



Higher Studies and Research

@Daffodil International University, Software Engineering Club

Introducing myself - 1/2

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Introducing myself - 2/2

Ph.D Candidate,

Advised by

[Dr. Denys Poshyvanyk](#) (Software Engineering
Maintenance and Evolution Research Unit -
[SEMERU](#))

&

[Dr. Adwait Nadkarni](#) (Secure Platforms Lab - [SPL](#))

More info: <https://amitsealami.com>



WILLIAM
& MARY
CHARTERED 1693





Context: 1st Factor

“Academia / research lives, breathes and evolves

Therefore, many choices between black and white.

Just like life.”

- Some wise guy
- (me)



Context: 2nd Factor

Reusing the Wheel

Notably,

- “How to navigate graduate school toward a rewarding Ph.D” in ICSE 2019 Student Mentoring Workshop



by Dr. Denys
Poshyvanyk



Why Higher Studies (in USA)?

- learn about the latest and greatest practices
 - from industry and academic experts
- fulfill your ambitions
- get paid!



Typical Lifecycle in Masters/PhD

In years:

1. Coursework
 2. Candidacy (/Masters)
 3. Forming Proposal, Research, Write, Publish
 4. Finalizing Proposal, Research, Write, Publish
 5. Research, Write, Publish, Dissertation
- 
- Lots of focus on research



Graduate Schools

Want to have students with

- Prior research experience, contribution, publication
- Creativity, responsibility, persistency
- Independency and Leadership
- Academic Choices and Performance



Preparing for Admission (As Student)

- Choose your courses wisely
- Do well in classes
- Know your faculties
- Try to get involved in research



Application Components

- Statement of Purpose (SOP)
- Letter of Recommendation (LoRs)
- GRE
- IELTS/TOEFL
- Undergrad transcripts



SOP - 1/2

- Focus on your own story
 - Experience with research / research interest
 - ideas about existing problems
 - Personal interest to professors in that department and why
 - Get feedback from others (specially faculties/peers)



SOP - 2/2

- never, ever, ever start by looking at SOPs written by others
- Follow guidelines
 - [MIT, Berkeley](#)

Good to read:

- [How to Write a Bad Statement for a Computer Science Ph.D. Admissions Application](#)



LoR

- 3-4 letters
- Make the letter personal
 - অমিম একটি ভালো শিক্ষার্থী
 - অমিম ভালো শিক্ষার্থী, আমি আর অমিম মিলে এই গবেষণা/প্রোজেক্ট করেছি যেটায় অমিম ওরকম সেরকম কাজ করেছে বলে গবেষণার মান বৃদ্ধি পেয়েছে।
- Preferably from supervisors who supervised your work
- Internship/industry supervisor LoR are also fine, but it has to be relatable



GRE

- required?
- range?
- quant score (probably) gets more weight



Factors to Consider when Applying - 1/2

- Specific Ranking (professor, department, field)
- Potential Supervisor
 - Beginner vs Experienced
 - Research Group
 - Publications
 - Alumni members



Factors to Consider when Applying - 2/2

- Requirements of PhD program
- Location
- Financial Support
- Bangladeshi community



Applying

Personal rule of thumb: If you are going for 10 schools

- 2 top tier
- 4 okay
- 4 safe



Potential Research Works - 1/2

- Find a supervisor with research experience / interest
- Maybe start with reading / doing Literature Survey
- Extension on existing works



Potential Research Works - 2/2

- Adding localized context/factor to existing works ([MobiCoMonkey](#))
- Reading about latest and greatest experimental works (e.g. ICSE [NIER](#))
- [Seminal Works in SE by CMU](#)

Good to read

- [What Makes Good Research in Software Engineering?](#)
- <https://www.slideshare.net/alexorso/how-to-get-my-paper-accepted-at-top-software-engineering-conferences>



Publication

- Avoid predatory journals
- Go for reputed conferences / journals
- Avoid plagiarism
- Focus on quality contribution, not for namesake



While studying, try to gain

- Independency
- Critical Thinking
 - *Why* of phenomenon
 - *What if* of phenomenon



Reaching out to Professors

Email

- Write a draft, check with your supervisor
- Focus on demonstrating your understanding

Totally random example:

- স্যার, আপনার ম্যালওয়ার এনালাইসিসটা ভালো লেগেছে
- স্যার, বায়েসিয়ান ক্লাসিফাইয়ার বেসড ম্যালওয়ার ডিটেকটরটা অনেক ভালো লেগেছে। আমার মনে হয় বায়েসিয়ানের বদলে এন-গ্রাম ব্যবহার করলে এপিআই পর্যায়ে ডিটেকটরটা আরো ভালো কাজ করবে, কারণ ...



Reaching out to Professors

Other ways:

- Twitter
- ResearchGate (!)



Summary

- Learn as much as possible about research
- Explore opportunities
- Read. A LOT (<https://paperswelove.org/>)
- Try to understand what if and why
- Think crazy, think out of the box
- Have fun while doing it



Q&A

Feel free to ask me anything.

Reach me through <https://amitsealami.com>

Twitter: [AmitSealAmi](#)