

The logo for CIGPU 2009 features the text "CIGPU2009" in a stylized font. The "CIGPU" part is in black and the "2009" is in red. The text is enclosed in a white rounded rectangle with a grey border. There are several small grey circles scattered around the rectangle, some overlapping it.

Second Call for Papers

The **Second International Workshop and Tutorial on Computational Intelligence on Consumer Games and Graphics Hardware (CIGPU 2009)** will be held in Montréal, Québec, Canada as part of the Genetic and Evolutionary Computation Conference (GECCO-2009) on July 8, 2009.

Everyone who has implemented an evolutionary algorithm or other computational intelligence approach using graphics processing units (GPUs), video game systems, mobile devices, cellular phones, etc. will want to submit to this workshop. Due to its speed, price, and availability, there is increasing interest in using mass consumer market commodity hardware for engineering and scientific applications. Mostly this has concentrated upon graphics hardware, particularly GPUs, due to their ability to offer teraflop performance on a desktop using a restricted form of parallel computing (known as “General Purpose computing on Graphics Processing Units”, or “GPGPU”). There is also increasing interest in using the computing power of game consoles such as Microsoft[®] Xbox, Sony[®] Playstation and the Cell processor, and portable entertainment and/or cellular phone mobile devices for research and applications.

Submissions are invited in (but not limited to) the following areas:

- Parallel genetic programming (GP) on GPU
- Parallel genetic algorithms (GA) on GPU
- Parallel evolutionary programming (EP) on GPU
- Associated or hybrid computational intelligence techniques on GPU
 - Support Vector Machines
 - Bayesian Networks
 - Parallel search algorithms
 - Data mining
- Differential Evolution on GPU
- Computational Biology or Bioinformatics on GPU
- Evolutionary computation on video game platforms
- Evolutionary computation on mobile devices

The workshop will be held in conjunction with the tutorial “Accelerating Evolutionary Computation with Graphics Processing Units” by Dr. Wolfgang Banzhaf and Dr. Simon Harding. In addition, an nVidia-sponsored GECCO 2009 competition on GPUs for Genetic and Evolutionary Computation has been organized with the prize of a state-of-the-art nVidia[®] graphics card.

Workshop website: <http://www.cs.ucl.ac.uk/external/W.Langdon/cigpu/>

Submissions and Publication

Submissions will be for papers up to 8 pages in ACM format, submitted to gwilson@cs.mun.ca. As the review process is double-blind, please make your submission anonymous by removing all references to the authors. Please see the GECCO 2009 information for authors for further details. All accepted papers will be presented at CIGPU 2009 and published by Sheridan/ACM Press in the workshop proceedings to be included on the GECCO Proceedings and Companion Material CD and placed in the ACM Digital Library.

Important Dates

Paper submission deadline: March 25, 2009 (Please submit to gwilson@cs.mun.ca.)

Notification to authors: April 3, 2009

Submission of camera-ready version: April 17, 2009

Conference registration: April 27, 2009

Workshop date: July 8, 2009

Workshop Format and Schedule

CIGPU 2009 will be held as a full day event including:

- GPU Tutorial - Accelerating Evolutionary Computation with Graphics Processing Units
- Paper presentations
- Discussion of experiences with latest GPU and commodity device technology
- Presentations by GPU competition entrants and subsequent award presentation by Dr. Harding (prize being a state-of-the-art nVidia[®] graphics card)

Program Committee

Workshop Chairs

- Dr. Garnett Wilson, Department of Computer Science, Memorial University of Newfoundland, Canada, gwilson@cs.mun.ca
- Dr. Simon Harding, Department of Computer Science, Memorial University of Newfoundland, Canada, simonh@cs.mun.ca
- Dr. W.B. Langdon, Department of Computer Science, King's College London, UK, wlangdon@essex.ac.uk
- Dr. Man Leung Wong, Department of Computing and Decision Sciences, Lingnan University, Hong Kong, mlwong@ln.edu.hk

Program Committee: Malcolm Heywood, Wai-Man Pang, Raghavendra D. Prabhu, Tien-Tsin Wong, Stephane Gobron, Ignacio Hidalgo, Francisco Fernández de Vega, Juan Lanchares, Denis Robilliard