

Talk notes for Sep 2, 2014

October-14-14 3:50 PM

0:00:28 Every doodle has a canonical form.

0:02:30 A Brunnian doodle.

0:04:30 Goussarov is alternation in parameter space.

0:05:30 The "Borromean" alternation example.

0:07:10 The "linking number" - changes by one under a triple point move. This is the Arnold "strangeness".

0:08:10 "Positive" and "negative" triple points.

0:10:30 End of strangeness discussion.

0:11:00 $n/n+1$ -discussion begins.

0:12:00 Always use a fixed rotation number.

0:12:40 Moving joint pieces.

0:14:25 What remains, including the "rotation number" integer.

0:15:35 Forgetting the "rotation" integers.

0:18:25 The "rotation" punchline.

0:20:00 Coming to "doodle links".

0:20:55 Smoothing the forks to get rotation-number-1 doodle links.

0:22:00 The subdivision/ θ relation.

0:23:30 Result after moding by θ .

0:24:20 Anti-symmetry and proof.

0:26:00 The tetrahedron relation and proof.

0:32:20 The ring exchange relation.

0:32:50 Reducing to the "chords".

0:34:20 Removing monochromatic double points.

0:35:40 Cutting disks into small pieces.

0:36:30 Further cuttings near "shielded" double points.

0:38:15 Rushed end of cutting proof.

0:38:45 The combinatorial information in a "chord diagram".

0:39:20 PAUSE.