

## Patents and softwares

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Our research works lead to develop approaches and models which may be included into software. Thus we provide advance tool softwares for expert as well as user defined software to provide new functionalities to end-users. Our softwares are protected and may be based on patents.

### Softwares

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- **AMC3: NC Solution for the optimization of machining**

The AMC3 solution is an integrated software package for machine tools with Siemens 840D CNC. It is used to optimize cutting conditions as well as in turning, drilling, boring and milling. AMC3 proposes to evaluate cutting forces and specific cutting energy in one tool path, and directly during a part machining. This solution allows an easy and short use of tool material pair method (according NF E66-520-1 to 8 standards). This software is dedicated for industrial uses in production.

[more information](#)

- **CAM: Simulation of cutting force in milling**

This software is fully dedicated to simulate cutting forces in milling, with taking into account the workmaterial and the complete milling configuration. Different milling cutter profiles and 5 axis milling can be defined as well as the local cutting geometry. Consequently, it is possible to use it both for designing optimal tool geometry or for performing cutting parameters with a given tool.

[more information](#)

- **SIMUL3D: Growth simulation of thin films (PVD)**

SIMUL3D is dedicated to sputtering process. Combined with SRIM-TRIM and SIMTRA, it allows to simulate the growth of a film taking into account the wole process.

[more information](#)

- **USILOG: Open access machining softwares**

Usilog is a platform that gives access to a library of various software and codes of most scientific model resulting from Arts & Métiers university research works.

[more information](#)

### Patents

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2012 - Fromentin, *Method for optimizing the working conditions of a cutting tool*

[EP2510410A1](#), [WO2011069646A1](#), [US20130178973A1](#)