

Curriculum Vitae Europass

Informazioni personali

Nome / Cognome **Calogero Maria Oddo**
BScEE, MScEE, PhD
ResearcherID:
Scholar:

Indirizzo

Telefoni

E-mail

Cittadinanza

Data di nascita

Sesso

Settore professionale

Ricerca universitaria.

Biorobotica, neuro-robotica

I suoi interessi di ricerca sono nel settore della biorobotica e bionica: sviluppo di sistemi di tatto artificiale per protesi cibernetiche di mano, chirurgia robotica e robotica collaborativa per Industria 4.0; neurofisiologia del tatto umano e progettazione e il controllo di sistemi biomeccatronici; tecnologie di energy harvesting per l'integrazione di elettronica zero-power in sistemi sensoriali.

Esperienza professionale

Date Dal 1° novembre 2019 ad oggi

Lavoro o posizione ricoperti Professore Associato di Bioingegneria Industriale

Principali attività e responsabilità Attività di ricerca e di coordinamento della ricerca nell'ambito del settore scientifico disciplinare ING-IND/34 (Bioingegneria Industriale)

Nome e indirizzo del datore di lavoro Istituto di BioRobotica – Scuola Superiore Sant'Anna. Pontedera (PI).

Tipo di attività o settore Ricerca scientifica e tecnologica

Responsabile scientifico di numerosi progetti di ricerca finanziati su base competitiva

Responsabile del "Neuro-Robotic Touch Laboratory" presso l'Istituto di BioRobotica

<https://www.santannapisa.it/en/neuro-robotic-touch-laboratory>

Varie responsabilità ed incarichi accademici come dettagliato di seguito

Date Dal 1° novembre 2016 al 31 ottobre 2019

Lavoro o posizione ricoperti Ricercatore Universitario a Tempo Determinato di tipo B (Legge n. 240/10 del 30 dicembre 2010, art. 24 c. 3 lett. B) di Bioingegneria Industriale

Principali attività e responsabilità Attività di ricerca e di coordinamento della ricerca nell'ambito del settore scientifico disciplinare ING-IND/34 (Bioingegneria Industriale)

Conseguimento dell'abilitazione scientifica nazionale alle funzioni di Professore Associato all'unanimità nell'ambito del settore concorsuale 09/G2 (Bioingegneria)

Nome e indirizzo del datore di lavoro Istituto di BioRobotica – Scuola Superiore Sant'Anna. Pontedera (PI).

Tipo di attività o settore Ricerca scientifica e tecnologica

Responsabile scientifico di numerosi progetti di ricerca finanziati su base competitiva

Responsabile del "Neuro-Robotic Touch Laboratory" presso l'Istituto di BioRobotica

