



# Claudio CASTELLINI, PH.D.

## Résumé

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### BIOGRAPHICAL SKETCH

I am a senior researcher and team leader in rehabilitation and assistive robotics, human-machine interfaces and interaction and applied machine learning.

I obtained a degree in Electronic (Biomedical) Engineerings in 1998 from the University of Genoa and a Ph.D. in Artificial Intelligence (Mathematical Logic) in 2005 from the School of Informatics of the University of Edinburgh.

I then turned my attention to robotics for the disabled, and after spending 4.5 years as a post-doctoral fellow at the Advanced Robotics Laboratory of the University of Genoa, I landed at the German Aerospace Center where I currently work.

As of now, I have (co)authored short of 120 scientific papers, I am involved in a few research projects and I have served, or am currently serving, for some international editorial boards and committees.

## PERSONAL DATA

FULL NAME	Claudio CASTELLINI
NATIONALITIES	Italy (by birth) and Germany (acquired in 2017)
BIRTH	July 19 <sup>th</sup> , 1972, Genoa, Italy
GENDER & STATUS	male, single (no children)
WORK CONTACT	Muenchener Strasse 20, 82234 – Wessling, Germany tel. +49 (0)8153 28 1093, fax +49 (0)8153 28 1134, mail <a href="mailto:claudio.castellini@dlr.de">claudio.castellini@dlr.de</a>

## ACADEMIC PROFILES AND METRICS

WEBPAGE	<a href="http://rmc.dlr.de/claudio.castellini">http://rmc.dlr.de/claudio.castellini</a>
LOOP/FRONTIERS	<a href="http://loop.frontiersin.org/people/67697">http://loop.frontiersin.org/people/67697</a>
ORCID	<a href="http://www.orcid.org/0000-0002-7346-2180">www.orcid.org/0000-0002-7346-2180</a>
GOOGLE	<a href="http://scholar.google.de/citations?user=barrdn0AAAAI">scholar.google.de/citations?user=barrdn0AAAAI</a> <i>h-index: 32, 3982 citations</i>
SCOPUS	<a href="http://www.scopus.com/authid/detail.uri?authorId=8957778700">www.scopus.com/authid/detail.uri?authorId=8957778700</a> <i>h-index: 28, 2467 citations</i>
WEB OF SCIENCE	<a href="http://www.publons.com/researcher/2068857/claudio-castellini">www.publons.com/researcher/2068857/claudio-castellini</a> <i>h-index: 24, 1873 citations</i>
SEMANTIC SCHOLAR	<a href="http://www.semanticscholar.org/author/Claudio-Castellini/1743399">www.semanticscholar.org/author/Claudio-Castellini/1743399</a> <i>h-index: 30, 3437 citations, 224 of which “highly influential”</i>
RESEARCHGATE	<a href="http://www.researchgate.net/profile/Claudio_Castellini">www.researchgate.net/profile/Claudio_Castellini</a> <i>h-index: 31, 3393 citations, RG score: 32.31</i>



ORCID QR CODE

## RESEARCH INTERESTS

MAIN INTERESTS	Human-machine interfaces and human-machine interaction, especially in the context of assistance and rehabilitation  Assistive robotics, rehabilitation robotics and virtual reality, focussing on upper-limb prosthetics, stroke and spinal cord injuries
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Functional assessment and outcome; usability; user-centered design  
Embodiment, co-adaptation, psychology of HRI with particular focus on constructivism and design science  
Surface electromyography, tactile, force, ultrasound and pressure sensing  
Applied and theoretical machine learning

**SECONDARY INTERESTS** Speech recognition; formal methods; Boolean satisfiability; automated verification of security protocols and programs; planning; temporal logics; combinatorial optimisation.

