

Dzięki współpracy z naszymi partnerami klinicznymi na całym świecie, firma Movendo Technology zrealizowała w ostatnich latach wiele badań klinicznych obejmujących główne obszary ortopedii, neurologii, geriatry i sportu.

## Badania naukowe

(materiały z czasopism i konferencji międzynarodowych - recenzowane)

Giovannini, S., Iacovelli, C., Brau, F. et al. **“RObotic-Assisted Rehabilitation for balance and gait in Stroke patients (ROAR-S): study protocol for a preliminary randomized controlled trial.”** *Trials* 23, 872 (2022). <https://doi.org/10.1186/s13063-022-06812-w>

**2022** | Giovannini, S.; Brau, F.; Galluzzo, V.; Santagada, D.A.; Loreti, C.; Biscotti, L.; Laudisio, A.; Zuccalà, G.; Bernabei, R. **“Falls among Older Adults: Screening, Identification, Rehabilitation, and Management”**. *Appl. Sci.* 2022, 12, 7934. <https://doi.org/10.3390/app12157934>

Marchesi G, De Luca A, Squeri V, De Michieli L, Vallone F, Pilotto A, Leo A, Casadio M and Canessa A (2022) **“A Lifespan Approach to Balance in Static and Dynamic Conditions: The Effect of Age on Balance Abilities.”** *Front. Neurol.* 13:801142. doi: 10.3389/fneur.2022.801142

Maggio M.G., Naro A., Calatozzo P., Rosa G., Porcari B., Latella D., Marzullo P., Calabrò R.S. **“Rehabilitation of somatoparaphrenia with misoplegia: insights from a single case-pilot study”** *J Integr Neurosci.* 2021 Jun 30;20(2):439-447. doi: 10.31083/j.jin2002046. PMID: 34258945.

Calabrò R.S., Billeri L., Ciappina F., Balletta T., Porcari B., Cannavò A., Pignolo L., Manuli A., Naro A. **“Toward improving functional recovery in spinal cord injury using robotics: a pilot study focusing on ankle rehabilitation.”** *Expert Rev Med Devices.* 2021 Mar 5:1-13. doi: 10.1080/17434440.2021.1894125. Epub ahead of print. PMID: 33616471.

**2021** | Spina S., Facciorusso S., Cinone N., Armiento R., Picelli A., Avvantaggiato C., Ciritella C., Fiore P., Santamato A. **“Effectiveness of robotic balance training on postural instability in patients with mild Parkinson's disease: A pilot, single blind, randomized controlled trial.”** *J Rehabil Med.* 2021 Feb 17;53(2): jrm00154. doi: 10.2340/16501977-2793. PMID: 33585943.

Gervasoni F., Lo Mauro A., Ricci V., Salce G., Andreoli A., Visconti A., Pantoni L. **“Balance and visual reliance in post-COVID syndrome patients assessed with a robotic system: a multi-sensory integration deficit.”** *Neurol Sci.* 2021 Oct 6:1-4. doi: 10.1007/s10072-021-05647-8. Epub ahead of print. PMID: 34613505; PMCID: PMC8493357.

Pilkar R., Veerubhotla A., Ehrenberg N. **“Objective evaluation of the risk of falls in individuals with traumatic brain injury: feasibility and preliminary validation.”** *Annu Int Conf IEEE Eng Med Biol Soc.* 2021 Nov;2021:4658-4661. doi: 10.1109/EMBC46164.2021.9630020. PMID: 34892252.

Marchesi G., Ricaldone E., De Luca A., Torre K., Quinland E., Bellitto A., Squeri V., Massone A., Casadio M. Canessa A., “**A robot based assessment of trunk control in Spinal Cord Injured athletes**”, (2020) 8th IEEE RAS/EMBS International Conference for Biomedical Robotics and Biomechatronics (BioRob), New York City, NY, USA, 2020, pp. 497-502, doi: 10.1109/BioRob49111.2020.9224337

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Cella A, De Luca A., Squeri V., Parodi S., Vallone F., Giorgeschi A., Senesi B., Zigoura E., Guerrero K., De Michieli L., Saglia J.A., Sanfilippo C., Pilotto A. (2020) “**Development and validation of a robotic multifactorial fall-risk predictive model: a one-year prospective study in community-dwelling older adults**” PLoS ONE 15(6): e0234904. <https://doi.org/10.1371/journal.pone.0234904>

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Marchesi G., Casadio M., Ballardini G., De Luca A., Squeri V., Vallone F., Giorgini C., Crea P., Pilotto A., Sanfilippo C., Saglia J.A., Canessa A. (2019) “**Robot-Based Assessment of Sitting and Standing Balance: Preliminary Results in Parkinson’s Disease.**” Pp. 570-76 in 2019 IEEE 16th International Conference on Rehabilitation Robotics (ICORR).

