# FPGA Design Productivity Workshop

FPT 2008

December 7, 2008

**112, Barry Lam Hall**

**Taiwan National University**

# Welcome! 歡迎!

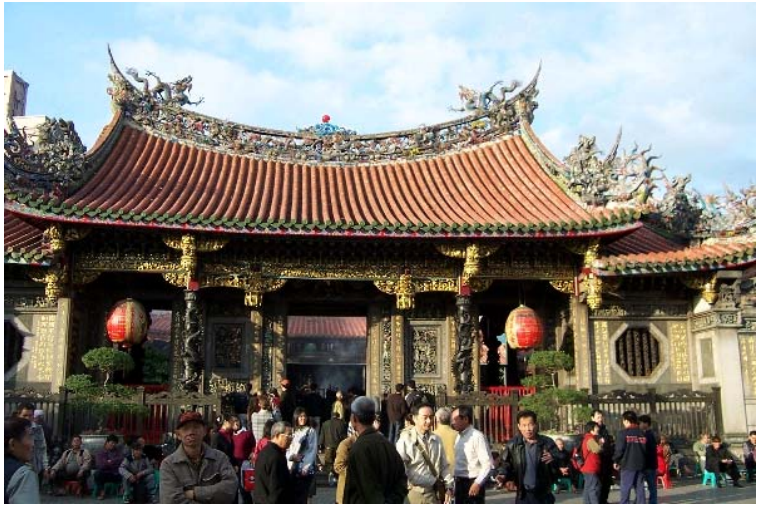
- Brent Nelson (Organizer)
  Brigham Young University
- Philip Leong (Speaker)
  Chinese University of Hong Kong
- Peter Athanas (Speaker)
  Virginia Tech
- David Andrews (Speaker)
  University of Arkansas

# Thanks to…

- FPT General Chair –
  - Wai-Kei Mak
- FPT Technical Program Chairs –
  - Tarek El-Ghazawi
  - Yao-Wen Chang
- Arrangements
  - Yao-Wen Chang
  - Chia-Lin Yang

# Motivation & Background

- FPGA use growing
  - The Dream ⇔ *Programming* of FPGA's
  - The Reality ⇔ FPGA design == hardware design
- Recent USA work on FPGA Design Productivity
  - DARPA projects: 1. BYU/VT, 2. GWU/UF
  - DARPA workshop: 6/5/2008
    - Salt Lake City, Utah
- Lots of international work



# Workshop Goals

1. Forum for discussing FPGA design productivity
   - Current state of the art
   - Solutions
2. Not take ourselves too seriously
   - Take off your tie
   - Have fun
   - Meet new people
   - See some of Taiwan

- Part 1: invited speakers
- Part 2: audience

# Workshop Agenda

| 12:00-12:30 | Bus Drive to National Taiwan University | |
|---|---|---|
| 12:30-13:00 | Workshop Registration & Lunch | |
| 13:00-13:15 | Welcome Remarks and Introduction | Brent Nelson<br>Brigham Young University, USA |
| 13:15-13:40 | “A Broader Look at FPGA Design Productivity” | Peter Athanas<br>Virginia Tech, USA |
| 13:40-14:05 | “Architectural Support for Productivity” | Philip Leong<br>The Chinese Univ. of Hong Kong |
| 14:05-14:30 | “Bringing Modern Modeling Abstractions into Configurable Computing” | David Andrews<br>University of Arkansas, USA |
| 14:30-14:45 | Break | |
| 14:45-15:45 | Group Session | |
| 15:45-18:00 | City Tour by Bus | |
| 18:30 | Back to Hotel | |

# Break Out Questions

- What are your organization's top 3 productivity issues (in priority order)?
- Is a design productivity boost possible? By how much (% or x)?
- What is the core of the problem: tools architecture methodology test?
- What is the mix in your organization of: FPGAs for circuits vs. FPGAs for computation?
- If productivity problems were solved, what would be your future mix of circuit apps vs. compute apps?
- If productivity problems were solved, what would be the top 3 application areas you would use FPGAs for?
- Should we do a pre-conference workshop again next year? If so, what topic ideas do you have?
- What are the good places for 老外 to buy 東西's in Taipei?