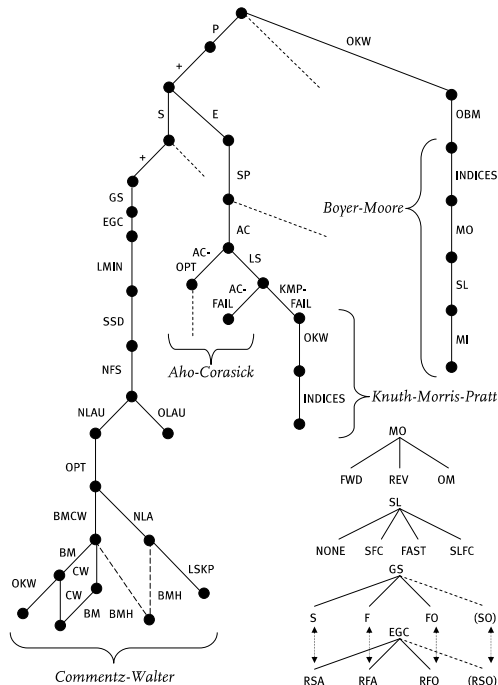


11  
апреля  
вторник

Коллоквиум  
факультета  
компьютерных наук  
НИУ ВШЭ



**Bruce Watson**

Stellenbosch University

**Correctness-by-  
Construction for Inventing  
Algorithms**

For the most part, inventing a new algorithm is equal parts deep insight, experience, luck, and creativity. In this talk, I will introduce a more systematic approach to inventive algorithmics — an approach which also provides a correctness argument.

Correctness-by-construction (CbC) is an algorithm derivation technique in which the algorithm is co-developed with its correctness proof. Starting with a pre- and post-condition specification, 'derivation steps' are made, eventually arriving at the final algorithm. Critically, each step in the derivation is a correctness-preserving one, meaning that the composition of the derivation steps is the correctness proof. While CbC can be used for already-invented algorithms, it can be used for taxonomization and also for identifying openings for new algorithms. This will be demonstrated on string, tree and FCA algorithms.

**11 апреля, 18:10 – 19:30**  
**Кочновский проезд, 3, ауд. 205**

**Заказать пропуск на проход в здание  
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