Saglia J. A., De Luca A., Squeri V., Ciaccia L., Sanfilippo C., Ungaro S., De Michieli L. (2019) “**Design and Development of a Novel Core, Balance and Lower Limb Rehabilitation Robot: Hunova®.**” Pp. 417-22 in 2019 IEEE 16th International Conference on Rehabilitation Robotics (ICORR).

## Konferencje

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Veerubhotla A., Ehrenberg N., Ibrionke O., Pilkar R. “**Objective Evaluation of Risk of Falls in Individuals with Chronic Stroke: Feasibility Study.**” Archives of Physical Medicine and Rehabilitation 2021, Volume 102, Issue 10, Page e101. ISSN 0003-9993.

De Luca A., Cella A., Squeri V., Vallone F., Pilotto A. “**Silver Index: a new tool to predict and treat the risk of falls in elderly subjects.**” 36ème congrès de la Société Française de Médecine Physique et Réadaptation, 14 - 16 octobre 2021, Lille, France.

Gervasoni F., Ricci V., Agostini A., Arrigo M., Salce G., Romano Bernardini L., Lo Mauro A., Andreoli A. “**Metacovid-19. Clinical and robotic assessment of neuromuscular symptoms in post covid syndrome.**” 36ème congrès de la Société Française de Médecine Physique et Réadaptation, 14 - 16 octobre 2021, Lille, France.

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Marchesi G., Pinna G., Bellitto A., Canessa A., De Luca A., Saglia J.A., Sanfilippo C., Squeri V., Casadio M. **“A robot-based evaluate on of the volitional component of pelvis and trunk control.”** ISEK XXIII Virtual congress (July 12-14, 2020).

Marchesi, G., Bellitto, A., Ricaldone, E., De Luca, A., Sanfilippo, C., Torre, K., Quinland, E., Saglia, J., Squeri, V., Massone, A. and Casadio, M., 2020, October. **“Evaluation of Balance Abilities in Expert Paralympic Athletes with Lower Limb Amputation.”** In International Conference on NeuroRehabilitation (pp. 213-217). Springer, Cham.

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Marchesi G., Canessa A., De Luca A., De Michieli L., Pilotto A., Vallone F., Cella A., Spinelli M., Leo A., Sanfilippo C., Squeri V., Saglia J.A., Casadio M. **“Robot-based static and dynamic balance assessments for planning age-tailored training protocol.”** 49th Annual Meeting of the Society for Neuroscience (Chicago, October 19-23, 2019).

Cella A., Squeri V., De Luca A., Zigoura E., Vallone F., Senesi B., Giorgeschi A., Quispe Guerrero KL., Garofalo V., De Michieli L., Saglia J.A., Sanfilippo C., Pilotto A. **“Balance robotic evaluation with hunova in older people: correlation with Short Physical Performance Battery (SPPB).”** 14th EUGSM International Congress of the European Geriatric Medicine Society, Berlin October 10-12, 2018.

Cannaviello G., Lorenzon C., Giovanzana C., Colombo M., Gaffuri M., Guanziroli E., Molteni F. **“Valutazione dell’equilibrio statico e dinamico con piattaforma robotizzata Hunova post ictus.”** XLVI Congresso Nazionale SIMFER, Ancona 20-23 settembre 2018.

Giorgini C., Vallone F., Crea P., De Luca A., Squeri V., Corrieri N., Aguzzoli P., Cella A., Prete C., Senesi B., Giorgeschi A., Saglia J.A., Sanfilippo C., Pilotto A. **“Efficacia di un trattamento robotico focalizzato su balance e core stability in pazienti affetti da morbo di Parkinson: studio pilota.”** XLVI Congresso Nazionale SIMFER, Ancona 20-23 settembre 2018.

Specchia A., Brambilla E., Cazzaniga M., Terenghi L., Guanziroli E., Molteni F. **“Utilizzo della piattaforma robotica per il training dell’equilibrio nella sindrome del motoneurone superiore.”** XLVI Congresso Nazionale SIMFER, Ancona 20-23 settembre 2018.

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Leo A., Zarbo M., Cassinis A., Pometto D., Re L., Bianconi T., Gambirasio C., Spinelli M. **“The use of the robotic device Hunova® as a rehabilitation tool for functional balance in individuals with Spinal Cord Injury.”** The 57th ISCoS Annual Meeting, Sydney 13-15 Semptember 2018.

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- 2016** Taglione E., De Marco E., Pasqualetti F., Rapalli A., Squeri V., Masia L., Caldwell D. G. , Catitti P., Saglia J.A. **“Sperimentazione del dispositivo robotico ARBOT nella riabilitazione della caviglia a seguito di lesioni fratturative: risultati di uno studio clinico randomizzato controllato.”** 44° Congresso Nazionale SIMFER 2016 (23-26 ottobre, Bari).
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