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Abstract for an Invited Paper  
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**Near Wall Turbulence: an experimental view.**<sup>1</sup>

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The aim of this presentation is to summarize the understanding of the near wall turbulence phenomena obtained at Laboratoire de Mécanique de Lille using both hot wire anemometry and PIV. A wind tunnel was built in 1993 specifically designed for these two measurement techniques and aimed at large Reynolds numbers. Several experiments were performed since then in the frame of different PhDs and European projects, all aimed at evidencing turbulence organization in this region. These have fully benefited of the extraordinary development of PIV in that time frame, which has allowed entering visually and quantitatively inside the complex spatial and temporal structure of near wall turbulence. The presentation will try to emphasize the benefit of this approach in terms of understanding and modelling, illustrated by some representative results obtained.

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