

## **CETMA activities for the development of advanced manufacturing techniques for thermoplastic composite structures**

Thermoplastic matrix composites are replacing thermosetting matrix composites in many different applications, thanks to their potential easy processing, long shelf life, lower storage costs, enhanced possibilities for recycling, high impact resistance, higher repair potential and the possibility of automated joining by welding. Anyway in order to take profit of the advantages of thermoplastic, there is the need to develop fast and fully automated technologies to process thermoplastics. In this talk the CETMA's approach to give a reply to this need is discussed, focusing on technologies like Continuous Induction Welding, Continuous compression moulding, Non-Isothermal compression moulding, and showing the analytical and numerical models developed to support these activities.