<https://www.santannapisa.it/en/neuro-robotic-touch-laboratory>

Varie responsabilità ed incarichi accademici come dettagliato di seguito

Date Dal 1° giugno 2012 al 31 ottobre 2016

Lavoro o posizione ricoperti	Ricercatore Universitario a Tempo Determinato di tipo A (Legge n. 240/10 del 30 dicembre 2010, art. 24 c. 3 lett. A) di Bioingegneria Industriale
Principali attività e responsabilità	Attività di ricerca e di coordinamento della ricerca nell'ambito del settore scientifico disciplinare ING-IND/34 (Bioingegneria Industriale)
Nome e indirizzo del datore di lavoro	Istituto di BioRobotica – Scuola Superiore Sant'Anna. Pontedera (PI).
Tipo di attività o settore	Ricerca scientifica e tecnologica Responsabile scientifico di numerosi progetti di ricerca finanziati su base competitiva Membro del comitato scientifico di 3 edizioni del Master Universitario di II livello "SMART" attivato alla Scuola Superiore Sant'Anna in collaborazione con TIM-Telecom Italia
Date	Dal 15 gennaio 2011 al 31 maggio 2012
Lavoro o posizione ricoperti	Assegnista di ricerca di Bioingegneria Industriale
Principali attività e responsabilità	Attività di ricerca nell'ambito del settore scientifico disciplinare ING-IND/34 (Bioingegneria Industriale)
Nome e indirizzo del datore di lavoro	Istituto di BioRobotica – Scuola Superiore Sant'Anna. Pontedera (PI).
Tipo di attività o settore	Ricerca scientifica e tecnologica Membro di numerosi progetti di ricerca finanziati su base competitiva
Date	Dal 2014 ad oggi
Lavoro o posizione ricoperti	Membro di commissioni di valutazione e/o comitati tecnici in ambito di iniziative di sostegno alla ricerca e all'innovazione e di valutazione di infrastrutture di ricerca e collaborazioni con Amministrazioni Pubbliche e/o Enti strumentali delle stesse nell'ambito di programmi di innovazione e ricerca
Principali attività e responsabilità	<ol style="list-style-type: none"> 1. Ha servito come valutatore nell'ambito della Second Call for Proposals for the BIRAX Regenerative Medicine Initiative – The Britain Israel Research And Academic Exchange Partnership https://www.britishcouncil.org/sites/default/files/birax_second_call.pdf 2. Ha servito come valutatore per un bando MIUR-DAAD 3. Ha servito come Senior Advisor per la commissione europea nell'ambito della interim evaluation del programma FET Flagships https://ec.europa.eu/digital-single-market/en/news/fet-flagships-receive-positive-evaluation-their-journey-towards-ground-breaking-innovation 4. Ha servito come valutatore nell'ambito del bando Troisième Programme D'investissements d'Avenir dell'Agence Nationale de la Recherche Francese 5. Ha servito come valutatore nell'ambito di un bando per infrastrutture di ricerca della Regione Piemonte – Finpiemonte 6. Ha servito come valutatore nell'ambito della Valutazione della Qualità della Ricerca (VQR) 2011-2014 su incarico dell'ANVUR 7. Ha servito come valutatore nell'ambito dei bandi OPUS e PRELUDIUM del National Science Centre Polacco 8. Ha servito come membro dell'Advisory Board del progetto europeo EFFECT 9. Serve regolarmente come valutatore per numerose riviste scientifiche e conferenze scientifiche internazionali
Nome e indirizzo del datore di lavoro	Varie agenzie pubbliche e private
Tipo di attività o settore	Ricerca scientifica e tecnologica
Istruzione e formazione	
Date	18 maggio 2011
Titolo della qualifica rilasciata	Diploma di Perfezionamento (equipollente al Dottorato di Ricerca, PhD) in Tecnologie Innovative per l'Ingegneria dell'Informazione e della Comunicazione e per la Robotica, curriculum Biorobotica
Principali tematiche/competenze professionali possedute	Tesi di perfezionamento dal titolo "A BioRobotic approach towards Artificial Touch" (supervisor: Prof.ssa M.C. Carrozza) presso l'Istituto di BioRobotica della Scuola Superiore Sant'Anna
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Scuola Superiore Sant'Anna – Università pubblica a Statuto Speciale
Livello nella classificazione nazionale o internazionale	100/100 <i>cum laude</i>
Date	2007, sessione 2
Titolo della qualifica rilasciata	Conseguimento dell'abilitazione alla professione di Ingegnere dell'Informazione
Principali tematiche/competenze professionali possedute	Progettazione e analisi di sistemi, circuiti e dispositivi elettronici, informatici ed elettromeccanici

Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Università di Pisa – Università pubblica
Livello nella classificazione nazionale o internazionale	Abilitazione all'esercizio della professione
Date	12 luglio 2007 (iscritto al corso di laurea specialistica da settembre 2005)
Titolo della qualifica rilasciata	Laurea specialistica in Ingegneria Elettronica con percorso di eccellenza
Principali tematiche/competenze professionali possedute	Tesi di laurea specialistica in Ingegneria Elettronica dal titolo "Development of a digital control platform for a biomechatronic interface" (relatori: Prof.ssa M.C. Carrozza, Prof. R. Saletti, Dr. S. Micera) presso il laboratorio ARTS della Scuola Superiore Sant'Anna.
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Università di Pisa – Università pubblica
Livello nella classificazione nazionale o internazionale	110/110 cum laude, conseguimento dell'attestazione di percorso di eccellenza e qualifica di "Esperto in progettazione di sistemi sensoriali per applicazioni industriali, diagnostiche e ambientali", a seguito della partecipazione al modulo professionalizzante su "Progettazione di sistemi sensoriali per applicazioni industriali, diagnostiche e ambientali" (attività formativa riconosciuta dalla Regione Toscana ai sensi della Legge Regionale 26.07.2002 n.32, Decreto Dirigenziale n.5321 del 27 settembre 2005).
Date	Settembre 2005 – Giugno 2009
Titolo della qualifica rilasciata	Allievo ordinario di secondo livello e diploma di licenza specialistica presso la Scuola Superiore Sant'Anna, settore di Ingegneria Industriale e dell'Informazione
Principali tematiche/competenze professionali possedute	Tesi di licenza di secondo livello in Ingegneria Industriale e dell'Informazione dal titolo "Human and artificial roughness encoding: a biorobotic approach. From bio-inspiration to robotic validation" (relatori: Prof.ssa M.C. Carrozza, Dr. L. Beccai; tutor: Prof. P. Ancilotti) presso il laboratorio ARTS della Scuola Superiore Sant'Anna.
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Scuola Superiore Sant'Anna – Università pubblica a statuto speciale", superando la prova di idoneità riservata agli Allievi Ordinari di primo livello, e classificandosi al primo posto ex-aequo nella graduatoria definitiva.
Livello nella classificazione nazionale o internazionale	100/100 cum laude (diploma di licenza di secondo livello)
Date	Settembre 2002 - Ottobre 2006
Titolo della qualifica rilasciata	Allievo ordinario di primo livello e diploma di licenza triennale presso la Scuola Superiore Sant'Anna, settore di Ingegneria Industriale e dell'Informazione
Principali tematiche/competenze professionali possedute	Tesi di licenza di primo livello in Ingegneria Industriale e dell'Informazione dal titolo "Experimental analysis of a multi-axis, linear and redundant force microsensor for tactile sensing application" (relatori: Prof.ssa M.C. Carrozza, Dr. L. Beccai; tutor: Prof. P. Ancilotti) presso il laboratorio ARTS della Scuola Superiore Sant'Anna.
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Scuola Superiore Sant'Anna – Università pubblica a statuto speciale, a seguito dell'ammissione (ottobre 2002) quale Allievo Ordinario di primo livello, risultando vincitore di concorso pubblico nazionale (10 posti, 333 partecipanti).
Livello nella classificazione nazionale o internazionale	100/100 cum laude (diploma di licenza di primo livello)
Date	Dal 25 luglio al 12 agosto 2005
Titolo della qualifica rilasciata	Summer School su "E-business in the Digital Age"
Principali tematiche/competenze professionali possedute	Economia e management aziendale, comunicazione aziendale,
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	London School of Economics and Political Science.
Livello nella classificazione nazionale o internazionale	Esame finale superato con la votazione di A (top 10% della classe).
Date	12 luglio 2005 (iscritto al corso di laurea da settembre 2002)
Titolo della qualifica rilasciata	Laurea triennale in Ingegneria Elettronica

