Erlang as supporting technology for teaching Software Architecture

Laura M. Castro

Department of Computer Science Universidade da Coruña (Spain)

Stockholm, June 9-10th, 2014













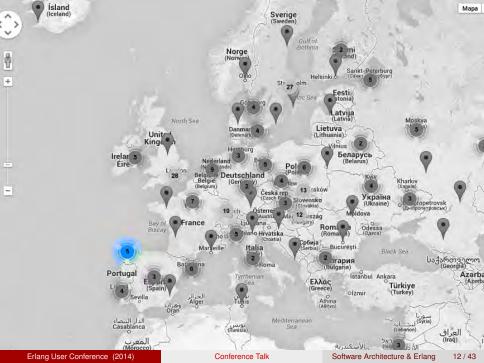


































2 bachelor degrees (3 academic years)

+

1 university degree (5 academic years)

1 degree (4 academic years)

+

5 professional profiles



2 bachelor degrees (3 academic years)

+

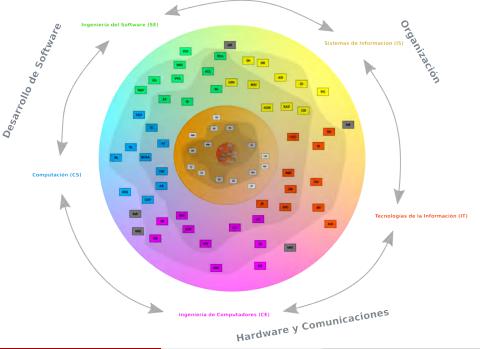
1 university degree (5 academic years)

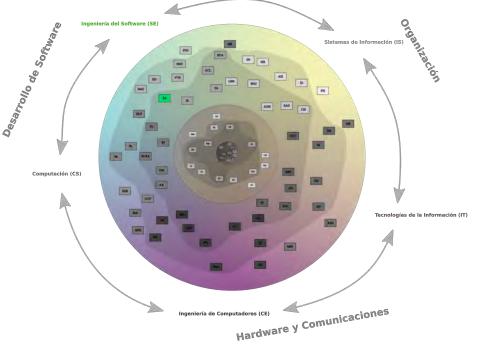
1 degree (4 academic years)

+

5 professional profiles

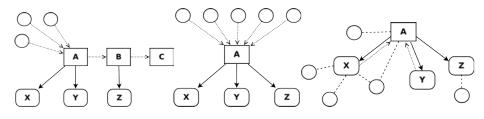


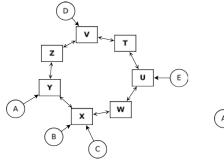


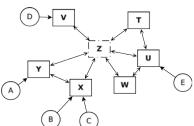














ping/echo availability heartbeat active redundancy scalability shadow operation pasive redundancy monitor fault tolerance event ratio robustness event queues fixed priority limited exposure efficiency dynamic priority facade wrapper security proxy cache notifier dispatcher adaptability



Erlang as a rapid prototying tool



Agile approach



Individual work + Team work



"We **dared** to do things far more complex that we usually do"



"I was a bit lost at the beginning, the exercises were easy but being unfamiliar with FP made me progress very slowly. But then, during the team project, we found ourselves building things very quickly."



"I thought working with so many processes was going to be a nightmare"



"I wish we had a few more weeks, we all could have made our projects even more awesome"



Student's projects

- Games (poker, trivia,...)
- IM systems
- Web crawlers
- Text analyzers
- Ship-to-shore crane control
- Smart-city sensor information



Student's evaluation

- Almost 0 drop-outs
- All students passed
- Most students got B scores



"Loved the iterations, you know exactly what you have to do"

"It forces you not to give up on the course"











Thanks for your attention

I hope this has been interesting!

```
time_for(Questions) ->
    [ speaker ! Q || Q <- Questions ].</pre>
```

@lauramcastro

lcastro@udc.es



Credits

Image authoring attribution (in order of appearance)

- Rusty tools, Wikimedia Commons.
- Octopus shell, Wikipedia.
- Claw hammer, Wikipedia.
- Nail art. SAYANEcw on Deviant Art.
- Ericsson DBH 1001 1939, Wikipedia.
- James Webb space telescope, Wikipedia.
- Rappelling success, Laity Lodge Family Camp on Flickr.
- Map of users, Erlang Central.
- Cidade da Coruña nun mar de brétema. Wikimedia Commons.
- View of A Coruña from lighthouse, Wikimedia Commons.
- Facultad de Informática, Wikipedia.
- Bologna seen from Asinelli tower, Wikipedia.
- Charla contra Bolonia, Wikimedia.
- Bologna Centrale AV, Wikimedia.
- Estudiantes contra Bolonia, Wikimedia.
- Nevada Test Site Control Point, Wikipedia.
- Flag of Europe, Wikimedia Commons.
- Greek wrap, Flickr user 'waferboard'.
- Thor's hammer, Flickr user Carlos Pacheco.
- Back door, Flickr user Chad Hunter.
- Red heart symbol, OpenClips on Pixabay.

