Tugdal Le Néel (Centrale Nantes), Pascal Mognol (École normale supérieure de Rennes) and Jean-Yves Hascoët (Centrale Nantes) have been recognized for their contribution to additive manufacturing. The Dick Aubin Distinguished Paper Award is presented annually at SME’s RAPID + TCT event.

Paper Title: Design for Additive Manufacturing: Multi Material Sand Mold

Abstract: Indirect additive manufacturing is an alternative way to produce metal parts by using foundry practices. This paper will detail a novel method that uses the additive manufacturing process of binder jetting with different powders such as silica, aluminum, alumina and steel to create a multimaterial mold. Multimaterial, 3D-printed molds and cores can improve parts’ design freedom; this methodology gives the ability to have a specific thermal conductivity at a specific location in order to remove or displace hot spots. The reduction of hot spots enables geometries that are more complex and are said to be impossible via traditional sandcasting. A binder-jetting 3D printer was developed to additively manufacture molds and core with an inorganic binder. Simulation software indicate material’s properties and design pertinence.

> more information on [http://www.sme.org/](http://www.sme.org/)
Colin Gatouillat, lauréat du 2e prix du jury de MT180

Gurvan Jodin, lauréat du prix de thèse Léopold Escande 2018

Charlie Hérent, lauréat du Prix Fermat Junior 2017

DOCUMENTATION

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