

Scheme UK Meeting: 23 June 2004

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From: Noel Welsh (noelwelsh_at_yahoo.com)

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Scheme UK Meeting: 23 June 2004

NB: This meeting is not held on the usual date, in honour of our special guest

The next meeting of the Scheme UK user's group will be held on Wednesday, 23 June 2004 from 7pm till we leave for the pub. The meeting will take place at the offices of LShift (see <http://www.lshift.net/contact.html> for directions). This meeting will be held in conjunction with UK Lispers.

Circuit Design in Lava

Satnam Singh, of Microsoft, will present a circuit design system called Lava which is embedded in the lazy functional language Haskell. Lava is a set of higher order combinators that are used to compose circuits in interesting ways. Many combinators compose behaviour and layout which gives the designer good control over the layout of circuits which in turn influences their performance. We illustrate circuit design in Lava with an example design and implementation of a sorting network and (possibly) a live demonstration of the sorting network running on an FPGA chip. We shall also show how circuit descriptions cast in Lava enjoy easier transformation for optimization and verification.

Satnam Singh obtained his BSc in Computing Science at the University of Glasgow in 1987 and his PhD at the same department in 1991. As a lecturer in Electrical Engineering and then in Computing Science at Glasgow he formed a research group focused on applying functional

programming techniques to the design and analysis of reconfigurable circuits. In 1998 he joined Xilinx's research laboratory in San Jose, California where he applied functional programming and formal verification techniques to help solve industrial CAD problems. He has recently joined Microsoft in Redmond, Washington, where he continues to peruse his interests in novel architectures, formal methods and programming languages.

See

<http://www.xilinx.com/labs/lava>

for more information

Scheme UK is a UK based group of people interested in the Scheme programming language in particular, and advanced programming languages in general. We are interested in both practical and theoretic aspects. We meet on the first Wednesday of each month. Newcomers are welcome.

For more details see:

<http://schematics.sourceforge.net/scheme-uk/>