

**UNIVERSITA' DELLA CALABRIA**  
**DIPARTIMENTO DI INGEGNERIA CIVILE**

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*Dottorato di Ricerca in Scienze e Ingegneria dell'Ambiente,  
delle Costruzioni e dell'Energia.  
Ciclo XXIX*

**Problemi d'Interfaccia Calcestruzzo-Rinforzi  
Fibrosi a Matrice Cementizia.**

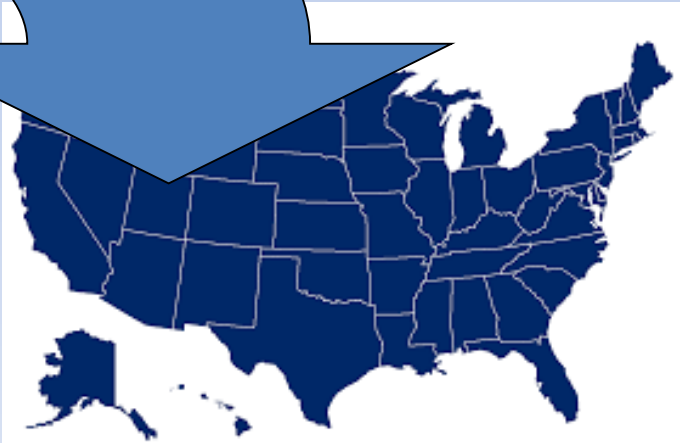
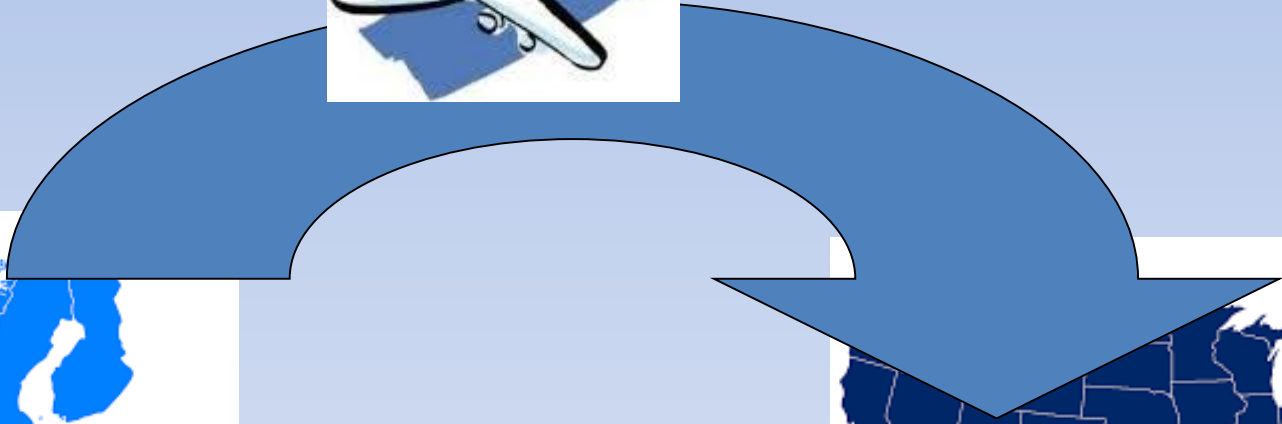
**Tutor:**  
**Prof. Ing. Luciano Ombres**

**Ph.D. Student:**  
**Salvatore Verre**

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**ANNO ACCADEMICO 2014-2015**







