NetFPGA Summer Course

Presented by:

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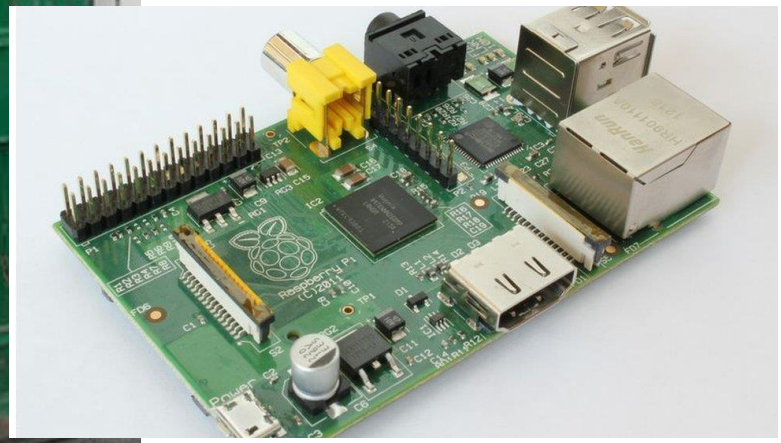
Technion

August 2 – August 6, 2015

http://NetFPGA.org

Cambridge University Computer Lab



Cambridge? never heard of them

- But you may have heard of some of our more successful projects (some have changed name):

Autonomy
alphamosaic
ARM
azuro
TenisonEDA
BBC MICRO
Virata
Level 5 networks
ANSA
Xen Source™

- And some of our not so successful projects:

ATM

Cambridge Backbone Ring
>1 Gb/s LAN/WAN in 1995

Sun's
sunray

ATM - (we didn't want 48 byte payloads either – so very silly)

Course Outline

- **Combination of lectures and hands-on experience**
- **Day 1 –** Introduction and “High level” concepts.
  Goal: Be able to do “rapid prototyping”.
- **Day 2 -** Complete high level usage aspects and start projects.
- **Day 3 -** Projects development, Detailed Vivado aspects.
- **Day 4** – Continue projects development, detailed hardware aspects.
- **Day 5** – Applications of NetFPGA, Projects presentations

- End of August – Projects submissions

Tutors

Noa Zilberman

- Design Flow
- Datapath
- IP Cores
- Board design
- Memory Interfaces
- Applications

Yury Audzevich

- DMA
- PCIe
- 10G Interfaces
- Timing
- Debug

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The Class

- **7 NetFPGA SUME platforms**
  - And servers, NICs, etc.
- **Up to 4 people per platform**
  - Design, synthesis and simulation can be done in parallel
  - Accessed remotely
- **Total – Up to 28 people in class**

- **All the material will be available online after the course**

Projects

- **Everyone do projects**
- **If you take the course for credit:**
  - Evaluated based on functionality, complexity, completeness (e.g. test harness), presentation and documentation
    - Credit for innovation and contribution as an open source NetFPGA project
  - 40% at the end of the course, 60% at the end of August
- **Else: no grade!**
  - You will experience a full design flow
  - Can do projects that will help your research

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