

Mathematicians

in the

Age of Technology

Navigating the New Mathematical Frontier

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My metamorphosis: From Grad Student to Assistant Professor

- How to survive (and maybe enjoy) academic life
- Using technology without losing your mathematical soul



THE CHANGING LANDSCAPE

- LLMs: your new overly confident officemate
- Automated theorem provers: the pedants we always needed
- Computers: still faster than us, still unable to appreciate beauty



WHAT HASN'T CHANGED

- At its core, math remains gloriously slow
- Insight still comes at 2AM, never when scheduled
- Deep thinking cannot be outsourced (YET)



GRADUATE SCHOOL MINDSET

- Life in the mathematical monastery
- Your world = 1 Theorem, 1 Problem, 1 Hope
- Advisor = Benevolent Overlord (USUALLY)



BECOMING AN ASSISTANT PROFESSOR

- Freedom AND Responsibility (SUDDENLY, TERRIFYING)
- Teaching, Research, Service
- Imposter syndrome evolves into permanent house guest



JOURNEY IN BETWEEN: POSTDOCS

- Finally MADE IT (defense, job, etc.)
- Lost in NO-MANs-LAND
- Mentor = New Overlord (benevolent?)



TEACHING SURVIVAL GUIDE

- Prep strategically, not obsessively
- Be fireless (students can smell it)
- Use tech to avoid tedious work
 - Use TAs (remember your sufferings)



RESEARCH SURVIVAL GUIDE

- Short-, medium-, and long-term projects
- Computers help you explore, not replace you
- Collaborate with people who spark JOY (and good theorems)



SERVICE SURVIVAL GUIDE

- Choose tasks that MATTER and spark JOY
- Say 'NO' gracefully and often
- Service to the community doesn't mean suffering



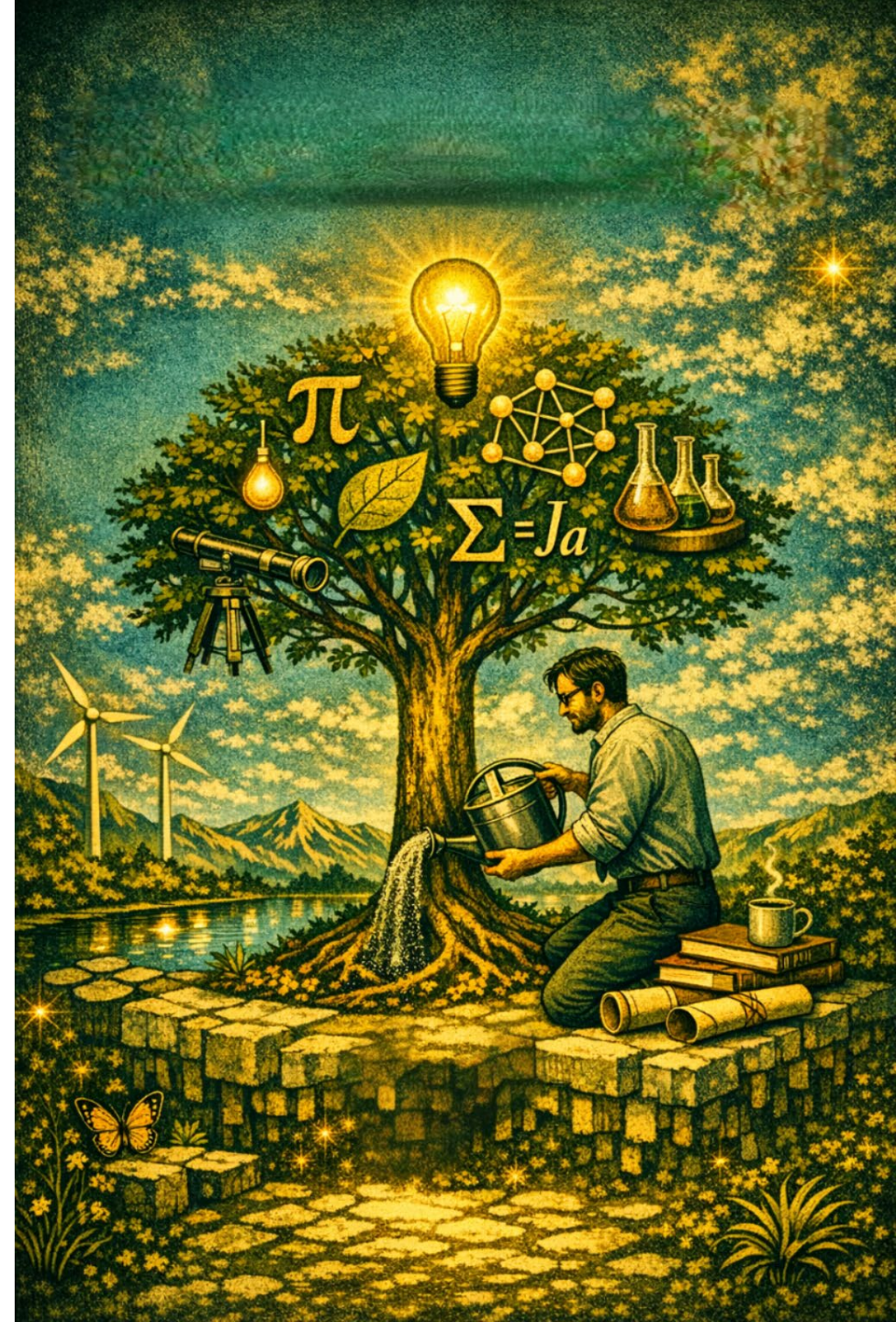
TECHNOLOGY: FRIEND OR FOE?

- LLMs for first drafts (and bad jokes, like the ones in this talk)
 - Careful of logical sins
 - Computation: FLASHLIGHT into mathematical darkness
- Tools $\neq$ answers; you're still the thinker
 - Maintain rigor like a philosophical workout
 - Your brain is still the ultimate theorem prover



BUILDING A SUSTAINABLE PROGRAM

- Find a theme that feels like home (and sparks JOY)
- Embrace both fast experiments and slow meditation
- Nurture collaborations that challenge and enrich you
- Save some time for questions that haunt you



CLOSING THOUGHTS

- Tech amplifies you; it doesn't define you
- The academic path is nonlinear and beautifully strange
- Stay curious, stay kind, stay mathematically rebellious



Thank You!

