On a few challenges being a PhD student

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Welcome meeting for new PhD students,
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Experience

- Supervised PhDs (or equivalent degrees) since 1984.
- Numerical modeling, theory, experiments; waves, numerical analysis, tsunami events, submarine slides, hydrodynamic stability.
- Candidates mostly financed through external projects.
- Currently 3 candidates
  - Computational models for granular slide motion (rheology, yield criteria etc.)
  - Study of large scale tsunami events caused by slides. Simplified slide model, tsunami models, observed data.
  - Bubble/droplet (spray) formation by breaking waves and jets. Experiments and modeling.

  Shared supervision. First two in collaboration with the Norwegian Geotechnical institute.

Most important

You must be truly committed to your research.
Research in two steps; acquiring methods/techniques, then the conceptual/application level. Methods are also interesting in their own right.
Long hours a lesser burden when you have fun.

and of course

Three (four including teaching) years is short time.
The primary objective is the research leading to the thesis.
Things like secondments abroad, conference participation are secondary.

Articles make the thesis

First article as a "main author" is often an obstacle.
You must step up and take responsibility; improve the way you are making computations, procedures, documentation of work etc.

Particular challenges

- Compilation of the research work going into the paper.
  An early tentative article outline is useful.
- Structure/balance of the article: what to elaborate or cut short; logical flow of text and discussions. *Would I have liked to read this myself ? Learn from articles you read.*
- Many reworkings needed before international standard is met. (Futile to negotiate this with the supervisor.)

An instructive process; very rewarding when paper is finally accepted for publication.