

Convegno satellite SIN
e Convegno regionale SIN-SNO del Lazio

NEURO-RIABILITAZIONE:
aspetti normativi ed innovativi

Marco Molinari

Director Neurorehabilitation 1 and Spinal Center
Director Clinical Translational Research



SANTA LUCIA
NEUROSCIENZE
E RIABILITAZIONE



IRCCS Fondazione Santa Lucia

La robotica: luci e ombre

FONDAZIONE SANTA LUCIA

ISTITUTO DI RICOVERO E CURA
A CARATTERE SCIENTIFICO



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E RIABILITAZIONE

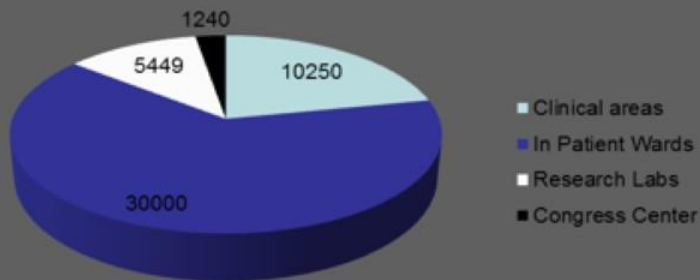


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E RIABILITAZIONE

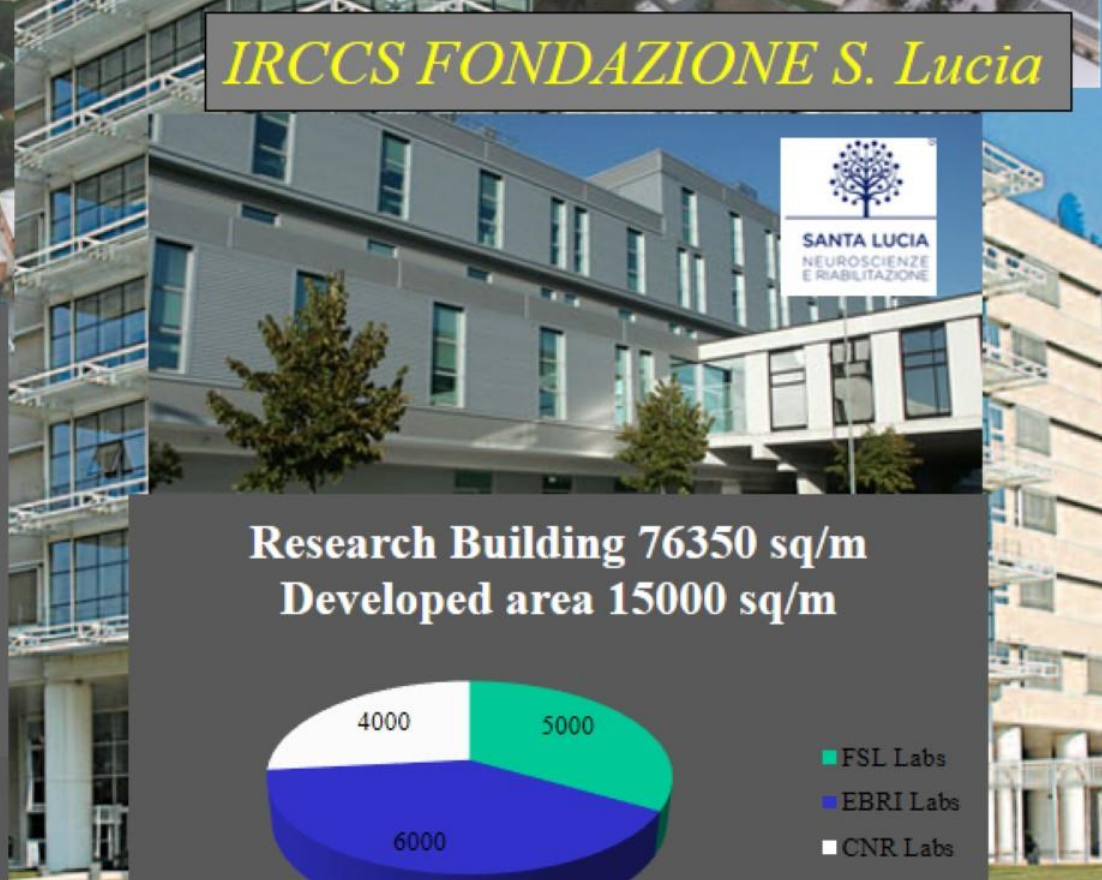
IRCCS FONDAZIONE S. Lucia



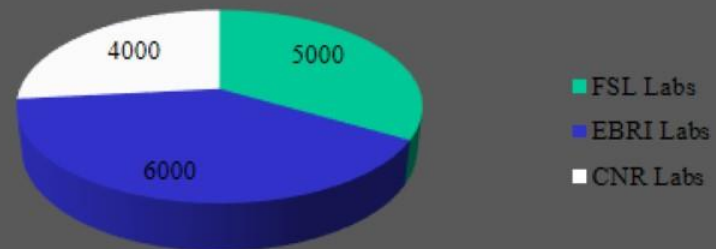
Main CAMPUS 90000 sq/m



293 beds for ordinary hospitalisation;
32 for day hospital;
17 for private patients.



