

## planetmath.org

Math for the people, by the people.

## Fourier-Stieltjes algebra of a groupoid

Canonical name FourierStieltjesAlgebraOfAGroupoid

Date of creation 2013-03-22 18:16:11 Last modified on 2013-03-22 18:16:11

Owner bci1 (20947) Last modified by bci1 (20947)

Numerical id 11

bci1 (20947) Author Entry type Definition Classification msc 55N33Classification msc 55N20Classification msc 55P10Classification msc 55U40Classification msc 42B10Classification msc 42A38Classification msc 43A25 Classification msc 43A30

Synonym Fourier-Stieltjes algebra of a groupoid

Related topic FourierStieltjesTransform

Related topic Distribution4

Defines Fourier-Stieltjes algebra

**Definition 0.1. The Fourier-Stieltjes algebra of a groupoid,**  $G_l$ . In ref. [?]), A.L.T. Paterson defined the *Fourier-Stieltjes algebra of a groupoid*,  $G_l$ , as the space of coefficients  $\phi = (\xi, \eta)$ , where  $\xi, \eta$  are

 $L^{\infty}$ -sections for some measurable  $G_l$ -Hilbert bundle  $(\mu, \Re, L)$ . Thus, for  $x \in G_l$ ,

$$\phi(x) = L(x)\xi(s(x), \eta(r(x))). \tag{0.1}$$

Therefore,  $\phi$  belongs to  $L^{\infty}G_l = L^{\infty}(G_l, \nu)$ .

## References

- [1] A. Ramsay and M. E. Walter, Fourier-Stieltjes algebras of locally compact groupoids, *J. Functional Anal.* **148**: 314-367 (1997).
- [2] A. L. T. Paterson, The Fourier algebra for locally compact groupoids., Preprint, (2001).
- [3] A. L. T. Paterson, The Fourier-Stieltjes and Fourier algebras for locally compact groupoids, (2003).