

UiO : **Department of Mathematics**
University of Oslo

PhD: the path to become a professional researcher

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STORM - Stochastics for Time-Space Risk Models

Funded by the Research Council of Norway Project nr. 274410 and the University of Oslo.

Why are you here?



Do you remember when you finished and defended your Master thesis?

- Excitement in finding things out
- Pleasure in the beauty of a rigorous argument
- Discomfort when something is escaping the understanding?
- Pleasure of playing with thoughts, experiments, trials, daring conjectures?
- Burning Flame?
- Passion?



... And then you have started a PhD



- The goal: The project
- The time: 3-4 years (after all quite short!)
- The group: Fellow PhD students, Postdocs
- The research group
- ... The supervisor !! Who is she?



Education

Master in Mathematics, Univ. Milano, Italy – Published thesis

PhD in Probability and Mathematical Statistics, Univ. Pavia, Italy – Published works

International Cooperation – different people from different continents, still similar!

Research

- Stochastic calculus and stochastic analysis: anticipating and non-anticipating integration and differentiation for processes and random fields, white noise for Levy processes, time-change and ambit fields
- SDEs, BSDEs, SFDE. Stochastic control under differentiated information
- Mathematical finance: modelling; pricing; hedging and optimal portfolio problems under full, partial, and insider information; sensitivity and robustness; markets with memory; energy finance; machine learning in finance

Students

Mentor of 10 PhD students (5 completed + 5 ongoing),

subsidiary for 4 PhD students. Mentor for 2 Postdoc.

Master and bachelor.

<http://folk.uio.no/giulian/>



Supervisor – PhD student

The GOAL – Let the PhD student *develop into an independent researcher*, who can complete the PhD project and then tackle other scientific goals in academia and outside.

How?

Guiding and sharing, research problems and approaches, proposing experiences, providing occasions, hinting towards opportunities, adapting, listening, meeting up, shaking up, calming down, boosting up, work on motivation (my motivation, your motivation),...