Research Building 76350 sq/m
Developed area 15000 sq/m





IRCCS FONDAZIONE S. Lucia



Neurorehabilitation 1

Spinal Center



Giorgio Scivoletto



Marcella Masciullo



Floriana Pichiorri



Lina Di Lucente



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Neurorehab 1



Ugo Fuoco



Massimo Rivola



Angelo Tonini



Caterina Gacovich



26 nurses



17 physiotherapists



ROBOTS IN THE CLINIC

TECHNOLOGIES IN NEUROLOGICAL REHABILITATION



FLOAT O



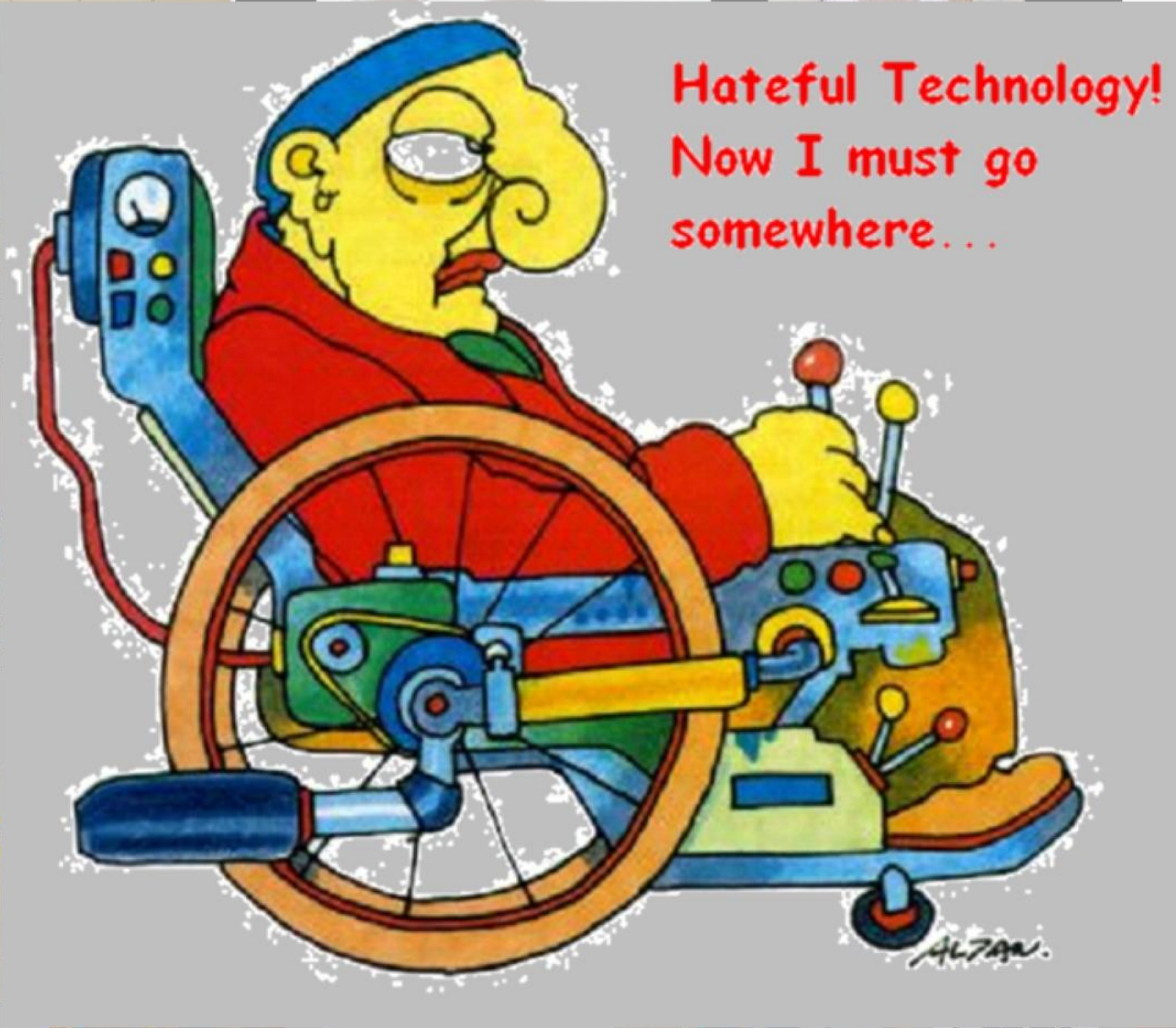
ance SD



PROMO



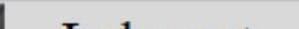
RMEO Power



ARGO - 1992



Gang Trainer



Lokomat



ReWalk



Hank



