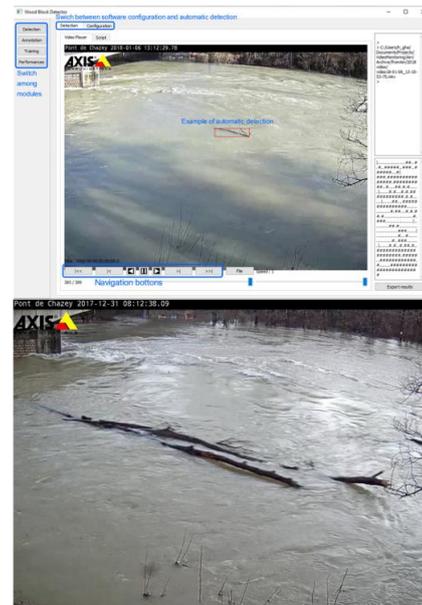
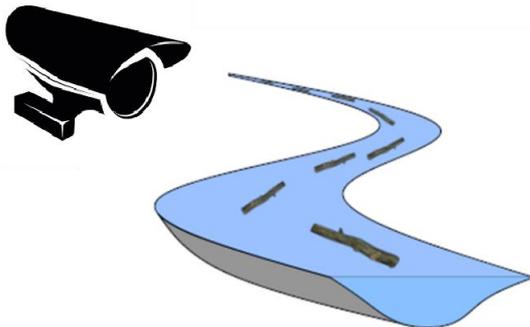




Developing video monitoring technique in riverine environment: Automatic and continuous detection par Zhang ZHI

Café fluvial du 19 novembre 2020 – 14h en [visio*](#)

Drift wood plays a significant role both on the ecology and morphology of a river. Therefore, quantifying the amount of wood in rivers is an important issue. During recent years, streamside video monitoring has been introduced as a feasible technique to evaluate the amount of wood in riverine environment. Beside many advances, there are still many questions needed to be address concerning this technique. Therefore, in this study, I focused on three major objectives. Firstly, I studied the relation between wood flux and flow discharge in order to create a model for predicting wood flux on invisible period of camera sight. Wood in-stream can show some different characteristics in some critical events, such as in two multi-peak floods, wood flux on the first peak of discharge is more than second one, and in a flood after a stronger windy day, wood flux can be activated by water elevation arise. In addition, the second major objective was the implementation and validation the application of an automatic detection software. After training the software, it is used to extract wood flux automatically by its own surveillance. The third major objective was evaluating human-based uncertainties in video monitoring due to two limitations, first time limitation which results in sampling the videos and second limitation in visibility of the operator which results in bias between different operators. I expect the results of this thesis develop the application of streamside video monitoring technique for practical concerns.



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