valued
- Family life: **housing market**, quality of public schools, benefits for spouses



# In Person Interview – After the interview

- Email every professor you met and send them a quick thank you.
  - Personalize the email with discussion points from the conversation that you wrote down in your notebook. Answer in questions they asked you that you may not have known at the time.
- Keep the department chair up-to-date about other offers you might have received.



# Negotiation

- **Do not go through this by yourself! Find a mentor here or even better, at the institution who gave you an offer letter.**
  - **Reach out to your host to help you with this.**
- Salary is the least negotiable item, especially at public schools.
- You will negotiate your start-up package:
  - Lab space – is this shared; if so, with who? Will it be ready when I arrive?
  - Start up equipment funds – does this have an expiry? Is it flexible?
  - **Discretionary package** – ask how facility get discretionary after start-up.
  - Initial number of students funded (student years) – post doc?
  - Miscellaneous – childcare, spousal job support etc.



# Thank you! Questions?

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**Michael West Jr, PhD**

Incoming Professor at Georgia Tech |  
Postdoc at Johns Hopkins | MIT PhD | Rese...