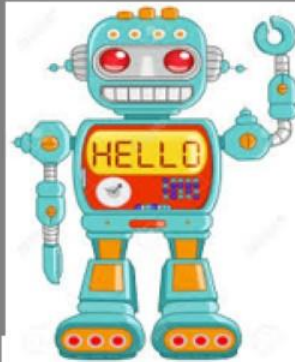
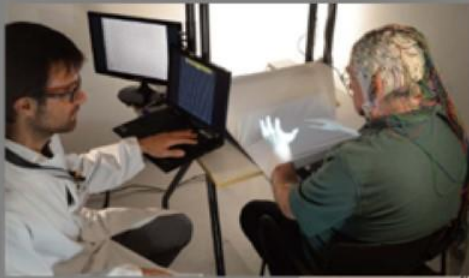
EKSO



WHICH IS THE RIGHT
PATIENT FOR MY
REHAB ROBOT



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WHICH IS THE RIGHT
REHAB ROBOT FOR
THIS PATIENT?

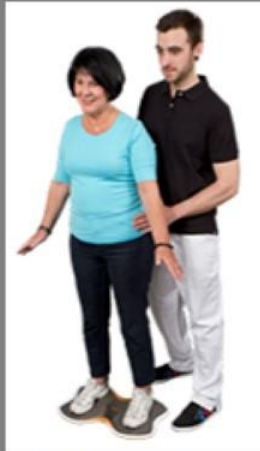
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Rehabilitation Technologies in clinical settings

Balance rehab



Tymo
Tyromotion



Balance SD
Biodex



BTS P-6000
BTS Bioengineering



The FLOAT
Lutz ME



Lokomat Pro
Hocoma



Gang Trainer

Upper limb rehab



Pablo Tyromoyion

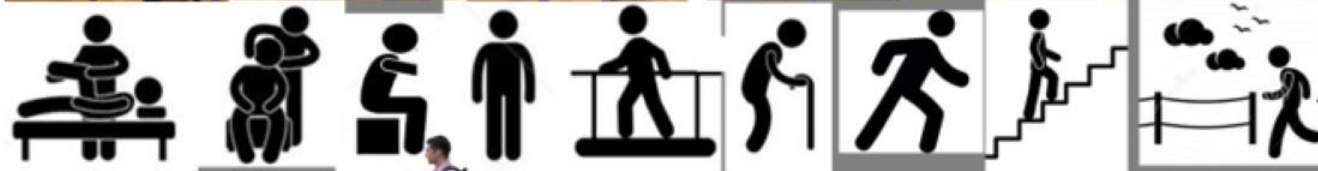
Walking assistance



ReWalk

REHABILITATION FOR ROBOTS.