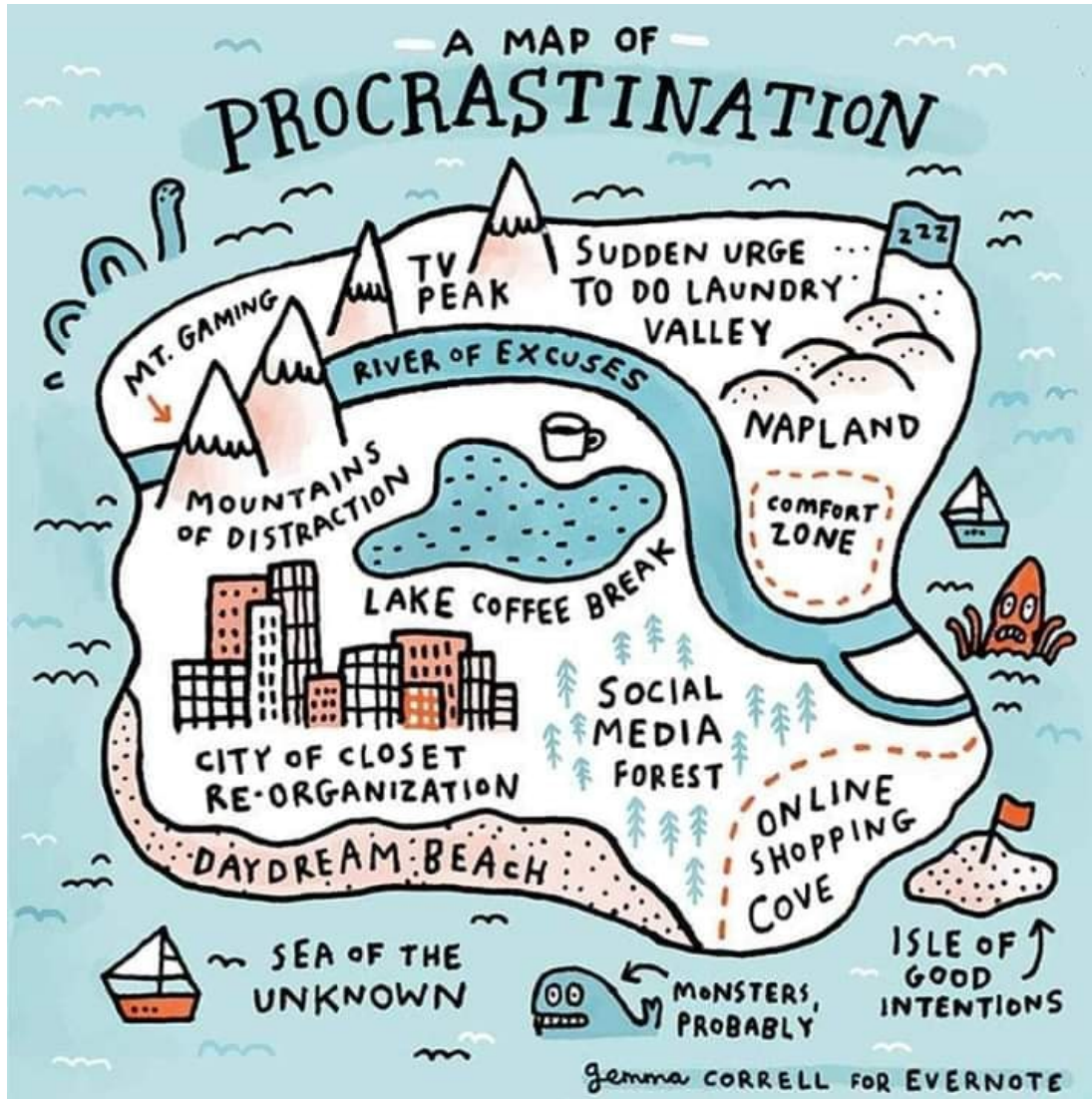
For me it is important

- Good environment
- Freedom and goal oriented: dialogue
- *Quality Time* is the most valuable item: yours and the one of your supervisor
- Be prepared, proactive, deep, careful, passionate
- Be part of doing: both researching and taking part to researchers' community
- Be inclusive of experiences: presentations, small/big conferences, organisation of events, meet other scientists senior and junior (Math, Faculty, International)
- Search for feedback (constructive is always better)
- Be ethical and responsible!

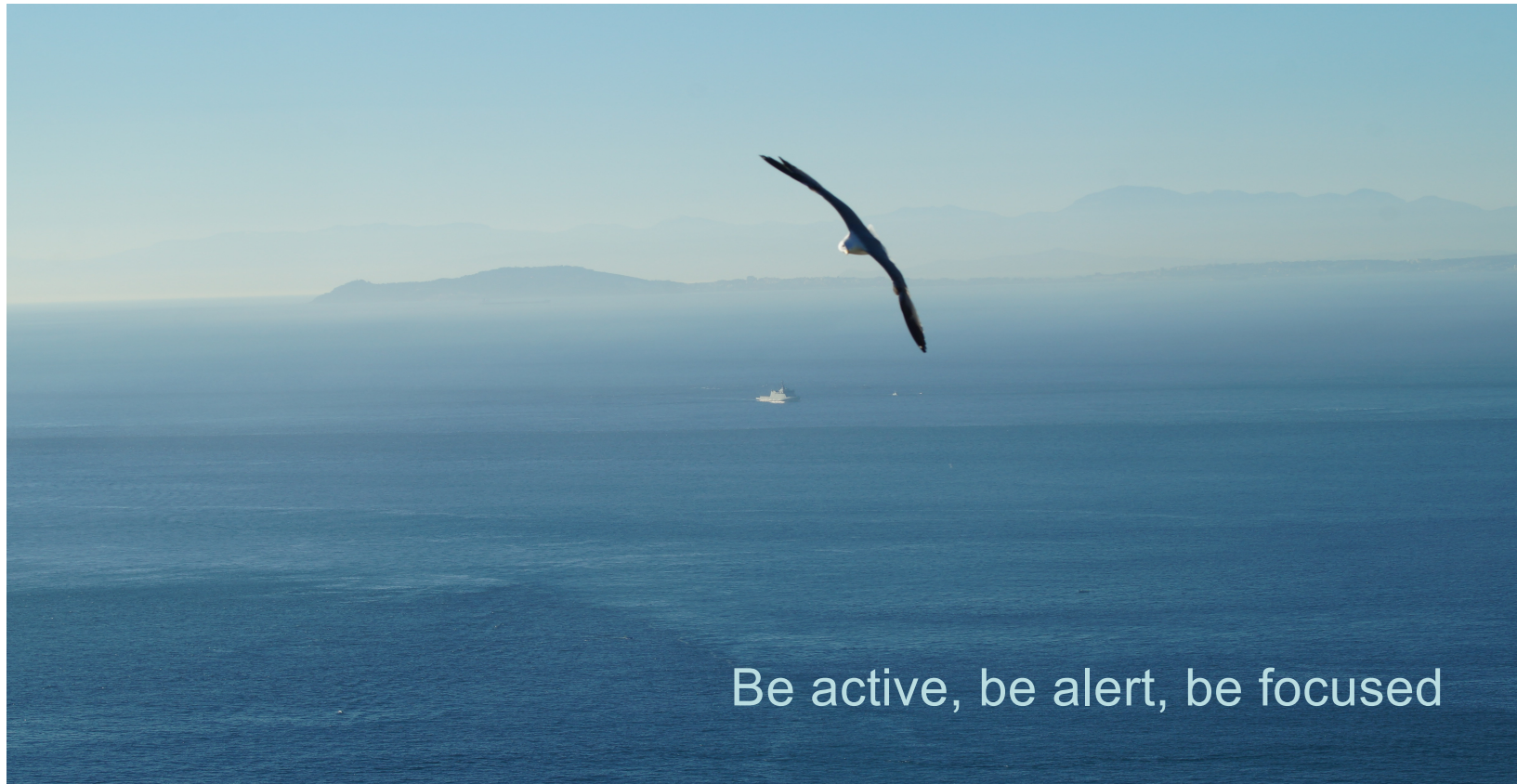


The deepest trap...

THE VICIOUS CYCLE:



Stay on your toes!



Be active, be alert, be focused