## CAREER HISTORY

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- CURRENT APPOINTMENT (2009 TO DATE)** Senior researcher and team leader at the **Institute of Robotics and Mechatronics German Aerospace Center (DLR), Oberpfaffenhofen, Germany**  
[www.dlr.de](http://www.dlr.de)  
Researcher in machine learning applied to assistive and rehabilitation robotics, especially human-machine interfaces for advanced upper-limb prosthetics.  
Leader of the *Adaptive Bio-Interfaces* team, directly reporting to the Head of Department and Head of Institute (internally funded permanent position).
- 2005 – 2009** Post-doctoral researcher at the **Advanced Robotics Laboratory University of Genoa, Italy**  
Researcher in machine learning applied to computer vision, gaze tracking, biological signals, teleoperation, natural language processing.  
Supervisors: Prof. Giulio SANDINI, Prof. Giorgio METTA
- 1999 – 2005** Ph.D. student at the **Department of Artificial Intelligence, School of Informatics University of Edinburgh, Scotland**  
[www.informatics.ed.ac.uk](http://www.informatics.ed.ac.uk)  
Researcher in automated theorem proving, especially in temporal logics; application to formal verification of complex, infinite-state systems.  
Supervisor: Dr. Alan SMAILL
- 2003 – 2004** Research associate at the **Institute of Cognitive Sciences and Technologies CNR – Italian National Research Council, Rome, Italy**  
Researcher in planning via Boolean satisfiability.  
Supervisor: Dr. Amedeo CESTA
- 2001 – 2004** Research associate at the **Artificial Intelligence Laboratory University of Genoa, Italy**  
Researcher in automated theorem proving, especially temporal logics; application to formal verification of complex, infinite-state systems.  
Supervisors: Prof. Enrico GIUNCHIGLIA, Prof. Alessandro ARMANDO

## ACADEMIC MILESTONES

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- 2018** Italian national scientific qualification as Associate Professor of Bioengineering (Abilitazione Scientifica Nazionale per professore di II fascia s.s.d. 09/G2 “Bioingegneria” ex settori ING-INF/06 “Bioingegneria elettronica e informatica”)

e ING-IND/34 "Bioingegneria industriale")

*Valid until March, 2027.*

- 2005 Ph.D. in Artificial Intelligence at the School of Informatics, Department of Artificial Intelligence, University of Edinburgh, Scotland.  
*Accepted with minor revision.*
- 1999 Professional qualification exam (*Esame di stato per ingegneri*) at the University of Genoa, Italy.  
*Final mark: 105/110.*
- 1998 *Laurea* (M.Sc. equivalent) in Electronic Engineering at the University of Genoa, Italy.  
*Final mark: 110/110.*
- 1991 High School diploma at *Martin Luther King* Liceo Scientifico in Genoa, Italy.  
*Final mark: 58/60.*

## RESEARCH PROJECTS

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- CURRENT** *The human hand/arm system* – main topic, internally funded by the DLR.  
*iHannes – Tecniche e tecnologie innovative per il controllo di sistemi protesici avanzati di arto superiore (Innovative techniques and technologies for control of advanced upper-limb prosthetic systems).* 3yrs, funded by INAIL – the Italian insurance Institute for work-related injuries, principal investigator.  
[www.inail.it](http://www.inail.it)
- Deep-Hand – Deep sensing + deep learning for myocontrol of the upper limb.* 2yrs, DFG – Deutsche Forschungsgemeinschaft, principal investigator.  
[www.dfg.de](http://www.dfg.de)
- VVITA – Validation of the Virtual Therapy Arm.* 2yrs, HGF – Helmholtz-Gemeinschaft Deutscher Forschungszentren, principal investigator.  
[www.helmholtz.de](http://www.helmholtz.de)
- An.Dy. – Advancing anticipatory behaviors in dyadic human-robot collaboration* 3yrs, EU H2020, co-investigator.  
[www.andy-project.eu](http://www.andy-project.eu)
- PAST** *Tact-Hand – Improving control of prosthetic hands using tactile sensors and realistic machine learning.* 3yrs, DFG – Deutsche Forschungsgemeinschaft, principal investigator.
- MARA – My (toy) Artificial Arms.* DLR International Cooperations dept., principal investigator.
- Smartgripper.* DLR Technology & Marketing dept., co-investigator.
- VITA – Virtual Therapy Arm.* 2yrs, DLR Technology & Marketing dept., principal investigator.
- NInAPro – Non-invasive adaptive prosthetics Development of novel control methods for mechanical hands, based upon surface electromyography (co-investigator).*
- THE – The Hand Embodied An investigation on the hand, its physiology, its use, its models (EU Framework Programme 7, co-investigator).*