Principali tematiche/competenze professionali possedute	Tesi di laurea triennale in Ingegneria Elettronica dal titolo "Caratterizzazione di un micro-sensore di forza 3D ad effetto piezoresistivo" (relatori: Prof.ssa M.C. Carrozza, Prof. G. Basso, Ing. P. Valdastrì) presso i laboratori ARTS e CRIM della Scuola Superiore Sant'Anna.																																																		
Nome e tipo d'organizzazione erogatrice dell'istruzione e formazione	Università di Pisa – Università pubblica																																																		
Livello nella classificazione nazionale o internazionale	110/110 <i>cum laude</i>																																																		
Capacità e competenze personali																																																			
Madrelingua	Italiano																																																		
Altre lingue	Inglese, Francese, Spagnolo																																																		
Autovalutazione																																																			
<i>Livello europeo (*)</i>																																																			
Inglese																																																			
Francese																																																			
Spagnolo																																																			
	<table border="1"> <thead> <tr> <th colspan="4">Comprensione</th> <th colspan="4">Parlato</th> <th colspan="2">Scritto</th> </tr> <tr> <th colspan="2">Ascolto</th> <th colspan="2">Lettura</th> <th colspan="2">Interazione orale</th> <th colspan="2">Produzione orale</th> <th colspan="2"></th> </tr> </thead> <tbody> <tr> <td>C1</td> <td>Livello avanzato</td> <td>C2</td> <td>Livello avanzato</td> <td>C1</td> <td>Livello avanzato</td> <td>C1</td> <td>Livello avanzato</td> <td>C2</td> <td>Livello avanzato</td> </tr> <tr> <td>A1</td> <td>Livello elementare</td> <td>A2</td> <td>Livello elementare</td> <td>A1</td> <td>Livello elementare</td> <td>A1</td> <td>Livello elementare</td> <td>A2</td> <td>Livello elementare</td> </tr> <tr> <td>A1</td> <td>Livello elementare</td> <td>A1</td> <td>Livello elementare</td> <td>A1</td> <td>Livello elementare</td> <td>A1</td> <td>Livello elementare</td> <td>A1</td> <td>Livello elementare</td> </tr> </tbody> </table>	Comprensione				Parlato				Scritto		Ascolto		Lettura		Interazione orale		Produzione orale				C1	Livello avanzato	C2	Livello avanzato	C1	Livello avanzato	C1	Livello avanzato	C2	Livello avanzato	A1	Livello elementare	A2	Livello elementare	A1	Livello elementare	A1	Livello elementare	A2	Livello elementare	A1	Livello elementare	A1	Livello elementare	A1	Livello elementare	A1	Livello elementare	A1	Livello elementare
Comprensione				Parlato				Scritto																																											
Ascolto		Lettura		Interazione orale		Produzione orale																																													
C1	Livello avanzato	C2	Livello avanzato	C1	Livello avanzato	C1	Livello avanzato	C2	Livello avanzato																																										
A1	Livello elementare	A2	Livello elementare	A1	Livello elementare	A1	Livello elementare	A2	Livello elementare																																										
A1	Livello elementare	A1	Livello elementare	A1	Livello elementare	A1	Livello elementare	A1	Livello elementare																																										
	(*) Quadro comune europeo di riferimento per le lingue																																																		
Ulteriori informazioni	<p>PUBBLICAZIONI SCIENTIFICHE</p> <p>L'elenco completo delle pubblicazioni è riportato nel profilo Google Scholar: http://scholar.google.com/citations?user=y1rffgkAAAAJ&hl=it</p> <p>Per il profilo personale sul sito istituzionale della Scuola Superiore Sant'Anna: https://www.santannapisa.it/en/calogero-maria-oddo</p> <p>Indici bibliometrici (da Scopus):</p> <table border="1"> <tr> <td>H-index</td> <td>19</td> </tr> <tr> <td>Citazioni totali</td> <td>1726</td> </tr> </table> <p>Ai sensi del Regolamento Generale sulla protezione dei dati (RGPD n. 679/2016), autorizzo il trattamento di tutti i dati personali contenuti nel presente curriculum vitae.</p>	H-index	19	Citazioni totali	1726																																														
H-index	19																																																		
Citazioni totali	1726																																																		

