



University of Camerino  
School of Science and Technology



HR EXCELLENCE IN RESEARCH



University of California  
Department of Mechanical  
Engineering of Berkeley



# WALKING WITH PHOENIX



**Camerino**  
**December 2<sup>nd</sup> 2014**  
Palazzo Ducale  
Sala degli Stemmi

15:00

*Welcome address*

by Prof. **Maria Letizia Corradini**  
University of Camerino, moderator

*Opening note*

by Prof. **Flavio Corradini**  
Rector of the University of Camerino

*The Exoskeleton Project*

by Ing. **Carlo Piscitelli**  
MES spa Rome

15:30

**NEW DEVELOPMENTS ON LOWER  
EXTREMITY EXOSKELETON SYSTEMS**

**H. Kazerooni**

University of California at Berkeley

16:30

Discussion



CRESCE L'EUROPA NEL LAZIO

Our objective at Berkeley is to create a set of advanced technologies that form the framework for developing accessible exoskeleton systems for people with mobility disorders. Our research work is not about creating 'walking' capability only; it is about fostering 'independence'. In addition to walking, there are many maneuvers a person with limited mobility needs to carry out for independence at home and work during a day. For widespread use, exoskeletons must be accessible. The medical wearable robotic exoskeletons allow people with paraplegia or other mobility disorders to be upright and mobile, preventing secondary diseases and enhancing their quality of life. These systems will be used for in-home care and everyday use, as well as within hospitals and rehabilitation centers. The industrial wearable robotic systems minimize spinal compression forces of workers who repeat various maneuvers on the job. These devices will be used in auto assembly plants, factories, manufacturing facilities, distribution centers, warehouses, and delivery services. These systems decrease the severity and number of work-related injuries, while enhancing worker safety. The quest to develop accessible exoskeleton orthotic systems suggests less hardware while placing more emphasis on the intelligence and cleverness during both the design stage and the device operation. This talk will describe new engineering developments to realize accessible exoskeleton systems.