## INTERNATIONAL VISITS

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- 2018 One week at the BLINC Lab, University of Alberta at Edmonton, Canada.  
Hosted by Prof. Dr. Jacqueline HÉBERT and Prof. Patrick PILARSKI.
- 2008 Two months at the NEUROLab, Faculty of Medicine, University of Ferrara, Italy.  
Investigation on the usage of audio-motor data in automatic speech recognition.  
Supervisor: Prof. Luciano FADIGA.
- 2007 Two and a half months at the DLR (German Aerospace Center), Germany.  
Investigation and practical implementation of a control system for a mechanical hand using surface electromyography.  
Supervisor: Dr. Patrick VAN DER SMAGT.
- 2001 Two weeks at Stanford University. Investigation of the temporal reasoning techniques employed in the STeP system.  
Supervisors: Prof. Zohar MANNA, Dr. Henny SIPMA.

## AWARDS

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- 2018 *Best Paper Award in Prosthetics* at ICNR 2018, International Conference on Neurorehabilitation, Pisa, Italy. Co-authored with Gauravkumar PATEL, Strahinja DOŠEN, Janne HAHNE and Dario FARINA.  
[www.icnr2018.org](http://www.icnr2018.org)
- 2017 Runner-up prize (as a supervisor of Mr. Eduardo RUIZ RAMÍREZ) of the *Best M.Sc. thesis in Artificial Intelligence*, Catalan Association for Artificial Intelligence (ACIA).
- 2016 Winner (as a supervisor of Ms. Carla VIEGAS) of the *Best student project award in the area of Pattern Recognition and Medical Engineering*, University of Erlangen-Nürnberg.
- 2015 *DLR Idea Award Leben 4.0* for innovative ideas in rehabilitation and assistive robotics. Co-authored with Zoltán-Csaba MÁRTON, Christian NISSLER, Markus NOWAK and Ingo KOSSYK
- 2014 Finalist for Best Video Contribution at ICRA 2014, *IEEE International Conference on Advanced Robotics*, Chicago, USA.
- 2009 Diploma of merit for the project proposal *NINAPRO – Non-invasive adaptive hand prosthetics*, awarded by SIRI (Italian Society of Automation and Robotics).
- 2007 One-year research project *Machine learning for intelligent prosthetics*. Awarded by the CARIGE Foundation (Bank of Genoa and the Ligurian Riviera).
- 2005 *Best Italian Ph.D. Thesis of the year* in Artificial Intelligence. Awarded by AIIA (Artificial Intelligence Italian Association).
- 2001 Two-yearly studentship on the project *ROBOCARE*. Awarded by CNR (Italian Research Council).

## MAIN INVITED TALKS

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- 2019/2020 *Human-machine {interaction, interfaces}: it isn't about machine learning*. A tutorial given at ICECS 2019 (Genoa, Italy), at the NeuTouch 2020 Summer School and at the School of Informatics of the University of Edinburgh.  
[www.ieee-icecs2019.org](http://www.ieee-icecs2019.org)  
[www.neutouch.eu/neuschool2020](http://www.neutouch.eu/neuschool2020)

- 2018 *Interactive learning: a key component of the HRI of the future*. University of Alberta, Canada; University of Bologna, Italy; ICNR – International Conference on NeuroRehabilitation, Pisa, Italy.  
[www.icnr2018.org](http://www.icnr2018.org)
- 2016 *Assessing the functionality of upper-limb amputees while using pattern matching and interactive learning*. RO-MAN Workshop *Human-Oriented Approaches for Assistive and Rehabilitation Robotics*, New York, USA.  
  
*A prototype wearable EMG/pressure sensing device: towards multi-modal prosthetic myocontrol*. MYOSENS Workshop *Smart, affordable prosthetics*, Göttingen, Germany.
- 2015 *Incremental learning: towards the interaction between a prosthesis and a patient*. ICORR 2015, Singapore.
- 2014 *Adding incrementality to simultaneous and proportional control: from training a machine to interacting with a human*. DEMOVE Symposium, Göttingen, Germany.  
  
*Ultrasound imaging as a new interface between man and machines for rehabilitation*. At OT-World 2014, Leipzig, Germany.
- 2007 *Learning when to grasp*. At CLEA 2007, a workshop within ICRA 2007.

