

CR geometry in 3D bears strong resemblance to conformal geometry in 4D. In particular, there are two natural conformally covariant equations one of second order, which is the analogue of the Yamabe equation and the other, a fourth order equation which is the analogue of the Paneitz Q-curvature equation. The positivity of the underlying linear operator gives strong consequences for the underlying structure: the embeddability of the CR structure, and the positivity of the CR mass. I will outline the ideas behind these results.