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Tim Cochran and **Shelly Harvey**. *The fractal nature of knot concordance*.

We describe new group series that yield filtrations of the knot concordance group that refine the (n) -solvable filtration. The new filtrations allow us to distinguish between knots whose classical Alexander polynomials are coprime and even to distinguish between knots with coprime higher-order Alexander polynomials. We use these techniques to give evidence that the set of smooth concordance classes of knots is a fractal set. (Received March 08, 2011)