From Data Acquisition to Decision

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The context of the CReSTIC lab (Research Center for Information and Communication Technologies and Sciences) – Reims, France - is briefly introduced and illustrated by a few examples of research works with possible applications in the fields of biology and bioinformatics. These works are related to Data acquisition, Visualization and Processing.

A first application dedicated to diabetic patients deals with the topic of Health Data Acquisition. A second example illustrates our skills in measurement science, instrumentation and sensors design.

Innovative signal processing methodologies are then exposed. One is dedicated to the detection of rare events such as neural spikes or signal abnormalities. A second one concerns blind source separation and its applications.

Finally, the contribution of the lab to state-of-the-art 2D and 3D object representation is illustrated through examples.