## ACADEMIC DUTIES

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- FROM 2020 ON Associate Editor of *Frontiers in Neurobotics*.  
[www.frontiersin.org/journals/neurobotics](http://www.frontiersin.org/journals/neurobotics)
- Review Editor for *Frontiers in Bioengineering and Biotechnology*.  
[www.frontiersin.org/journals/bioengineering-and-biotechnology](http://www.frontiersin.org/journals/bioengineering-and-biotechnology)
- Project reviewer for the ETH Zürich.
- 2020 Editor of the 8th IEEE RAS/EMBS *International Conference on Biomedical Robotics and Biomechatronics (BioRob 2020)*.  
[www.biorob2020nyc.org](http://www.biorob2020nyc.org)
- Guest Associate Editor for Frontiers in Neurobotics, research topic *Embodiment and Co-Adaptation through Human-Machine Interfaces: at the border of Robotics, Neuroscience and Psychology*.  
[www.frontiersin.org/research-topics/12275/embodiment-and-co-adaptation-through-human-machine-interfaces-at-the-border-of-robotics-neuroscience](http://www.frontiersin.org/research-topics/12275/embodiment-and-co-adaptation-through-human-machine-interfaces-at-the-border-of-robotics-neuroscience)
- 2019 Associate Editor of ICORR 2019.  
[www.icorr2019.org](http://www.icorr2019.org)
- 2018 Organiser of *The intelligence of touch*, a workshop associated to IROS 2018, Madrid, Spain. Co-organisation with Philipp BECKERLE and Tamim ASFOUR.  
[www.inttouch.wordpress.com](http://www.inttouch.wordpress.com)
- 2017 Associate Editor of ICORR 2017.  
  
Organisation of the 3<sup>rd</sup> workshop on *Present and future of non-invasive PNS-Machine Interfaces* – a satellite event of AOPA World Congress 2017, *American Orthotics and Prosthetics Association*, Las Vegas, USA.
- 2016 Guest Associate Editor for Frontiers in Neurobotics, research topic *Peripheral Nervous System-Machine Interfaces (PNS-MI)*.  
[www.frontiersin.org/research-topics/4614/peripheral-nervous-system-machine-interfaces-pns-mi](http://www.frontiersin.org/research-topics/4614/peripheral-nervous-system-machine-interfaces-pns-mi)
- Project reviewer for the Dutch Technology Foundation STW.
- 2015 Organisation of the 2<sup>nd</sup> workshop on *Present and future of non-invasive PNS-Machine Interfaces* – a satellite event of ICORR 2015, *International Conference on Rehabilitation Robotics*, Singapore.

- 2014 Co-organisation of the symposium *Steuerungsschnittstelle in der Armprothetik: Stand der Technik und über den Stand der Technik hinaus!* (Control interfaces in arm prosthetics: state of the art and beyond!), in OT-World 2014.  
Project reviewer for the European Research Council (registered at the European Commission as an *External Expert*).
- FROM 2013 ON Chair of the *PNS-Machine Interfaces* community.
- 2013 Organisation of the 1<sup>st</sup> workshop on *Present and future of non-invasive PNS-Machine Interfaces* – a satellite event of ICORR 2013, *International Conference on Rehabilitation Robotics*.
- 2012 Project reviewer for the Canadian Institute of Health.
- 2009 Member of the program committee of ICAR 2009, *International Conference on Advanced Robotics*.
- 2008-2010 Member of the editorial board of the *Open Artificial Intelligence Journal*.  
Member of the IEEE RAS *Technical Committee on Robot Learning*.
- SINCE 2001 Reviewer for several conferences and journals, among which *Advanced Robotics*, the *Journal of Physiology (Paris)*, the *Journal of Neuroengineering and Rehabilitation*, several IEEE Transactions, the *International Journal of Robotics Research*, ICRA, IROS and ICORR.