Pubblicazioni su riviste scientifiche internazionali

1. Enander, J.M. D., Spanne, A., Mazzoni, A., Bengtsson, F., **Oddo, C.M.**, Jörntell, H. *Ubiquitous neocortical decoding of tactile input patterns.* (2019) *Frontiers in Cellular Neuroscience*, 13 doi:10.3389/fncel.2019.00140
2. Fraleoni-Morgera, A., Cesini, I., Kumar, P., **Oddo, C.M.** *Hydrothermally grown ZnO nanorods as promising materials for low cost electronic skin.* (2019) *ChemNanoMat*, doi:10.1002/cnma.201900620
3. Jovanović, K., Petrić, T., Tsuji, T., **Oddo, C.M.** *Editorial: Human-like advances in robotics: Motion, actuation, sensing, cognition and control.* (2019) *Frontiers in Neurorobotics*, 13 doi:10.3389/fnbot.2019.00085
4. Lo Presti, D., Massaroni, C., D'Abbraccio, J., Massari, L., Caponero, M., Longo, U. G., **Oddo, C.M.**, Schena, E. *Wearable system based on flexible fbg for respiratory and cardiac monitoring.* (2019) *IEEE Sensors Journal*, 19(17), 7391-7398. doi:10.1109/JSEN.2019.2916320
5. Lo Presti, D., Romano, C., Massaroni, C., D'Abbraccio, J., Massari, L., Caponero, M. A., **Oddo, C.M.**, Formica, D., Schena, E. *Cardio-respiratory monitoring in archery using a smart textile based on flexible fiber bragg grating sensors.* (2019) *Sensors (Switzerland)*, 19(16) doi:10.3390/s19163581
6. Massari, L., Bulletti, A., Prasanna, S., Mazzoni, M., Frosini, F., Vicari, E., Pantano, M., Staderini, F., Ciuti, G., Cianchi, F., Messerini, L., Capineri, L., Menciassi, A., **Oddo, C.M.** *A mechatronic platform for computer aided detection of nodules in anatomopathological analyses via stiffness and ultrasound measurements.* (2019) *Sensors (Switzerland)*, 19(11) doi:10.3390/s19112512
7. Massari, L., **Oddo, C. M.**, Sinibaldi, E., Detry, R., Bowkett, J., & Carpenter, K. C. *Tactile sensing and control of robotic manipulator integrating fiber bragg grating strain-sensor.* (2019) *Frontiers in Neurorobotics*, 13 doi:10.3389/fnbot.2019.00008
8. Rongala, U. B., Mazzoni, A., Chiurazzi, M., Camboni, D., Milazzo, M., Massari, L., Ciuti, G., Roccella, S., Dario, P., **Oddo, C.M.** *Tactile decoding of edge orientation with artificial cuneate neurons in dynamic conditions.* (2019) *Frontiers in Neurorobotics*, 13 doi:10.3389/fnbot.2019.00044

