



Séminaire de la Branche Mécanique des Fluides et Energétique en Ile de France

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10h45

Tools for post-processing numerical and experimental data

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Résumé : Experiments and numerical simulations of complex fluid flows often produce a large amount of data. In its raw form, it rarely provides sufficient insight into coherent structures or physical mechanisms. Instead, statistical techniques, decompositions and signal-processing methods have to be applied to distinguish dominant processes from incoherent background noise and to isolate the principal dynamics from the high-dimensional data. This talk will give an overview of common tools for the extraction of relevant processes and coherent structures from computational and experimental data sequences. Examples from numerical simulations, image-based data and time-resolved PIV-measurements will be used to address the strengths and weaknesses of the various post-processing methods

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