MISSOURI  
S&T



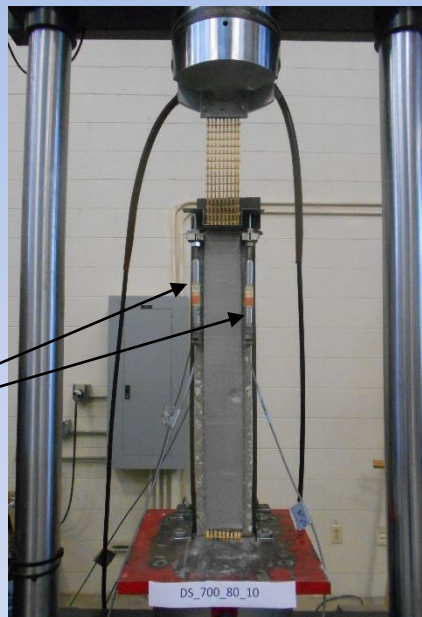


**Tipologia di Test Adoperato in Laboratorio**

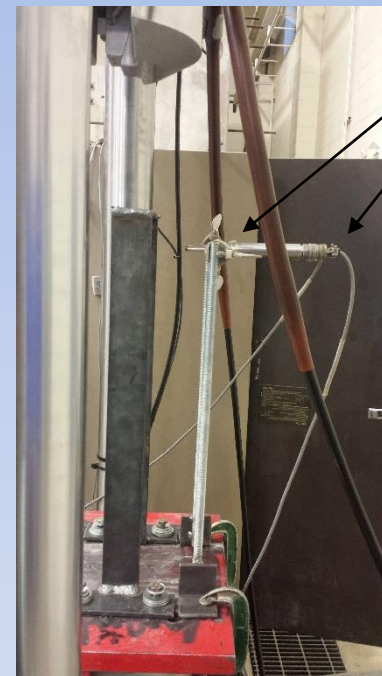
**“DIRECT SHEAR”**

**“Setup Test”**

**LVDT Frontali  
“AVG”**



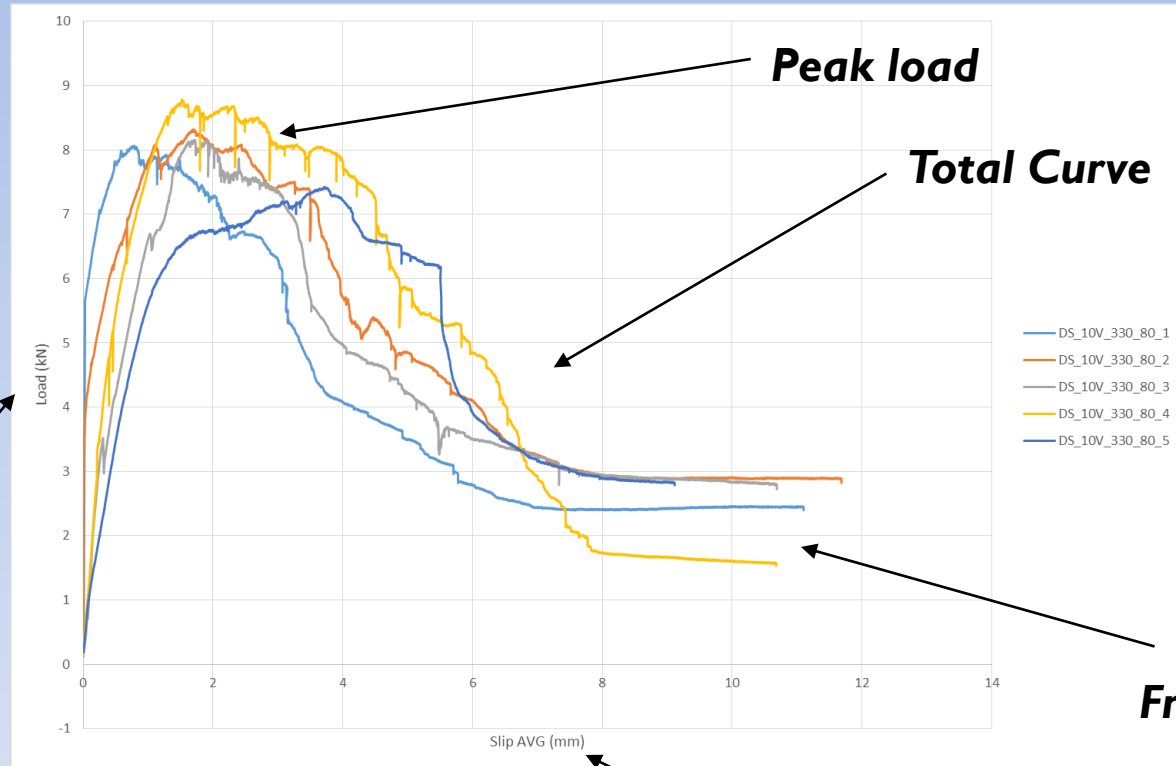
**LVDT Back**



**Ruredil and KeraKoll**

- **Varie lunghezze di bond tra cui 200, 330, 450 e 700 mm**
- **Mono e Bi-Layer**
- **Free End**
- **Load Rate**
- **Control Stroke**

“DIRECT SHEAR”



