1135-53-392   **Justin Sawon*** (`sawon@email.unc.edu`), Department of Mathematics, University of North
Carolina, Chapel Hill, NC 27510. *Quaternionic manifolds.*

Complex manifolds can be described as open subsets of $\mathbb{C}^n$, patched together with biholomorphic maps. But quaternion-analytic maps are too limited to define quaternionic manifolds in a similar way. Instead, one defines an almost quaternionic structure on the tangent bundle, and then imposes one of several possible integrability conditions. This yields "quaternionic manifolds" and "hypercomplex manifolds". One can also add compatible Riemannian metrics, giving "quaternion-Kähler manifolds" and "hyperkähler manifolds". In this talk we will describe these different constructions and then survey some of the main facts about the resulting manifolds. (Received August 30, 2017)