

Groupoid quantales beyond étale groupoids

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In this talk I describe a generalization of the correspondence between inverse quantal frames and étale groupoids of [1] so as to include open (and even semiopen) groupoids. I shall give an algebraic characterization of the class of quantales that corresponds to these groupoids. This seems to include the need for a somewhat troublesome “multiplicativity” axiom that in the case of inverse quantal frames is automatic. The talk will explain this along with ongoing work meant to settle the question of whether in the more general case the multiplicativity condition is still automatic. This is based on imposing a new axiom (which at least holds for many of the groupoids arising in analysis and geometry, in particular the locally compact groupoids), and on embedding such a quantale Q into an inverse quantal frame generated by “local bisections” of Q , which among other things requires Q to be “spatial” in the sense of having enough such bisections.

REFERENCES

- [1] P. Resende, *Étale groupoids and their quantales*, Adv. Math. 208 (2007) 147–209.

*Joint work with P. Resende.