## TEACHING EXPERIENCE

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- 2019 *Human-machine {interaction, interfaces}: it isn't about machine learning*  
Guest lecture at the Technical University of Munich, Germany – Prof. Dongheui Lee  
Language: English, approx. 25 attendees  
As part of the course *Machine Learning in Robotics*
- 2011, 2012 Co-lecturer and -examiner for a course in *Machine Learning*  
Technical University of Munich, Germany – Prof. Patrick van der Smagt  
Language: English, approx. 100 attendees each year  
As part of an international M.Sc. in Artificial Intelligence
- 2003-2005 Co-lecturer and -examiner for a course in *Database Theory and Practice*  
Location: University of Genoa, Italy – Prof. Mauro Di Manzo  
Language: Italian, approx. 70 attendees each year  
As part of an M.Sc. in Communication Science
- 2002 Co-lecturer and -examiner for a course in *Foundations of Informatics*  
Location: University of Genoa, Italy – Prof. Alessandro Armando  
Language: Italian, approx. 200 attendees  
As part of an M.Sc. in Management Engineerings

## SUPERVISIONS

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- POSTGRADUATES Mrs. Mathilde CONNAN (Ph.D. candidate)  
Mr. Donato BRUSAMENTO (researcher)  
Mr. Konrad FRÜND (researcher)  
Mr. Andrea GIGLI (Ph.D. candidate)  
Mr. Markus NOWAK (Ph.D. candidate)  
Mr. Simone RANALDI (guest researcher)  
Mr. Karan SHARMA (Ph.D. candidate)  
Mr. Marek SIEROTOWICZ (researcher)
- UNDERGRADUATES Mrs. Cristina SERRANO GONZÁLEZ.
- ALUMNI *Postgraduates* Dr. Gauravkumar PATEL, Dr. Roberto MEATTINI, Mr. David SIERRA GONZÁLEZ.  
*Undergraduates* Mr. Vincenzo SALZILLO, Mr. Alex HINGAR, Mr. Marco RICCIARDI, Mr. Tim SZIBURIS, Mr. Alexander PAKAKIS, Mr. Ben HALLWORTH, Mr. Florian SPERLE, Mr. Ikrima BIN SAEED, Mr. Marek SIEROTOWICZ, Mr. Shreyas WAICHAL, Mr. Xiang GAO, Mr. Li CHEN, Mr. Dario GUIDOTTI, Mr. Hassan SHEHAWY, Mr. Justin ISZATT, Mr. Leonhard RAUH, Mr. Thomas EIBAND, Mrs. Sarah ENGEL, Mr. Eduardo



RUIZ RAMÍREZ, Mr. Imran BADSHAH, Mrs. Carla VIEGAS, Mrs. Beatrice ARETZ, Mrs. Mathilde CONNAN, Mrs. Nikoleta MOURIKI, Mr. Anduaem MAEREG, Mr. Vikram RAVINDRA, Mrs. Katharina KANN, Mr. Jossin ANTONY, Mr. Markus NOWAK, Mr. Santiago PÉREZ CHÁVEZ, Mr. Albert ARQUER CORTÉS, Mrs. Rashida BOHRA, Mrs. Barbara HILSENBECK, Mr. David SIERRA GONZÁLEZ, Mr. Roberto PERRETTA, Mr. Emanuel ZARKA, Mr. Uwe JASCHKE.

## REFERENCE PERSONS

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DLR (2009-NOW)	Prof. Dr. Alin ALBU-SCHÄFFER, <a href="mailto:alin.albu-schaeffer@dlr.de">alin.albu-schaeffer@dlr.de</a> Dr. Freek STULP, <a href="mailto:freek.stulp@dlr.de">freek.stulp@dlr.de</a>
UNIVERSITY OF GENOA (2005-2009)	Prof. Giulio SANDINI, <a href="mailto:giulio.sandini@iit.it">giulio.sandini@iit.it</a> Prof. Giorgio METTA, <a href="mailto:giorgio.metta@iit.it">giorgio.metta@iit.it</a>
UNIVERSITY OF EDINBURGH (1999-2005)	Prof. Alan BUNDY, <a href="mailto:a.bundy@ed.ac.uk">a.bundy@ed.ac.uk</a> Dr. Alan SMAILL, <a href="mailto:a.smaitl@ed.ac.uk">a.smaitl@ed.ac.uk</a>
UNIVERSITY OF GENOA (1997-2004)	Prof. Enrico GIUNCHIGLIA, <a href="mailto:enrico.giunchiglia@unige.it">enrico.giunchiglia@unige.it</a> Prof. Alessandro ARMANDO, <a href="mailto:alessandro.armando@unige.it">alessandro.armando@unige.it</a>

