



## Third Laureate Research & Development

- ◆ **Project Title:** Movable Canopies for Military Aircrafts
- ◆ **Representative:** Ahmad Reza Najimi (B.Sc.)

### Abstract:

The canopy on modern high-performance aircrafts protects the crew, provides enhanced visibility and serves as an avenue of escape in case of emergency. The designed canopy is a transparent cockpit enclosure consisting of laminated acrylic panels and bullet proof windshields in a metal frame made of certain aerospace alloys. It also includes inflatable sealing, defogging, light striking systems. The canopy also goes with hydraulic and Pneumatic, Jettison, Sealing and other avionic systems. The canopy designed to withstand all flight conditions. Transparent panels consist of three lamination of stretched polymer and thermoplastic polyurethane or thermoset silicon interlayer. Stretched acrylics show perfect mechanical properties and the interlayer enhances strength and causes the canopy to withstand critical flight conditions.

The casting metal frame of canopy is about 4meters in length and 3mm in thickness which is made of special alloy. It was produced by an innovative Low Pressure Casting method.