Deaths of motorcycle drivers caused by traffic accidents account up to 20% of the total. Safety measures such as helmets are key elements. The biomechanical investigation of the human skull allows us to interpret cranial fracture patterns in accidents aiming to improve protective equipment. The UdG proposes a new 3D skull model to predict cranial fracture patterns.

**TECHNOLOGY DESCRIPTION**

The Y-Cr@nium technology consists of a 3D geometrical model that systematizes the 22 cranial bones. It allows to demonstrate what is the mechanical behavior of the skull in case of impact and therefore changes the paradigm when designing cranial prostheses and protective equipments such as motorcycle helmets.

**TARGET MARKET**

- Applicable in the helmet manufacturing industry through design studies.
- Applicable in the health sector for skull virtual simulation purposes.
- Applicable in the dummies manufacturing industry, making the design of their heads suitable to real skull impacts.

**COMPETITIVE ADVANTAGES**

- It allows to study the pattern of damage according to the localized impact, allowing a better treatment.
- Non-invasive method that allows multiple trials avoiding high cost in time or material.
- Several applications in different areas such as industrial (dummies for simulations, helmets) and/or medical (new treatment guidelines).