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Jonathan Bowden* (jonathan.bowden@monash.edu), Australia. *From Foliations to Contact Structures*. Preliminary report.

In the mid 90's Eliashberg and Thurston established a fundamental link between the more classical theory of (smooth!) foliations and that of contact topology in dimension 3, which, amongst other things, played an important role in Mrowka and Kronheimer's proof of Property P Conjecture. Their theory gains its potency from the fact that Gabai gave a powerful method for constructing (smooth) taut foliations from on (irreducible) 3-manifolds from non-trivial homology classes.

On the other hand most foliations that occur in nature via (pseudo)-Anosov flows, surgery, gluing, blows ups... are not smooth in general. This naturally motivates the need to apply Eliashberg and Thurston's theory to foliations of lower regularity. In this talk I will report on how their theory generalises. Time permitting I will discuss some applications and related questions. (Received January 17, 2019)