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A new module is available on [plug in!](#), IFPEN's image processing platform, based on a new learning method: deep learning, a form of artificial intelligence.

It was designed as a result of collaborative work launched in 2017 with Dan Ciresan (Conderra Research, a former senior researcher at the Dalle Molle Institute for Artificial Intelligence). The collaboration led to the adaptation of a network of deep neurons and a methodology adapted to a limited annotated dataset, successfully employed for the detection of defects for four types of alumina catalyst supports. With this approach, each image

pixel is considered as a clean sample, considerably increasing the volume of data available for learning.

This deep learning approach is currently being directly applied in various projects conducted by IFPEN's R&I teams. Further updates will follow in a few months!

[>> Read more about plug *im!* and open access software.](#)

Integration of deep learning in IFPEN projects
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Link to the web page :