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Martina Lanini* (martina.lanini@unimelb.edu.au). *The stable moment graph and periodic structures in the affine category O .*

We associate with any affine Kac-Moody algebra \mathfrak{g} its stable moment graph. Such a graph turns out to be the main tool in order to get a categorical version of a result by Lusztig, stating certain stability property for affine Kazhdan-Lusztig polynomials. This stabilisation phenomenon bridges the Hecke algebra to its periodic module, which -according to the Feigin-Frenkel conjecture- governs the representation theory of \mathfrak{g} at a critical level. The stable moment graph is expected to enable us to apply moment graph techniques to the study of critical level representations (joint with P. Fiebig). (Received February 18, 2013)