## PATENTS

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2020 Ingo Kossyk, Markus Nowak, Christian Nißler, Claudio Castellini and Zoltán-Csaba Márton, *Virtual Reality-System und Verfahren zum Betreiben eines solchen*  
German Patent Office ID: DE10 2016 205 849.5

## PUBLICATIONS

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- |                           |  |
|---------------------------|--|
| BOOKS (AS EDITOR)         | 1. Winger, M., Artemiadis, P., Castellini, C. and Pilarski, P., (eds.) <i>Peripheral Nervous System-Machine Interfaces (PNS-MI)</i> , Frontiers Media SA, 2018.  |
| BOOK CHAPTERS             | 1. Castellini, C. "Chapter 20 - Design principles of a light, wearable upper limb interface for prosthetics and teleoperation", in Rosen, J. and Ferguson, P., ed., 'Wearable robotics: systems and applications', Elsevier, 2020, pp. 377--391.<br>2. Castellini, C. "Chapter 19 - Upper limb active prosthetic systems - Overview", in Rosen, J. and Ferguson, P., ed., 'Wearable robotics: systems and applications', Elsevier, 2020, pp. 365--376.<br>3. Castellini, C. "Incremental learning of muscle synergies: from calibration to interaction", in Bianchi, M. and Moscatelli, A., ed., 'Human and robot hands: sensorimotor synergies to bridge the gap between neuroscience and robotics', Springer International Publishing, 2016, pp. 171--193.<br>4. Castellini, C. "State of the art and perspectives of ultrasound imaging as a Human-Machine Interface", in Artemiadis, P., ed., 'Neuro-Robotics: from Brain-Machine Interfaces to rehabilitation robotics', Springer International Publishing, 2014, pp. 37--58.   |
| IN PEER-REVIEWED JOURNALS | 1. Connan, M., Kõiva, R. and Castellini, C. "Online natural myocontrol of combined hand and wrist actions using tactile myography and the biomechanics of grasping," <i>Frontiers in Neurorobotics</i> (14:11), 2020.<br>2. Nowak, M., Eiband, T., Ruiz Ramírez, E. and Castellini, C. "Action interference in simultaneous and proportional myocontrol: comparing force- and electromyography," <i>Journal of Neural Engineering</i> (17:2), 026011, 2020.<br>3. Sierotowicz, M., Connan, M. and Castellini, C. "Human-in-the-loop assessment of an ultralight, low-cost body posture tracking device," <i>MDPI Sensors</i> (20:3), 2020, pp. 890.<br>4. Guidotti, D., Leafante, F., Tacchella, A. and Castellini, C. "Improving reliability of myocontrol using formal verification," <i>IEEE Transactions on Neural Systems and Rehabilitation Engineering</i> (27:4), 2019, pp. 564--571.<br>5. Meattini, R., Nowak, M., Melchiorri, C. and Castellini, C. "Automated instability detection for interactive myocontrol of prosthetic hands," <i>Frontiers in Neurorobotics</i> (13:68), 2019.<br>6. Nissler, C., Nowak, M., Connan, M., Büttner, S., Vogel, J., Kossyk, I., Marton, Z.-C. and Castellini, C. "VITA - An everyday virtual reality setup for prosthetics and upper-limb rehabilitation," <i>Journal of Neural Engineering</i> (16:2), 2019.<br>7. Sharma, K., Castellini, C., van den Broek, E. L., Albu-Schäffer, A. and Schwenker, F. "A dataset of continuous affect annotations and physiological signals for emotion analysis," <i>Scientific Data</i> (6:1), 2019, pp. 196.<br>8. Sharma, K., Wagner, M., Castellini, C., van den Broek, E. L., Stulp, F. and Schwenker, F. "A functional data analysis approach for continuous 2-D emotion annotations," <i>Web Intelligence</i> (17:1), 2019, pp. 41--52.<br>9. Beckerle, P., Bianchi, M., Castellini, C. and Salvietti, G. "Mechatronic designs for a robotic hand to explore human body experience and sensory-motor skills: a Delphi study," <i>Advanced Robotics</i> |