Load

Peak load

Total Curve

Friction

Slip AVG

## Tipologia di Test Adoperato in Laboratorio

“Beam”



Cages

Stain gage

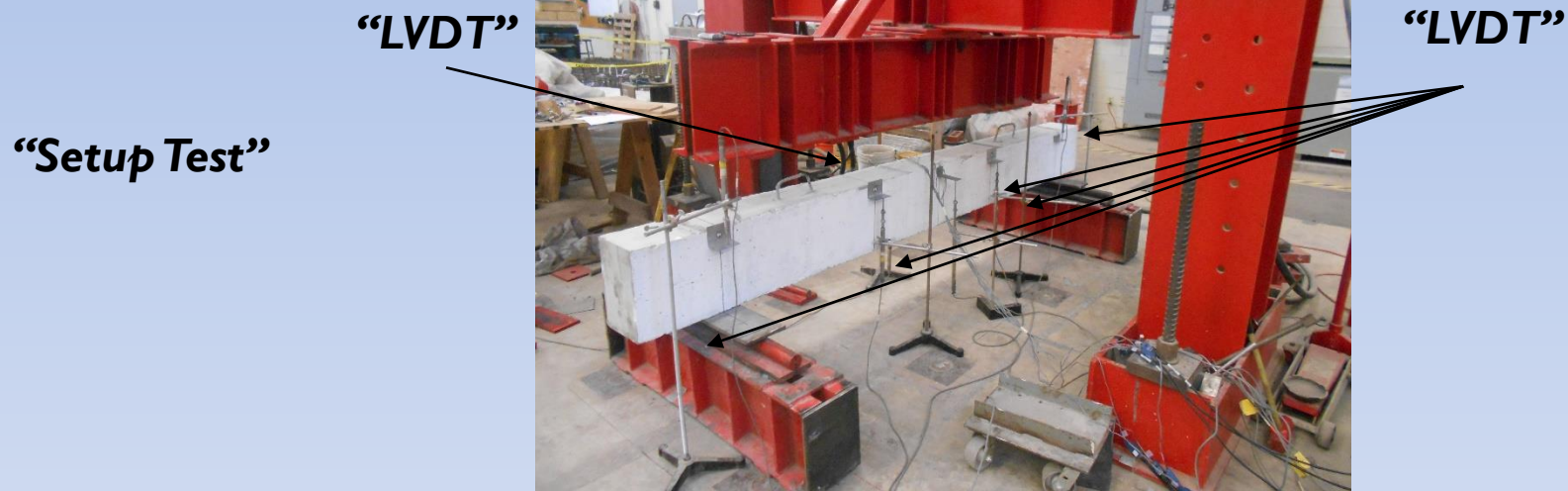


Beams



## Tipologia di Test Adoperato in Laboratorio

**“Beam”**



### **KeraKoll**

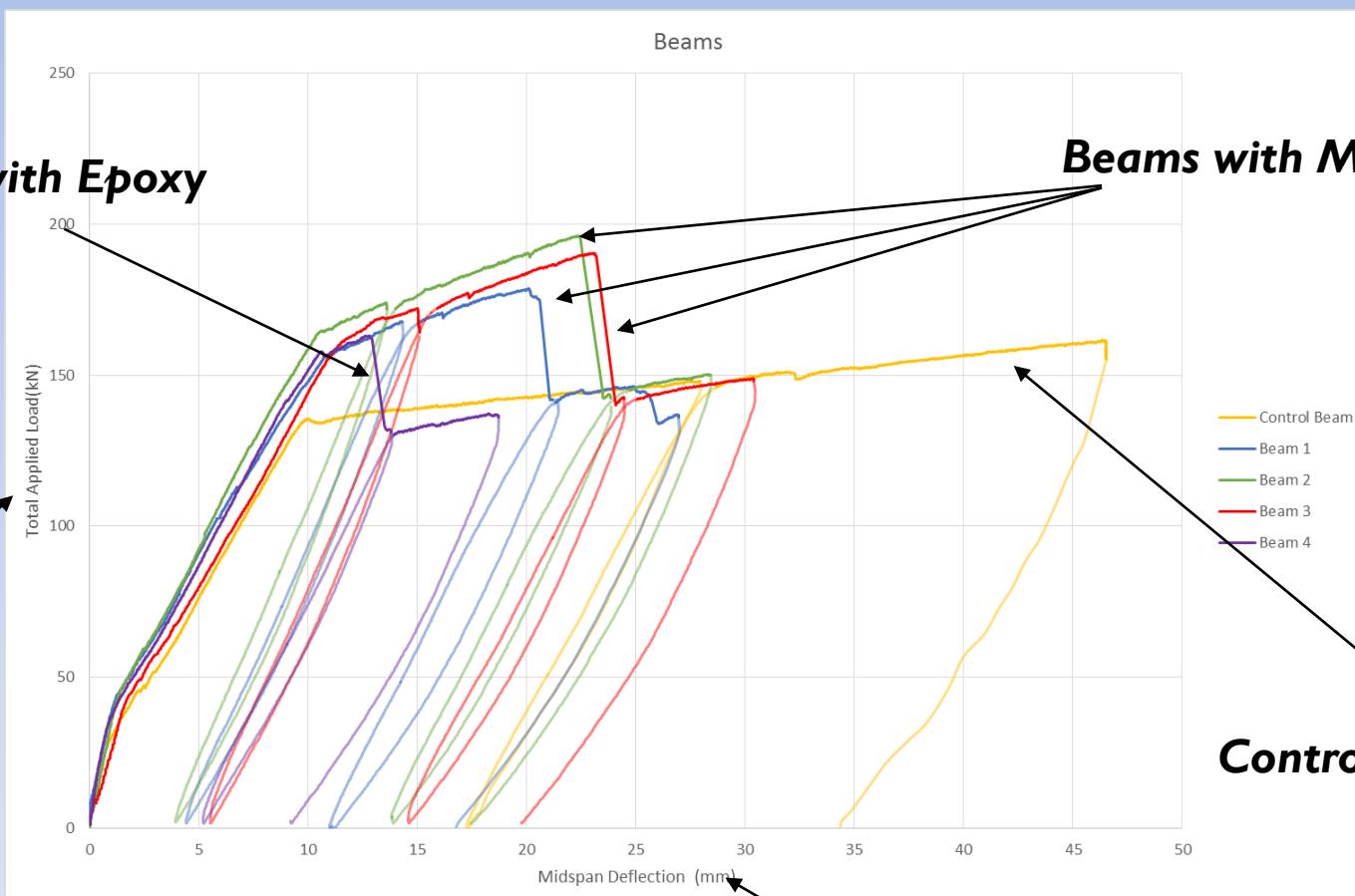
- **n.1 Control Beam**
- **n.2 Beams Mono-Layer (Load Rate)**
- **n.1 Mono-Layer without external Layer**
- **n.1 Mono-Layer with Epoxy**
- **Frature of Mechanics (Concrete and Matrix)**



