An invitation to Contact Topology and Legendrian curves

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<u>Abstract</u>

In this seminar we will motivate, through visual examples, the study of Contact Topology in dimension 3. This area of Mathematics has experienced remarkable growth since the last part of the 20th century. We will then introduce *Legendrian* knots, which play a central role in the study of Contact Topology and we will relate these objects to the general study of Knot Theory. We will give a global perspective of the subject and discuss some recent results.

We will essentially follow the following two references.

References

[1] J. Etnyre. *Legendrian and transversal knots.* Handbook of knot theory, 105–185, Elsevier B. V., Amsterdam, 2005.

[2] H. Geiges. *An Introduction to Contact Topology.* Cambr. Studies in Adv. Math. 109. Cambr. Univ. Press 2008.