9. Gunasekaran, H., Spigler, G., Mazzoni, A., Cataldo, E., **Oddo, C.M.** *Convergence of regular spiking and intrinsically bursting Izhikevich neuron models as a function of discretization time with Euler method.* (2019) Neurocomputing.
10. Romeo, R.A., Rongala, U.B., Mazzoni, A., Camboni, D., Carrozza, M.C., Guglielmelli, E., Zollo, L., **Oddo, C.M.** *Identification of slippage on naturalistic surfaces via wavelet transform of tactile signals.* (2019) IEEE Sensors Journal, 19 (4), art. no. 8537793, pp. 1260-1268.
11. D'Abbraccio, J., Massari, L., Prasanna, S., Baldini, L., Sorgini, F., Farulla, G.A., Bulletti, A., Mazzoni, M., Capineri, L., Menciassi, A., Petrovic, P., Palermo, E., **Oddo, C.M.** *Haptic glove and platform with gestural control for neuromorphic tactile sensory feedback in medical telepresence.* (2019) Sensors (Switzerland), 19 (3), art. no. 641.
12. Genna, C., **Oddo, C.M.**, Fanciullacci, C., Chisari, C., Micera, S., Artoni, F. *Bilateral cortical representation of tactile roughness.* (2018) Brain Research, 1699, pp. 79-88.
13. Rongala, U.B., Spanne, A., Mazzoni, A., Bengtsson, F., **Oddo, C.M.**, Jörntell, H. *Intracellular dynamics in cuneate nucleus neurons support self-stabilizing learning of generalizable tactile representations.* (2018) Frontiers in Cellular Neuroscience, 12, art. no. 210.
14. Sorgini, F., Caliò, R., Carrozza, M.C., **Oddo, C.M.** *Haptic-assistive technologies for audition and vision sensory disabilities.* (2018) Disability and Rehabilitation: Assistive Technology, 13 (4), pp. 394-421.
15. Genna, C., **Oddo, C.M.**, Mazzoni, A., Wahlbom, A., Micera, S., Jörntell, H. *Bilateral tactile input patterns decoded at comparable levels but different time scales in neocortical neurons.* (2018) Journal of Neuroscience, 38 (15), pp. 3669-3679.
16. Sorgini, F., Massari, L., D'Abbraccio, J., Palermo, E., Menciassi, A., Petrovic, P.B., Mazzoni, A., Carrozza, M.C., Newell, F.N., **Oddo, C.M.** *Neuromorphic vibrotactile stimulation of fingertips for encoding object stiffness in telepresence sensory substitution and augmentation applications.* (2018) Sensors (Switzerland), 18 (1), art. no. 261.
17. Bianchi, F., Ciuti, G., Koulaouzidis, A., Arezzo, A., Stoyanov, D., Schostek, S., **Oddo, C.M.**, Menciassi, A., Dario, P. *An innovative robotic platform for magnetically-driven painless colonoscopy.* (2017) Annals of Translational Medicine, 5 (21), art. no. 421.
18. Sorgini, F., Mazzoni, A., Massari, L., Caliò, R., Galassi, C., Kukreja, S.L., Sinibaldi, E., Carrozza, M.C., **Oddo, C.M.** *Encapsulation of piezoelectric transducers for sensory augmentation and substitution with wearable haptic devices.* (2017) Micromachines, 8 (9), art. no. 270.
19. Romeo, R.A., **Oddo, C.M.**, Carrozza, M.C., Guglielmelli, E., Zollo, L. *Slippage detection with piezoresistive tactile sensors.* (2017) Sensors (Switzerland), 17 (8), art. no. 1844.
20. Genna, C., **Oddo, C.M.**, Fanciullacci, C., Chisari, C., Jörntell, H., Artoni, F., Micera, S. *Spatiotemporal Dynamics of the Cortical Responses Induced by a Prolonged Tactile Stimulation of the Human Fingertips.* (2017) Brain Topography, 30 (4), pp. 473-485.
21. **Oddo, C.M.**, Mazzoni, A., Spanne, A., Enander, J.M.D., Mogensen, H., Bengtsson, F., Camboni, D., Micera, S., Jörntell, H. *Artificial spatiotemporal touch inputs reveal complementary decoding in neocortical neurons.* (2017) Scientific Reports, 8, art. no. 45898.
22. Rongala, U.B., Mazzoni, A., **Oddo, C.M.** *Neuromorphic Artificial Touch for Categorization of Naturalistic Textures.* (2017) IEEE Transactions on Neural Networks and Learning Systems, 28 (4), pp. 819-829.
23. Ciuti, G., Caliò, R., Camboni, D., Neri, L., Bianchi, F., Arezzo, A., Koulaouzidis, A., Schostek, S., Stoyanov, D., **Oddo, C.M.**, Magnani, B., Menciassi, A., Morino, M., Schurr, M.O., Dario, P. *Frontiers of robotic endoscopic capsules: a review.* (2016) Journal of Micro-Bio Robotics, 11 (1-4).
24. **Oddo, C.M.**, Raspovic, S., Artoni, F., Mazzoni, A., Spigler, G., Petrini, F., Giambattistelli, F., Vecchio, F., Miraglia, F., Zollo, L., Di Pino, G., Camboni, D., Carrozza, M.C., Guglielmelli, E., Rossini, P.M., Faraguna, U., Micera, S. *Intraneural stimulation elicits discrimination of textural features by artificial fingertip in intact and amputee humans.* (2016) eLife, 5 (MARCH2016), art. no. e09148.
25. Airò Farulla, G., Pianu, D., Cempini, M., Cortese, M., Russo, L.O., Indaco, M., Nerino, R., Chimienti, A., **Oddo, C.M.**, Vitiello, N. *Vision-Based Pose Estimation for Robot-Mediated Hand Telerehabilitation.* (2016) Sensors (Basel, Switzerland), 16 (2), p. 208.
26. Ackerley, R., Borich, M., **Oddo, C.M.**, Ionta, S. *Insights and Perspectives on Sensory-Motor Integration and Rehabilitation.* (2016) Multisensory Research, 29 (6), pp. 607-633.
27. Salgarella, A.R., Giudetti, G., Ricotti, L., Camboni, D., Puleo, G.L., Ruini, F., Tonda-Turo, C., Chiono, V., Ciardelli, G., Micera, S., Menciassi, A., **Oddo, C.M.** *A bio-hybrid mechanotransduction system based on ciliate cells.* (2015) Microelectronic Engineering, 144, pp. 51-56.
28. Russo, L.O., Farulla, G.A., Pianu, D., Salgarella, A.R., Controzzi, M., Cipriani, C., **Oddo, C.M.**, Geraci, C., Rosa, S., Indaco, M. *PARLOMA - A novel human-robot interaction system for Deaf-blind remote communication.* (2015) International Journal of Advanced Robotic Systems, 12, art. no. 57.
29. Yan, T., Cempini, M., **Oddo, C.M.**, Vitiello, N. *Review of assistive strategies in powered lower-limb orthoses and exoskeletons.* (2015) Robotics and Autonomous Systems, 64, pp. 120-136.
30. Saccomandi, P., **Oddo, C.M.**, Zollo, L., Formica, D., Romeo, R.A., Massaroni, C., Caponero, M.A., Vitiello, N., Guglielmelli, E., Silvestri, S., Schena, E. *Feedforward neural network for force coding of an MRI-compatible tactile sensor array based on fiber bragg grating.* (2015) Journal of Sensors, 2015, art. no. 367194.
31. Cheneler, D., Buselli, E., Camboni, D., Anthony, C., Grover, L., Adams, M.J., **Oddo, C.M.** *A bio-hybrid tactile sensor incorporating living artificial skin and an impedance sensing array.* (2014) Sensors (Switzerland), 14 (12), pp. 23781-23802.
32. Klöcker, A., **Oddo, C.M.**, Camboni, D., Penta, M., Thonnard, J.-L. *Physical factors influencing pleasant touch during passive fingertip stimulation.* (2014) PLoS ONE, 9 (7), art. no. e101361.
33. Caliò, R., Rongala, U.B., Camboni, D., Milazzo, M., Stefanini, C., de Petris, G., **Oddo, C.M.** *Piezoelectric energy harvesting solutions* (2014) Sensors (Switzerland), 14 (3), pp. 4755-4790.
34. Raspovic, S., Capogrosso, M., Petrini, F.M., Bonizzato, M., Rigosa, J., Pino, G.D., Carpaneto, J., Controzzi, M., Boretius, T., Fernandez, E., Granata, G., **Oddo, C.M.**, Citi, L., Ciancio, A.L., Cipriani, C., Carrozza, M.C., Jensen, W., Guglielmelli, E., Stieglitz, T., Rossini, P.M., Micera, S. *Bioengineering: Restoring natural sensory feedback in real-time bidirectional hand prostheses.* (2014) Science Translational Medicine, 6 (222), pp. 222ra19.
35. Crea, S., Donati, M., De Rossi, S.M.M., **Oddo, C.M.**, Vitiello, N. *A wireless flexible sensorized insole for gait analysis.* (2014) Sensors (Switzerland), 14 (1), pp. 1073-1093.