**“Beam”**

**Beams with Epoxy**

**Beams with Matrix**



**Load**

**Control Beam**

**Mid-Span Deflection**

**Tipologia di Test Adoperato in Laboratorio**

**“Beam”**



**Damege in Mid-Span**



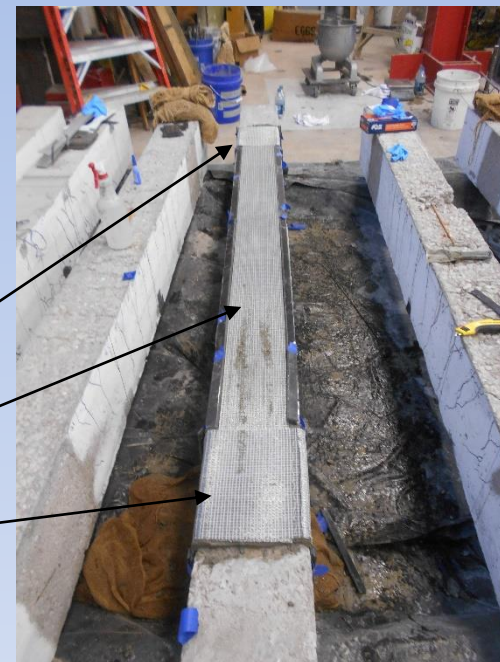
**Repair**

## Tipologia di Test Adoperato in Laboratorio

**“Beam”**



**Formwork**



**U-Wrap**

## **KeraKoll**

- **n.1 Control Beam**
- **n.1 Beam Mono-Layer and U-wrap**
- **N.3 Beam Mon-Layer and U-wrap with Epoxy**

**GRAZIE  
PER  
L'ATTENZIONE**