Tokyo University of Agriculture and Technology
Institute of Global Innovation Research

グローバルイノベーション研究院　公開セミナー
Institute of Global Innovation Research Open Seminar

Optimization of WAAM process using smart toolpath generation and process simulation

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東京農工大学 小金井キャンパス
9号館 5階 505号室
Room 505 , 5th Fl., Building 9,
Koganei Campus TUAT

どなたでも、ご聴講いただけます。
Everyone is welcome to attend.

The seminar wants to introduce the solutions and approaches developed at University of Firenze (UNIFI) to optimize WAAM deposition process. The first part of the seminar will deal with the optimization of deposition toolpath, created in order to minimize vertical and horizontal errors in the stacked layers. The strategy to define the optimal sequencing for piling up the layers is based on experimental tests carried out at UNIFI's laboratory and the use of automatic feature recognition to define the optimal sequencing. The second part of the seminar will be focused on the thermo-mechanical simulation of the deposition process. In order to have a reliable simulation a new model for the thermal characterization of the welding source has been developed, starting from Goldak's one, together with a strategy to activate the model's elements during the deposition. During the seminar the theory behind the model, its validation and application to simple cases will be presented.

The seminar will be the opportunity to have a first overview of UNIFI's research activities on WAAM and we will be available for in-depth presentations of specific topics in the following days.

■主催／Organized by
グローバルイノベーション研究院 エネルギー分野 小笠原研究チーム
Institute of Global Innovation Research "Energy" Ogasawara Team

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