- (32:12), 2018, pp. 670--680.
10. Beckerle, P., Kõiva, R., Kirchner, E. A., Bekrater-Bodmann, R., Dosen, S., Christ, O., Abbink, D. A., Castellini, C. and Lenggenhager, B. "Feel-good robotics: requirements on touch for embodiment in assistive robotics," *Frontiers in Neurobotics* (12:84), 2018.
  11. Beckerle, P., Castellini, C. and Lenggenhager, B. "Robotic interfaces for cognitive psychology and embodiment research: a research roadmap," *Wiley Interdisciplinary Reviews - Cognitive Science*, e1486, 2018, pp. e1486.
  12. Castellini, C., Kõiva, R., Pasluosta, C., Viegas, C. and Eskofier, B. M. "Tactile myography: an off-line assessment on able-bodied subjects and one upper-limb amputee," *MDPI Technologies* (6:2), 2018, pp. 38.
  13. Nowak, M., Castellini, C. and Massironi, C. "Applying Radical Constructivism to machine learning: a pilot study in assistive robotics," *Constructivist Foundations* (13:2), 2018, pp. 250--262.
  14. Patel, G., Castellini, C., Hahne, J., Dosen, S. and Farina, D. "A classification method for myoelectric control of hand prostheses inspired by muscle coordination," *IEEE Transactions on Neural Systems and Rehabilitation Engineering* (26:9), 2018, pp. 1745--1755.
  15. Beckerle, P., Salvietti, G., Ünal, R., Prattichizzo, D., Rossi, S., Castellini, C., Hirche, S., Endo, S., Amor, H. B., Ciocarlie, M., Mastrogiovanni, F., Argall, B. D. and Bianchi, M. "A Human-Robot Interaction perspective on assistive and rehabilitation robotics," *Frontiers in Neurobotics* (11:24), 2017.
  16. Jaquier, N., Connan, M., Castellini, C. and Calinon, S. "Combining electro- and tactile myography to improve hand and wrist activity detection in prostheses," *MDPI Technologies* (5:4), 2017, pp. 64.
  17. Patel, G., Nowak, M. and Castellini, C. "Exploiting knowledge composition to improve real-life hand prosthetic control," *IEEE Transactions on Neural Systems and Rehabilitation Engineering* (25:7), 2017, pp. 967--975.
  18. Patel, G. K., Hahne, J. M., Castellini, C., Farina, D. and Dosen, S. "Context-dependent adaptation improves robustness of myoelectric control for upper-limb prostheses," *Journal of Neural Engineering* (14:5), 2017, pp. 056016.
  19. Sharma, K., Castellini, C., Stulp, F. and van den Broek, E. L. "Continuous, real-time emotion annotation: a novel joystick-based analysis framework," *IEEE Transactions on Affective Computing* (11:1), 2017, pp. 78--84.
  20. Strazzulla, I., Nowak, M., Controzzi, M., Cipriani, C. and Castellini, C. "Online bimanual manipulation using surface electromyography and incremental learning," *IEEE Transactions on Neural Systems and Rehabilitation Engineering* (25:3), 2017, pp. 227--234.
  21. Wininger, M., Artemiadis, P., Castellini, C. and Pilarski, P. M. "Editorial: Peripheral Nervous System-Machine Interfaces (PNS-MI)," *Frontiers in Neurobotics* (11:54), 2017.
  22. Atzori, M., Gijsberts, A., Castellini, C., Caputo, B., Mittaz Hager, A.-G., Elsig, S., Giatsidis, G., Bassetto, F. and Müller, H. "Clinical parameter effect on the capability to control myoelectric robotic prosthetic hands," *Journal of Rehabilitation Research and Development* (53:3), 2016, pp. 345--358.
  23. Connan, M., Ruiz Ramírez, E. R., Vodermayr, B. and Castellini, C. "Assessment of a wearable force- and electromyography device and comparison of the related signals for myocontrol," *Frontiers in Neurobotics* (10:17), 2016.
  24. Nissler, C., Mouriki, N. and Castellini, C. "Optical myography: detecting finger movements by looking at the forearm," *Frontiers in Neurobotics* (10:3), 2016.
  25. Nowak, M. and Castellini, C. "The LET procedure for prosthetic myocontrol: towards multi-DOF control using single-DOF activations," *PLoS ONE* (11:9), 2016, pp. 1--20.
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