

3-manifold topology in honour of Peter Shalen's 60th birthday  
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## Differentials on Khovanov–Rozansky homology

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### **Abstract**

Khovanov–Rozansky homology is a combinatorial invariant of knots in  $S^3$  which exhibits some intriguing parallels with knot Floer homology. An important property of the latter theory is the rich structure of differentials on it. I'll explain why the analogous structures on KR-homology might be of interest, and discuss what we know (and don't know) about them.