

1059-53-138

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C.P. 8888 Succ. Centre-ville, Montreal, Quebec H3C3P8, Canada. *Toric geometry of convex  
quadrilaterals.*

In the toric case, extremal Kähler and Sasaki metrics correspond to solutions of the Abreu equation on labeled polytopes via the Delzant-Lerman-Tolman correspondence. We will present an explicit resolution of the Abreu equation on convex labeled quadrilaterals. This confirms a conjecture of Donaldson in this particular case and implies a complete classification of the explicit toric Kähler-Einstein and toric Sasaki-Einstein metrics constructed by Gaunlett, Martelli, Sparks and Waldram (Adv. Theor. Math. Phys. 2004). As a byproduct, we show that for a toric orbifold with 4 fixed points of the torus action, the vanishing of the Futaki invariant is a necessary and sufficient condition for the existence of a Kähler metric with constant scalar curvature. (Received February 22, 2010)