



CRASH DYNAMICS

The Crash Dynamics Lab provides research, testing and certification for transportation seats and restraints systems under dynamic impact conditions.

→ CAPABILITIES

- FMVSS 208
- FMVSS 213
- CMVSS 208
- ECE R94
- Euro NCAP
- IIHS
- OSA

→ CODE OF FEDERAL REGULATIONS

- Title 14 Part 23.562
- Title 14 Part 25.562
- Title 14 Part 27.562
- Title 14 Part 29.562

→ ANTHROPOMORPHIC TEST DUMMY CALIBRATION

- On-site calibration capability for Hybrid II and Hybrid III ATDs
- On-site calibration for accelerometers

→ PROJECTS

- Certification by Analysis - Seat Modeling Techniques
- Evaluation HIII 95th & 5th
- Percentile ATD for Automotive Applications
- Certification by Analysis - Sled Testing for ATD Validation
- Mass Transit Bus Crashworthiness I and II

→ AREAS OF RESEARCH

- Aircraft occupant protection
- Implementation of child restraints in aerospace applications
- Mass transit occupant safety
- Aircraft component certification

→ EQUIPMENT

MTS Model 888.20 servo-hydraulic crash simulator

- Nominal force: 2,000 kN (450 kips)
- Max velocity w/ 1,500 kg: 81 km/h (50 mph)
- Dynamic response: >150 Hz
- Acceleration w/ 1,500 kg: 65g
- Acceleration w/ 1,000 kg: 75g

→ PHOTOMETRICS

- AOS Technologies S-VIT Imagers
- High-resolution color (800x600) 1,000 frames per second (10,000 fps at reduced resolution)
- Immediate availability of videos in .avi format

→ CLIENTS

- Aircraft, Automotive and Military Vehicle
- Seat Manufacturers
- Internally Funded Research Centers
- Crash Research Centers

→ CONTACT

Robert Huculak, Manager

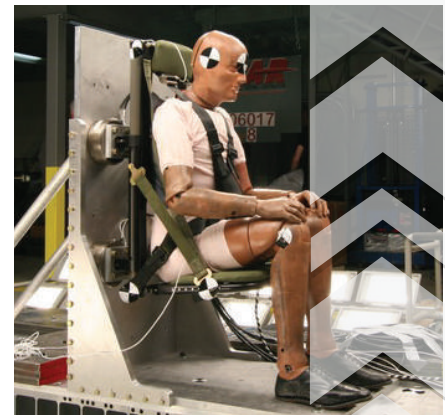
(316) 978-5331

robert.huculak@wichita.edu

Gerardo Olivares, Ph.D., Director

(316) 978-7273

gerardo.olivares@wichita.edu



WICHITA STATE
UNIVERSITY

NATIONAL INSTITUTE
FOR AVIATION RESEARCH