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David E. Blair* (blair@math.msu.edu), MI. *Conformal and Bochner flatness in complex contact geometry and in the geometry of metric contact pairs*. Preliminary report.

First we review the geometry of complex contact manifolds as defined locally by a holomorphic contact form and the geometry of contact pairs (also known as bicontact manifolds). We also will review the Bochner tensor in the general almost Hermitian setting.

In joint work with V. Martín-Molina we showed that there are no conformally flat, normal, complex contact metric manifolds and that a Bochner flat, normal, complex contact metric manifold must be Kähler and its universal cover is $\mathbb{C}P^n(4)$. We then discuss joint work with G. Bande and A. Hadjar and give our results to date on conformally flat and Bochner flat, normal, metric contact pairs. Here the Hopf manifolds $S^{2n+1}(1) \times S^1$ are both conformally flat and Bochner flat. (Received September 12, 2014)