

HOLOMORPHIC LINEARIZATION OF COMMUTING GERMS OF HOLOMORPHIC MAPS

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Given $h \geq 2$ germs of biholomorphisms of \mathbb{C}^n fixing the origin, we investigate the shape a (formal) simultaneous linearization of the given germs can have, and we prove that if the germs commute and their linear parts are almost simultaneously Jordanizable then they are simultaneously formally linearizable. We next introduce a simultaneous Brjuno-type condition and prove that, in case the linear terms of the germs are diagonalizable, if the germs commute and our Brjuno-type condition holds, then they are holomorphically simultaneously linearizable. This answers to a multi-dimensional version of a problem raised by Moser.