▶ ROMAN KONTCHAKOV, *Spatial logics with connectedness predicates.*
School of Computer Science and Information Systems, Birkbeck College, Malet Street, London WC1E 7HX.
E-mail: roman@dcs.bbk.ac.uk.

We consider quantifier-free spatial logics, designed for qualitative spatial representation and reasoning in AI, and extend them with the means to represent topological connectedness of regions and restrict the number of their connected components. We investigate the computational complexity of these logics and show that the connectedness constraints can increase complexity from NP to PSpace, ExpTime and, if component counting is allowed, to NExpTime.