Jean N. Renault* (jean.renault@univ-orleans.fr), Dept of Math, University of Orléans, 45067 Orléans, France. Semigroups, higher rank graphs and groupoids. Preliminary report.

I will present a survey of some recent work on semigroups, higher rank graphs and C*-algebras associated to them. Some constructions are limited to special classes of semigroups (for example Ore semigroups or quasi-lattice ordered semigroups). I will show that the introduction of suitable groupoids of germs provides a general framework for these constructions and that the main problem is the identification of these groupoids. (Received August 17, 2015)