Selection of the technology on functional basis



Neurorehab 1 & Spinal Center

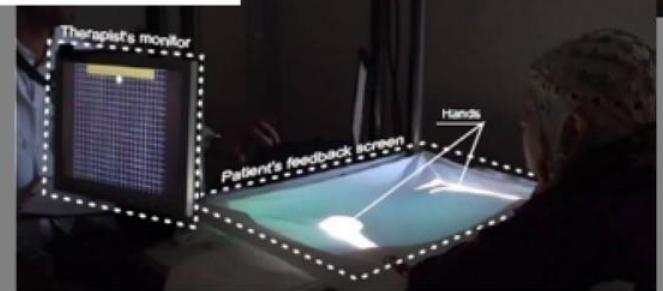
53 inpatient
10 outpatient

6 MDs,
1 psychologist,
26 nurses,
17 physiotherapists



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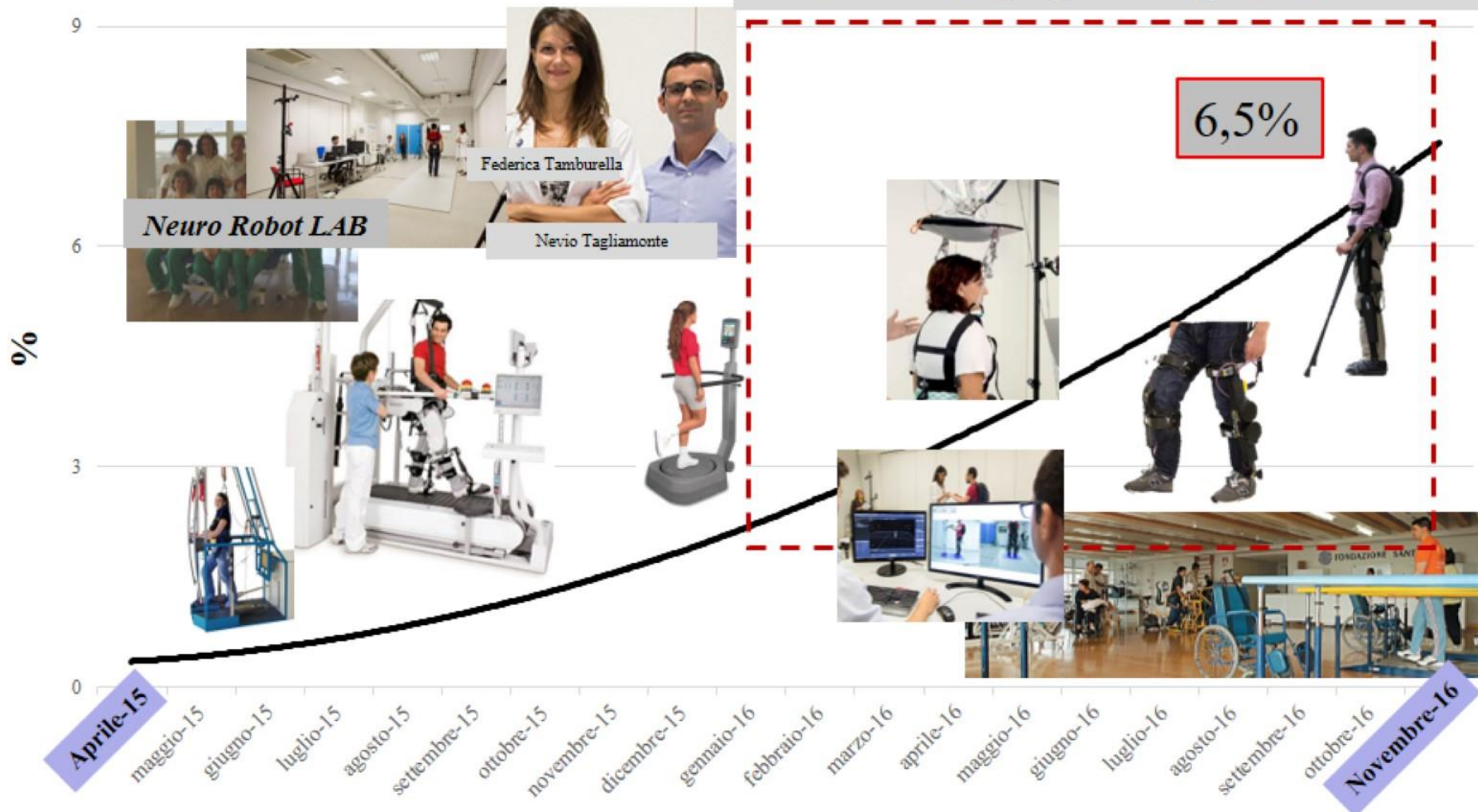
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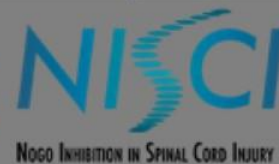
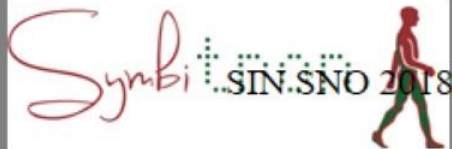
FSL research clinical integration in Neurological Rehabilitation

