

AGACSE 2012

*Applied Geometric Algebra for
Computer Science and Engineering*

July 2-4, 2012 - La Rochelle, France

Chairs: Michel Berthier, La Rochelle University
Laurent Fuchs, Poitiers University
Christophe Saint-Jean, La Rochelle University

Organizing committee :
Laurent Mascarilla, Philippe Carré,
Lilian Aveneau, David Helbert



**Special Lectures and Tutorials,
intended speakers:**

- *Differential Geometry, Differential Calculus and Optimization in GA*
 - D. Hestenes, F. Sommen, A. Lasenby, W. Baylis, J. Ryan
- *Conformal Model*
 - H. Li, A. Rockwood, W. Sprössig

Special Sessions, intended speakers:

- *GA in Practice*
 - R. Ablamovitz, E. Bayro-Corrochano, L. Dorst
- *Demonstration of algorithms, library implementations, dedicated hardware*

Conference fees will include lunch, coffee breaks and social event.
Extended versions of papers will be published as a Springer-Verlag book.

Special issues:

- *Clifford Fourier and Wavelets Transforms in Journal of Mathematical Imaging and Vision*
- Another special issue that will cover other themes is under negotiations

Best paper award.

Main topics

- Mathematics and Computer Science
 - Numerical algorithms for multivectors
 - Efficient computation and implementation
 - Symbolic Algebra
 - Theorem proving
 - Spin groups and Lie groups
 - Quantum computing
- Geometric Computing
 - Projective and conformal geometry
 - Computer Vision
 - Robotics
 - Mechanics and Aeronautics, Control theory
 - Computer graphics
 - Discrete geometry
- Signal and Image Processing
 - Fourier and Wavelet Analysis, Clifford transforms
 - Monogenic and quaternionic signal
 - Color and multidimensional signal processing
- Topics for special sessions and panels
 - Flow Field Analysis and Visualization
 - Clifford Analysis
 - Pattern Recognition and Machine Learning
 - Neural computing
 - Industrial applications