36. Controzzi, M., Peccia, C., **Oddo, C.M.**, Carrozza, M.C., Cipriani, C. *Bioinspired fingertip for anthropomorphic robotic hands*. (2014) Applied Bionics and Biomechanics, 11 (1-2), pp. 25-38.
37. Saccomandi, P., Schena, E., **Oddo, C.M.**, Zollo, L., Silvestri, S., Guglielmelli, E. *Microfabricated tactile sensors for biomedical applications: A review*. (2014) Biosensors, 4 (4), pp. 422-448.
38. Lucarotti, C., **Oddo, C.M.**, Vitiello, N., Carrozza, M.C. *Synthetic and bio-artificial tactile sensing: A review* (2013) Sensors (Switzerland), 13 (2), pp. 1435-1466.
39. Pape, L., **Oddo, C.M.**, Controzzi, M., Cipriani, C., Förster, A., Carrozza, M.C., Schmidhuber, J. *Learning tactile skills through curious exploration*. (2012) Frontiers in Neurorobotics, (JULY), art. no. Article 6.
40. Muhammad, H.B., Recchiuto, C., **Oddo, C.M.**, Beccai, L., Anthony, C.J., Adams, M.J., Carrozza, M.C., Ward, M.C.L. *A capacitive tactile sensor array for surface texture discrimination*. (2011) Microelectronic Engineering, 88 (8), pp. 1811-1813.
41. **Oddo, C.M.**, Controzzi, M., Beccai, L., Cipriani, C., Carrozza, M.C. *Roughness encoding for discrimination of surfaces in artificial active-touch*. (2011) IEEE Transactions on Robotics, 27 (3), art. no. 5740988, pp. 522-533.
42. **Oddo, C.M.**, Beccai, L., Wessberg, J., Wasling, H.B., Mattioli, F., Carrozza, M.C. *Roughness encoding in human and biomimetic artificial touch: Spatiotemporal frequency modulation and structural anisotropy of fingerprints*. (2011) Sensors, 11 (6), pp. 5596-5615.
43. **Oddo, C.M.**, Beccai, L., Vitiello, N., Wasling, H.B., Wessberg, J., Carrozza, M.C. *A mechatronic platform for human touch studies*. (2011) Mechatronics, 21 (3), pp. 604-613.
44. Muhammad, H.B., **Oddo, C.M.**, Beccai, L., Recchiuto, C., Anthony, C.J., Adams, M.J., Carrozza, M.C., Hukins, D.W.L., Ward, M.C.L. *Development of a bioinspired MEMS based capacitive tactile sensor for a robotic finger*. (2011) Sensors and Actuators, A: Physical, 165 (2), pp. 221-229.
45. **Oddo, C.M.**, Beccai, L., Felder, M., Giovacchini, F., Carrozza, M.C. *Artificial roughness encoding with a bio-inspired MEMS- Based tactile sensor array*. (2009) Sensors, 9 (5), pp. 3161-3183.
46. **Oddo, C.M.**, Valdastri, P., Beccai, L., Roccella, S., Carrozza, M.C., Dario, P. *Investigation on calibration methods for multi-axis, linear and redundant force sensors*. (2007) Measurement Science and Technology, 18 (3), art. no. 011, pp. 623-631.

