



Workshop: Quaternion and Clifford Fourier transforms and wavelets 2 (QCFTW2)

Dear Colleagues,

We are going to organize a 2nd session on Quaternion and Clifford Fourier transforms and wavelets (QCFTW2) at the University of Tartu, Estonia, 4-5 Aug. 2014 as part of

10th International Conference on Clifford Algebras and their Applications 2014 (ICCA10)
<http://icca10.ut.ee/>

On behalf of the Scientific Committee of ICCA10, it is a great pleasure for us to invite you to come to the historic city of Tartu to present some of your latest results.

■ **Description.** Quaternion and Clifford Fourier and Wavelet Transforms as refinement and generalization of the 1D complex Fourier and Wavelet theory play an increasing role in different areas of mathematics, physics, computer science, engineering, and beyond. We want to discuss the state of the art in mathematics and application of these hypercomplex Fourier and Wavelet Transforms and give ideas for new developments.

■ **Idea.** We aim to bring together experts working in theoretical research and applied sciences who are active in fields related to the use of Quaternion and Clifford Fourier and Wavelet Transforms and extensions to other Clifford Integral Transforms (not restricted to the topics mentioned below). We intend to cover both the discussion of these transforms and the presentation of new methods that develop and apply them.

■ **History.** A first session under the same topic has been organized at the previous conference ICCA9 in Weimar (2011). It brought together contributions on this topic and related Clifford integral transforms. Its proceedings appeared as a book with Springer: *Quaternion and Clifford Fourier Transforms and Wavelets*, TIM, Hitzer, E., Sangwine, S. J. (Eds.), 2013, XXVII, 338 p. 76 illus., 44 illus. in color.

■ **Topics.** We invite scientists and engineers working with discrete and continuous Quaternion and Clifford Fourier and Wavelet Transforms in the following fields to contribute to the session:

- *pure and applied Clifford analysis, geometric calculus, hypercomplex analysis, harmonic analysis, or quaternion analysis*
- *solution of partial differential equations, boundary and initial value problems*
- *approximation theory, sampling, and numerical simulations*
- *wavelets with application in physics, visualization, signal analysis, (color) image processing, feature extraction, medical imaging, applications in numerical analysis*
- *practical applications in engineering sciences in general, in particular in electric engineering, robotics, classical mechanics, navigation, guidance and control systems, geographic information systems, seismology, and data registration*

■ **Proceedings.** We plan to publish proceedings in an *international peer-reviewed scientific journal* together with other ICCA10 contributions. A 2nd round of reviewing on improved and extended papers (up to 20 pages) is planned. Even if the conference organizers decide against this form of proceedings, we still plan to independently publish our proceedings this way.

■ **Registration.** When you register online for ICCA10, please indicate that your contribution is for this workshop (QCFTW2).

■ **Manuscript Submission:** Please send the *paper* you will present (6 to 10 pages, single column PDF) to icca10@ut.ee by **22 June 2014**.

Please feel free to contact us!

With kind regards,

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