Average technology based treatments per month: 40
 Patients undergoing technological rehab: 80%

% Tech Rehab / Total of treatments



MIND WALKER



SUPPORT FOR TECHNOLOGY TRANSFER

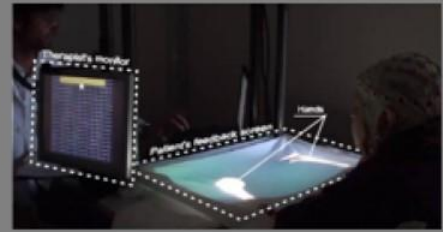
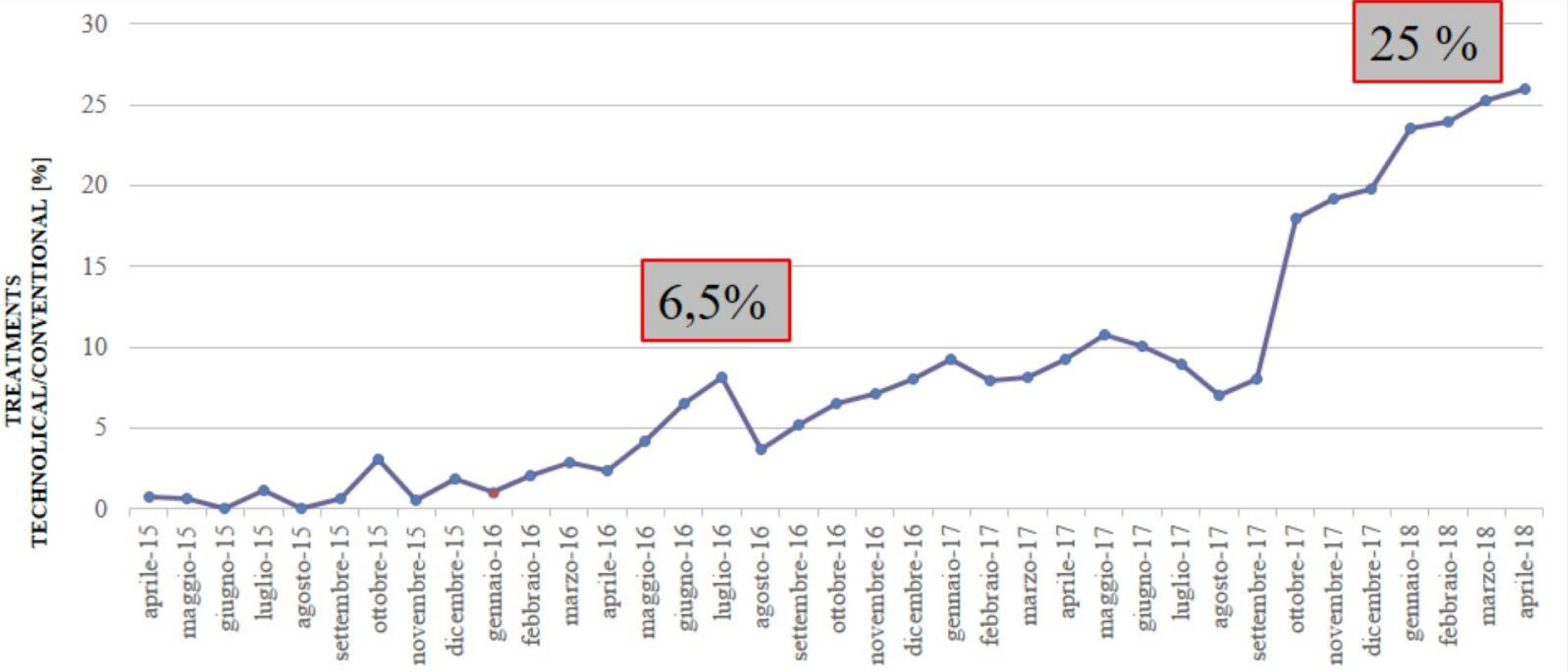
17 Physical therapists in staff
100% trained for technology

