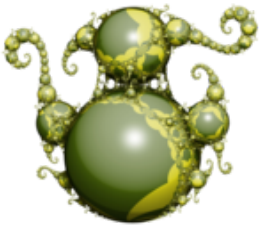

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The shape of the limit cone for positive representations

mercredi 25 juin 2025 09:30 (1 heure)

We discuss the problem of computing the limit cone of a positive representation of a surface group into a real-split, semi-simple Lie group G. This is a closed cone in the positive Weyl chamber recording the range of possible spectral behavior achieved by the representation; it is convex with non-empty interior, assuming the representation is Zariski-dense. To compute it, one needs a way to certify that a particular point lies in the boundary, and to that end, we focus on the problem of identifying which curves and geodesic currents are able to find the boundary. We compute some explicit examples in the case $G = (\mathrm{PSL}_2\mathbb{R})^3$, including some for which the limit cone has finitely many sides, and others for which the limit cone is strictly convex. Joint work with François Guéritaud and Fanny Kassel.

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