

## The Path of an... Academic Physicist

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### Three key elements to success on any path...

- Learn your craft
- Work hard
- Establish high-quality and lasting relationships
  - Colleagues
  - Mentors
  - Sponsors

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### Where did my path begin ?

- 1997: BS in Chemistry/Biology, UTEP → *6 years to complete*  
**Why so long?**
- Work, work, work... 
- Learned invaluable lessons that still apply today in my career as an academic medical physicist.
  - Always be on time.
  - Be respectful of your colleagues.
  - Do your fair share of the work.
  - Sometimes you have to work the “worst” shifts.
  - Sometimes you have to mop up a big mess.

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### The early days....

- 1998: Began graduate school in Radiation Biology, UTHSCSA 
- 2000: PhD candidacy exams in Radiation Biology and Medical Physics  
Married 
- 2001: MS in Medical Physics, UTHSCSA  
Moved to Atlanta, got a job as junior physicist at Emory University  
*After a 1-year break from grad school, I reenrolled at UTHSCSA and completed my dissertation research.*
- 2005: PhD in Medical Physics, UTHSCSA  
ABR certification  
Assistant Professor (clinical track), Emory University

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### And then...

#### MD Anderson in Houston, Texas

- 2007: Assistant Professor (tenure track), MD Anderson
- 2010: Started a family 
- 2011: Divorce  
*Requested/granted 1-year tenure clock delay* 
- 2014: Associate Professor (with tenure)
- 2016: Director of Late Effects Group and Associate Director of Radiation Dosimetry Services

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### Things I've learned along the way.....




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## Learn your craft

- Learn to be a good clinical physicist. It is rewarding and makes you a better researcher.
  - ABR certification is important even for academic careers; e.g., a tenure track appointment at MD Anderson is 70% clinical and only 30% research (until you have grants to buy more time).
- Stay focused on your research.
  - A project is not complete until the manuscript is published. Always follow through.
  - Grants, grants, grants, and more grants (lots of applications to get one funded).

**And to do both of these well, you have to work hard (and lots of hours).**

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## Find good mentors and sponsors

- Early in your career, your mentors tend to be your research advisor and thesis committee members.
- As you progress, it is important to seek out broader mentorship.
  - I have many mentors, each of whom have different areas of expertise and very different perspectives.

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## Listen to the hard feedback



• **Mary Martel (mentor/sponsor):**  
*“You can’t just keep working on random projects. If you want to make tenure, you have to pick an area in which to focus your efforts and become nationally known for that...”*

*(After initially being taken-back) I took her advice to heart and focused on out-of-field dose and late effects. Six years later, I made tenure, largely based on research in those areas.*

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## Establish collaborations



- Prior to AAPM 2004, I searched the meeting program for "neutrons", and I found a presentation by Stephen Kry on a topic very similar to my own research.
  - I emailed him, and we met at AAPM and began discussing collaborative projects, one of which we began later that year.
  - To date, we have co-authored **20** manuscripts.

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## Get involved in AAPM

- **But how? No one just invites a new graduate to join a committee!**

### Self-Referral

- Email committee chairs and ask to sit in.
- My experience is they usually say yes. ☺
- And if you show an interest and are willing to work, they will often let you "join".

### Mentor Referral

- Ask your mentors to recommend you for open committee positions.
- And then follow through with direct contact.
- This is how I got on my favorite committee, CAMPEP GEPRC.

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## Establish a network of contacts

- In 2006, I set my sights on MD Anderson, but there were no open positions, and all of my inquiry emails had been ignored.
- I got creative. I emailed someone I met through committee work (and a former MD Anderson employee) for advice on how to get my foot in the door.
- I ran with his advice...

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## Recommended reading

- SDAMPP Student Guide to a Medical Physics Career



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