Brevetti depositati negli ultimi 3 anni

1. Caliò, R., Menciasci, A., Ciuti, G., **Oddo, C.M.**, Camboni, D., Bianchi, F., Dario, P., Carrozza, M.C. Dispositivo sondante per l'analisi di una superficie. Numero di riferimento: 102017000103200, deposito in Italia in data 14 Settembre 2017. Richiedente: Scuola Superiore Sant'Anna, Pisa, Italia.
2. Capineri, L., Frosini, F., Mazzoni, M., Bulletti, A., Menciasci, A., Ciuti, G., Massari, L., **Oddo, C.M.** Apparato per l'analisi intraoperatoria di campioni di tessuto biologico. Numero di riferimento: 102018000001108, deposito in Italia in data 16 gennaio 2018. Estensione PCT numero PCT/IB2019/050335 in data 16 gennaio 2019. Richiedente: Scuola Superiore Sant'Anna, Pisa, Italia.
3. Bianchi, M., Ciuti, G., Dario, P., Czimmermann, T., Milazzo, M., **Oddo, C.M.**, Roccella, S., Chiurazzi, M., Farnioli, E., Minutillo M., Bonilla Jimenez J.M., Massari, L., Camboni, D., Carrozza, M.C., Stefanini, C., Leoni, F., Bray, D., Rizzo, T., Bruni, F., Collodi, L. Sistema per l'identificazione di difetti su una superficie di almeno una porzione di una scocca e relativo metodo. Numero di riferimento: 102018000004368, deposito in Italia in data 10 aprile 2018. Estensione PCT numero PCT/IB2018/050681 in data 9 aprile 2019. Richiedente: Scuola Superiore Sant'Anna, Pisa, Italia.
4. Massari, L., D'Abbraccio, J., Terruso, G., Zaltieri, M., Schena, E., Sinibaldi, E., **Oddo, C.M.** A tactile sensor device. Numero di riferimento: 102019000003657, deposito in Italia in data 13 marzo 2019. Richiedente: Scuola Superiore Sant'Anna, Pisa, Italia.

Biografia scientifica e professionale breve

Calogero Maria Oddo è professore associato di Bioingegneria all'Istituto di BioRobotica della Scuola Superiore Sant'Anna di Pisa, dove è responsabile del Neuro-Robotic Touch Lab, un laboratorio con oltre 15 persone, tra studenti di PhD, personale con assegni e borse di ricerca. Nel 2002 è stato ammesso alla **Scuola Superiore Sant'Anna** come allievo ordinario del settore di Ingegneria, superando un concorso con **334 concorrenti per 10 posti**.

