

GEOTOP: CENTRE HIGHLIGHTS 2021

The year 2021 was the first full year for the *Copenhagen Centre for Geometry and Topology*. The first half of the year was constrained to be mostly online, but we were ready to jump back in live as soon as the doors of the University reopened, with 3 masterclasses and workshop in hybrid mode during the second half of the year, in addition to a GeoTop IRL summer meeting at the Royal Society in June, which ended with a swim in the harbour! By the end of the year, the centre counted 11 permanent members, 3 associated members, 14 postdocs, and 12 PhD students.



RESEARCH

Highlights in the research progress include new angles of research on geodesics, that appeared both combinatorially in Avvakumov's work, and in the study of rotationally symmetric singularities of the mean curvature flow in the work of Ma, Muhammad and NM Møller. Naef proved the surprising result that the string coproduct is not homotopy invariant, and gave indications of relations to Reidemeister torsion. The "working workshop" on configuration spaces, illustrated to the left, resulted in a list of hands-on open problems, and a few answers! 38 new preprints were posted in 2021.

ACTIVITIES

In addition to the 5 masterclasses and workshops, and the regular seminars, a new working seminar was initiated by Carmeli, solving reachable research questions over lunch on Fridays. On the outreach side, the Videnskabsklubben program *Geometry & Algorithms* had its first run, with 165 primary school students making their way through a mathematical game planned by NM Møller together with AU computer scientist KG Larsen and Copenhagen Game Lab. GeoTop also made its first appearance at the Culture Night with mathematical puzzles, soap bubbles and talks for a wide audience.



RECOGNITION

Colding was invited to be a plenary speaker of the ICM 2022, and Randal-Williams and Wahl as sectional speakers for the Topology section.