TU/e Technische Universiteit Eindhoven University of Technology

Thijs Laarhoven

PhD candidate

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Department Dialogue, Eindhoven, The Netherlands
(October 9, 2014)

Who am I?

- PhD candidate (just started my 4th year)
- Department: Mathematics and Computer Science
- Section: Discrete Mathematics (DM)
- Group: Coding Theory and Cryptology (CC)
- Promotor: Tanja Lange
- Supervisor: Benne de Weger
- Office: 6.105 $\rightarrow$ 6.103

What do I do?

Studies and work

- Bachelor's project: The Collatz conjecture
- Master's project: Fingerprinting and group testing schemes
- Doctoral project: Lattice cryptography and cryptanalysis

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Suppose we iterate the following function:

- If n is even, then $f(n) = n/2$.
- If n is odd, then $f(n) = 3n + 1$.

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Some examples:

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  (6 iterations to go from 10 to 1)

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2014: Still no solution!

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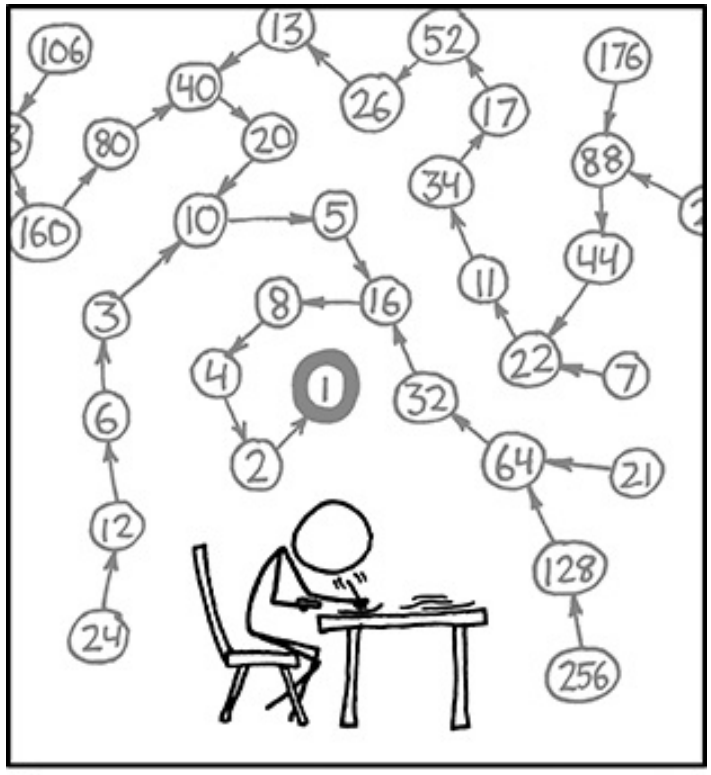

THE COLLATZ CONJECTURE STATES THAT IF YOU PICK A NUMBER, AND IF IT'S EVEN DIVIDE IT BY TWO AND IF IT'S ODD MULTIPLY IT BY THREE AND ADD ONE, AND YOU REPEAT THIS PROCEDURE LONG ENOUGH, EVENTUALLY YOUR FRIENDS WILL STOP CALLING TO SEE IF YOU WANT TO HANG OUT.

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Other things I do

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- Recently started playing tennis again

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I participated in many (youth) tournaments over the years.

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Playing chess

I even played chess *at* the TU/e...

What do I do?

Playing chess

I even played chess *at* the TU/e...

What do I do?

Playing chess

...and I even played chess *for* the TU/e.

What do I do?

Playing chess

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What do I do?

Playing chess

...and I even played chess *for* the TU/e.

What do I do?

Playing chess

...and I even played chess *for* the TU/e. **And we won!**

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...and I even played chess *for* the TU/e. **And we won!**

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Plan: Finish PhD by October 2015.