

Doing a Phd in logic-related areas: some dos and don'ts

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My background

- research topic: logic engineering of multiagent systems
 - aim: model phenomena
 - identify basic concepts (time, action, knowledge, belief, goals, intentions, . . .)
 - identify their interrelations ('knowledge implies belief')
 - find logic (modal logic KD45, . . .)
 - prove properties
 - develop theorem proving methods
- involved in 17 Phd supervisions
- more theory- than application-oriented

Are you ready to do a Phd thesis?

- 1 like to find out things on your own
 - prove mathematical results (were you ever tempted to prove a theorem that was not part of the course?)
 - write programs (well, that's obvious)
- 2 develop an appetite for formal correctness and elegance
 - “beauty is our business” [Krister Segerberg]
- 3 have a lot of stamina
 - doing a Phd is not a regular job
 - one difficult phase in 3-4 years is almost certain!
- 4 have some literary skills (!)
 - research papers are a particular literary genre
 - but coauthors may help
- 5 be modest
 - “Out of 100 conference papers, 1 is really good, 9 are wrong but interesting, and 90 are not even wrong” [Pierre Siegel]

N.B.: you cannot acquire these qualities (either you have them or you don't)

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If you answered 'yes' to the previous question...

- 1 trust your gut feeling when choosing supervisor and subject
- 2 be frank with your supervisor
 - ask if you don't understand!
- 3 learn how to explain what you are doing
 - http://www.eecs.berkeley.edu/~messer/Bad_talk.html
- 4 don't plagiarize
- 5 have a break from time to time; go in for sports

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