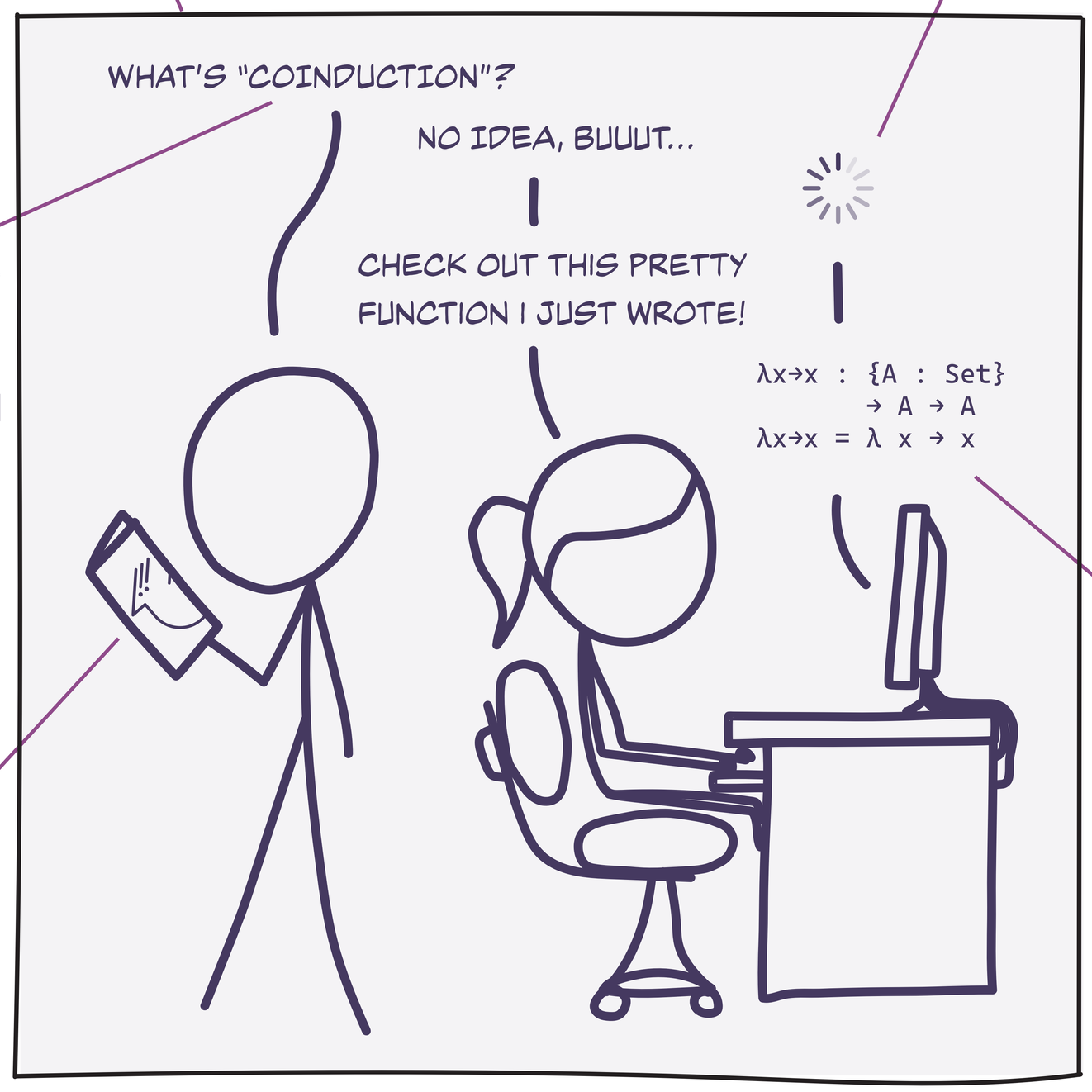
Sára Juhošová • Delft University of Technology

How Novices Perceive Interactive Theorem Provers

35 bachelor students

told us which obstacles they encountered when learning to use Agda



perceived irrelevance

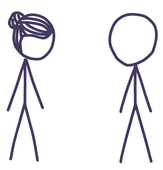
"[Agda] might be a bit too theoretical."

"It's hard to imagine writing software with Agda."

unfamiliar concepts

"Dependent types were not intuitive."

"[The idea that] the magic happens during type checking instead of execution [took time] to wrap [my] head around."



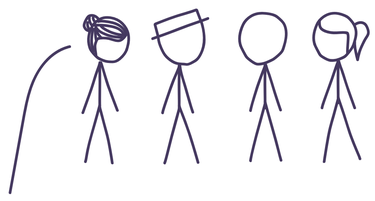
complex theory

"The way you need to think about your program [is] much more abstract."

inadequate ecosystem

"The Agda docs have a lot of material on super crazy stuff, but very little on the detailed semantics of the basic language."

"The installation of Agda is a horrible experience."



"Syntax highlighting [is] not updating automatically and not highlighting anything on invalid syntax."

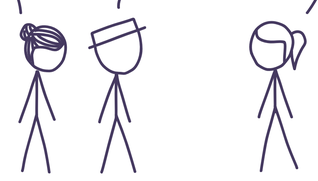
"Agda-mode plugin is very buggy, I had to restart it very often."

"weird" design

"[It is] very difficult to write [Agda code] with a text editor alone."

"Unicodes [raise] the barrier of entry."

"Error messages were not helpful."

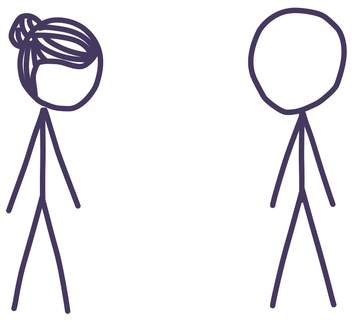


inspired by http://xkcd.com

Many obstacles are a result of the high coupling between Agda's underlying theory and its design.

Agda's ecosystem has very little supporting infrastructure for novices.

Agda's design choices make it dependent on a custom development environment.



Check out my profile for the full story!