

# Konrad Walus

Ph.D. (University of Calgary), B.Sc. (University of Windsor)

## Academic Awards:

- 2005 Micronet Annual Workshop Best Paper
- 2004 Recipient of Alberta Science and Technology Leaders of Tomorrow Award  
University of Calgary Graduate Research Conference Best Presentation  
University of Calgary Dean's Research Excellence Award
- 2003 Alberta Science and Technology Leaders of Tomorrow Provincial Finalist  
Micronet Annual Workshop Best Paper  
University of Calgary Dean's Research Excellence Award
- 2002 Micalyne Microsystems Design Award  
Informatics Circle of Research Excellence (iCORE) Scholarship  
NSERC Postgraduate Scholarship

## Refereed Journals:

1. **Walus K.**, Budiman R. A., and Jullien G. A. (2005) Impurity Charging in Semiconductor QCA. *Nanotechnology*. 3(1):26-31.
2. **Walus K.**, Budiman R. A., and Jullien G. A. (2004) Split Current Quantum Dot Cellular Automata - Modeling and Simulation. *IEEE Transactions on Nanotechnology*. 3(2):249-255.
3. **Walus K.**, Dysart T., Jullien G. A., and Budiman R. A. (2004) QCADesigner: A Rapid Design and Simulation Tool for Quantum-Dot Cellular Automata. *IEEE Transactions on Nanotechnology*. 3(1): 26-31 .
4. Zhang R., **Walus K.**, Wang W., and Jullien G. A. (2004) A Method of Majority Logic Reduction for Quantum Cellular Automata. *IEEE Transactions on Nanotechnology*. 3(4):443-450 .

## International Conference Contributions:

5. **Walus K.**, (2005) Design and Simulation of Quantum-Dot Cellular Automata (QCA) Devices and Circuits. University of Calgary Ph.D. Thesis. .
6. **Walus K.**, Mazur M., Schulhof G., and Jullien G. A. (2005) Simple 4-Bit Processor Based On Quantum-Dot Cellular Automata (QCA). *Application-Specific Systems, Architectures and Processors Conference*. Samos, Greece. 288-293 .
7. **Walus K.**, Schulhof G., Zhang R., Wang W., and Jullien G. A. (2004) Circuit Design Based on Majority Gates for Applications with Quantum-Dot Cellular Automata. Invited at IEEE Asilomar Conference on Signals, Systems, and Computers. Asilomar, CA, USA. .
8. **Walus K.**, Schulhof G., and Jullien G. A. (2004) High Level Exploration of Quantum-Dot Cellular Automata (QCA). Invited at IEEE Asilomar Conference on Signals, Systems, and Computers. Asilomar, CA, USA. .
9. **Walus K.**, Budiman R. A., Mazur M., Jullien G. A., and Schulhof G. (2004) Split Current Quantum Cellular Automata: Device and Logic Gates. 2004 IEEE Conference on Nanotechnology. München, Germany. 216-219 .
10. **Walus K.**, Jullien G. A., and Dimitrov V. S. (2003) Computer Arithmetic Structures for Quantum Cellular Automata. *Asilomar Conference on Signals, Systems, and Computers*. Asilomar, CA, USA. .
11. Wang W., **Walus K.**, and Jullien G. A. (2003) Quantum-Dot Cellular Automata Adders. 2003 IEEE Nanotechnology Conference. San Francisco, CA, USA. 2:461-464 .
12. **Walus K.**, Dysart T., Jullien G. A., and Budiman R. A. (2003) QCADesigner: A Rapid Design and Simulation Tool for Quantum-Dot Cellular Automata. *Second International Workshop on Quantum Dots for Quantum Computing and Classical Size Effect Circuits*. Notre Dame, IN, USA.