

Partner offer

Date (01/12/2021)

- **Relevant topic(s) in work programme**

HORIZON-CL4-2022-RESILIENCE-01-25: Optimised Industrial Systems and Lines through digitalisation (IA)

- **Quick description of the project concept**

<ul style="list-style-type: none"> - Expertise proposition on: - enhance efficiency of the manufacturing process; - improve process and product quality;
--

- **Description of the expertise proposed**

<p>For several years, we work on the study of the machine-tool or robot architecture behavior and its impact on the process (manufacturing, polishing, additive manufacturing, pick and place...) performance in term of productivity and quality. Our originality is to develop frugal model based on multi-body approach. We have strong competence in geometric and dynamic modelling and identification of parallel kinematic and serial robots and of machine-tools. We are able to take into account all the numerical tool path chain (CAD-CAM model and control law)</p>
--

Chanal, H., Duc, E., & Ray, P. (2006). A study of the impact of machine tool structure on machining processes. *International Journal of Machine Tools and Manufacture*, 46(2), 98-106.

Pateloup, S., Chanal, H., & Duc, E. (2012). Process definition of preformed part machining for taking benefit of parallel kinematic machine tool kinematic performances. *The International Journal of Advanced Manufacturing Technology*, 58(9), 869-883.

- **Keywords describing the expertise proposed**

machine-tool or robot architecture behavior, modelling, identification, control law, CAD-CAM influence.

Organisation information

Organisation and country: Institut Pascal / Clermont Auvergne INP, France
--

Type of organisation:

<input checked="" type="checkbox"/> Academic <input checked="" type="checkbox"/> Research institute

Former participation in FP European projects?
--

<input type="checkbox"/> Yes <input type="checkbox"/> No
--

Web address: http://www.institutpascal.uca.fr/index.php/fr/

Description of the organisation:

Institut Pascal is an interdisciplinary research laboratory working in the strategic fields of the Engineering and Systems Sciences: process engineering, mechanics, robotics, physics for information sciences, health technologies. It is supervised by the University of Clermont Auvergne and the CNRS. Clermont Auvergne INP is an engineering school.

Contact details

Contact person name	Hélène CHANAL
Telephone	+33 4 73 28 80 75
E-mail	Helene.chanal@sigma-clermont.fr
Country	France