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The Kolchin Irreducibility Theorem

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Abstract: A jet bundle is a higher order version of a tangent bundle (one for each positive integer) and the points correspond to truncated power series on your original variety. It turns out that if you have a singular variety these spaces get all messed up—they have extra irreducible components above the singular locus (and encode interesting singularity invariants). Magically, if we take the limit of these spaces, where the points correspond to full power series, these spaces become irreducible again! This is Kolchin's Irreducibility theorem. We will talk about this theorem and what happens when power series are replaced by Witt vectors. This talk is based on joint work with Lance Edward Miller and James Freitag.

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Mathematics and Science Center: W304

MATHEMATICS AND COMPUTER SCIENCE
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