

# Empowering Novel Geometric Algebra for Graphics & Engineering Workshop @ CGI 2026 London – 6<sup>th</sup> July 2026

## 2<sup>nd</sup> Call for Papers

<http://www.cgs-network.org/cgi26>, <https://twitter.com/ENGAGEworkshop>, <https://engage-workshop.org/>

The ACM Siggraph 2001, 2003, 2019, and 2022 saw Geometric Algebra (GA) featured in the form of a Keynote and Courses. The GA community continues to highlight the benefits of employing W. K. Clifford's GA, quaternions, and octonions for computer graphics and vision problems. The advances were presented at the Workshops CGI'2016 on "Geometric Algebra in Computer Science and Engineering" and annually at CGI'2017-2025 on "Empowering Novel Geometric Algebra for Graphics & Engineering (ENGAGE)" and have underlined the power of GA for analysis and computation. GAME2020, 2023, further boost GA and associated algebras as a language for Graphics.

Under the auspices of **CGI'26** (July 6-10, 2026), ENGAGE2026 on **July 6<sup>th</sup>** in London, with a keynote by *Nektarios Valous (German Cancer Research Center)*, will again provide a multi-disciplinary approach from mathematics applied to computer graphics, computer vision, and general computer science fields, where GA has strong potential to answer existing mathematical problems.

GA is particularly well suited to allow cross-disciplinary solutions in software engineering as it provides an intuitive and insightful common denominator across mathematical disciplines used in a variety of applications. Understanding GA enables us to relate distinct, seemingly incompatible paths by providing a common geometric and mathematical base.

We invite original contributions that advance the state-of-the-art in both the application of GA and its instantiation in software & hardware.

**Topics will include, but are not limited to:**

- Feature detection & Data analysis
- LIDAR and point cloud algorithms
- Sci & Information visualization
- Computer graphics rendering
- Computer animation and video processing
- Holographic optics & Holographic maps
- Geographic information systems GIS & Climate
- Soundscape & Electromagnetic landscape modelling
- AR, VR, XR
- Clifford integral transforms for 2D/3D images/color images
- Higher dimensional geometric algebras, octonions
- GA, HPC and quantum computing
- GA hardware implementations
- GA for AI & deep learning, multi-modal data mining/data fusion
- GA for ubiquitous information processing
- GA for big data & visualization
- Other engineering & science applications using GA

Authors should submit *an abstract* directly to the *ENGAGE workshop track* under the *CGI EasyChair account* by April 2, 2026. All authors of accepted abstracts will be invited either to an oral or poster presentation.

*Post workshop ENGAGE papers* can be published in a topical collection of the Springer Nature journal *Advances in Applied Clifford Algebras (AACAA)*, and should have been orally presented at the conference. AACAA author guidelines: <https://www.springer.com/journal/6/>

submission-guidelines. Online submission (December 31, 2026): <https://www.springer.com/journal/6/>. At the time of submission, authors must indicate the Topical Collection "TC ENGAGE 2026".

**Awards:** *Best Paper Award* and *GA Application and Computing Award*, see: [engage-workshop.org](https://engage-workshop.org)

### IMPORTANT DATES

- Abstract submission to the ENGAGE workshop track under the CGI EasyChair account: **April 2, 2026 April 30, 2026** <https://easychair.org/conferences?conf=cgi2026>
- Abstract notification: **April 30, 2026 May 12, 2026**
- AACAA journal paper submission (Latex using `birkjour.cls`): **August 1 - December 31, 2026.**

For **further information**, please contact the organizers:

- Kamron Abdulkhayev (Moscow)
  - Andreas Aristidou (Cyprus)
  - Werner Benger (Innsbruck)
  - Stephane Breuils (Savoie Mont-Blanc)
  - Hugo Hadfield (Seattle)
  - Dietmar Hildenbrand (Darmstadt)
  - Eckhard Hitzer# (Tokyo)
  - Xiao-Xiao Hu (Wenzhou)
  - Manos Kamarianakis (Crete)
  - Adam Leon Kleppe (Alesund)
  - Kit Ian Kou (Macao)
  - Joan Lasenby (Cambridge)
  - Vincent Nozick (Paris)
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  - Kanta Tachibana (Tokyo)
  - Lars Tingelstad (Trondheim)
  - Petr Vasik (Brno)
  - Zhaoyuan Yu (Nanjing)
- (# = local workshop organizers)

**Sponsors:** ORamaVR.com, GA Computing Research and Application Center, Taylor & Francis (TBC), Birkhaeuser/SpringerNature (TBC)

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