Continuous support
from researchers (1 physical therapist + 1 bioengineer)

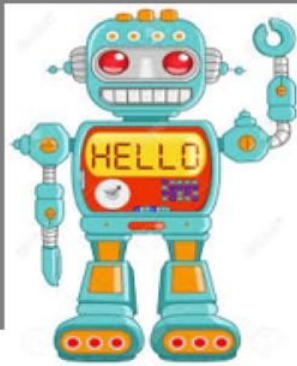
Continuous and updated training
for physical therapists (dedicated monthly courses)



April 2018
25 % of all
treatments



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WHICH IS THE RIGHT
SETTING OF THE ROBOTIC
REHAB FOR THIS PATIENT?

TOWARD A PERSONALIZED ROBOTIC REHABILITATION



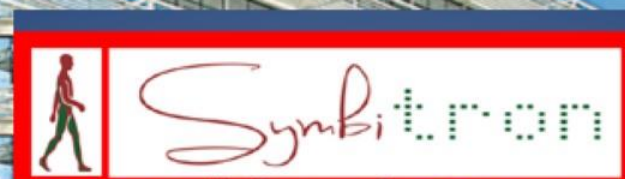
TAILORED REHABILITATION HOW PRECISE CAN WE BE?





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AKNOWLEDGEMENTS



Federica
Tamburella



Marcella
Masciullo,



Iolanda
Pisotta,



Nevio
Tagliamonte



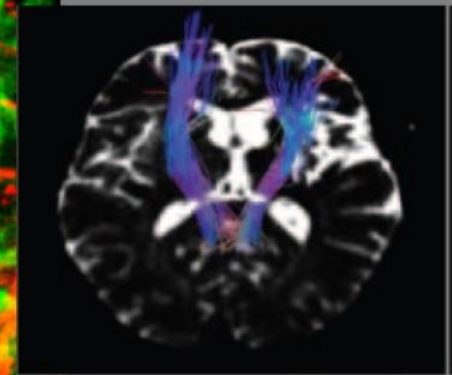
Matteo
Arquilla



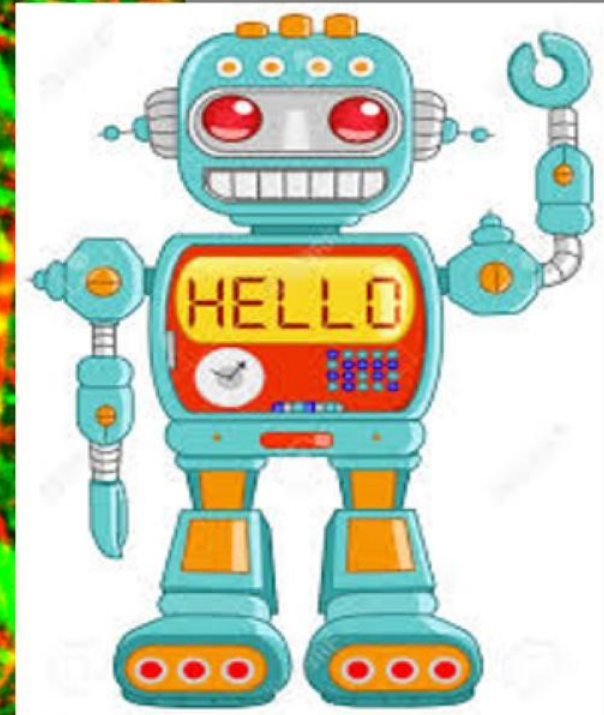
Marco
Molinari



Giorgio
Scivoletto



*Thanks
for your
attention*



Step Measurement

IREX

Please do stand inside the step

STN SNO 2018

The complex block contains three panels illustrating step measurement. The first panel shows a person standing on a step with a sensor. The second panel shows a person in a pool with a sensor. The third panel shows a person on a snowy slope with a sensor. The text "STN SNO 2018" is at the bottom.