A luglio del 2005 ha conseguito la laurea triennale in **Ingegneria Elettronica** all'**Università di Pisa**, e nel luglio 2007 la laurea specialistica, **entrambe con 110 e lode**, primo studente laureato nei corsi, **pubblicando i risultati** sia della tesi triennale su un microsensore MEMS in silicio, che della tesi specialistica sul controllo di un robot biomedicale mediante un sistema elettronico programmabile. Nell'ambito della laurea specialistica in Ingegneria Elettronica ha anche seguito il percorso di eccellenza attivato dall'Università di Pisa, e ha conseguito la qualifica di "Esperto in progettazione di sistemi sensoriali per applicazioni industriali, diagnostiche e ambientali", a seguito della partecipazione ad un modulo professionalizzante supportato dalla Regione Toscana.

In parallelo ha completato il percorso da allievo ordinario presso la **Scuola Superiore Sant'Anna**, conseguendo **con lode** i diplomi di licenza di primo e secondo livello in Ingegneria Industriale e dell'Informazione, ha seguito con il massimo dei voti il corso in "E-Business in the Digital Age" presso la **London School of Economics** nel Regno Unito, e nel 2006 ha partecipato in Francia ad una campagna sperimentale di volo parabolico organizzata dall'**Agenzia Spaziale Europea**.

Nel 2008 ha iniziato il corso di perfezionamento in Tecnologie Innovative per l'ingegneria dell'informazione e comunicazione e la robotica, **ammesso come primo classificato nel curriculum di PhD in Biorobotica**. Durante il percorso di dottorato ha trascorso un periodo di ricerca in visita presso il Dipartimento di Fisiologia dell'Università di Göteborg, e ha conseguito il titolo di PhD nel 2011 **con lode**, con numerose pubblicazioni scientifiche e una tesi sullo studio del senso del tatto umano e lo sviluppo di sensori di tatto artificiale per robotica biomedica.

Dopo un periodo di un anno da assegnista di ricerca post-doc, nel 2012 e nel 2016 ha vinto due concorsi da ricercatore a tempo determinato (RTD-A nel 2012, RTD-B nel 2016), nel 2017 ha conseguito all'unanimità l'abilitazione scientifica nazionale da professore associato, e **dal 2019 è passato in ruolo come professore associato di Bioingegneria della Scuola Superiore Sant'Anna**.

I suoi interessi di ricerca sono nell'area della neurorobotica, con particolare attenzione allo sviluppo di protesi bioniche e senso del tatto artificiale, microsensori per neuroprotesi, neurofisiologia del tatto umano, intelligenza artificiale neurobionica, integrazione sicura e collaborazione tra persone e macchine nei luoghi di lavoro. Calogero Oddo ha una crescente esperienza nell'integrare biorobotica e neuroscienze, e in questo ambito ha eccellenti indicatori di valutazione della quantità e qualità della ricerca, è autore di pubblicazioni su riviste scientifiche internazionali ad alto impatto, quali eLife, Science Translational Medicine, riviste delle case editrici Nature-Springer, Elsevier, della IEEE, ed è inventore di tecnologie brevettate. Per sensibilità personale e interesse scientifico, segue con interesse le innovazioni tecnologiche nel settore delle energie rinnovabili e della green economy.

Calogero Oddo presta notevole attenzione anche alla **disseminazione pubblica dei risultati** delle proprie ricerche, che hanno regolarmente spazio in mezzi di comunicazione nazionali e internazionali come [BBC](#), [Fox News](#), [Rai 2](#), [Rai 3](#), [Scientific American](#), [National Geographic](#), [La Repubblica](#), [ANSA](#), [Daily Mail](#).

Calogero Oddo serve abitualmente come revisore di articoli scientifici per oltre 40 riviste scientifiche internazionali, e per enti nazionali e internazionali nell'ambito di iniziative di sostegno alla ricerca e all'innovazione e di valutazione di infrastrutture di ricerca, è vice-chair dell'Italian Chapter dell'IEEE Sensors Council, ha responsabilità editoriali ed è attivo nell'organizzazione di conferenze scientifiche internazionali nel settore della biorobotica e della bioingegneria.

Nel 2006 ha ricevuto il premio in BioRobotica dall'Associazione ex allievi della Scuola Superiore Sant'Anna per la tesi di laurea triennale. Nel 2011 ha conseguito il Working Capital Award da Telecom Italia. Nel 2012 è stato finalista al "Georges Giralt PhD Award", il più importante premio di dottorato di ricerca europeo nel campo della robotica. Nel 2016 ha ricevuto il premio "In onore dell'Italia che ci onora", consegnato all'Accademia dei Georgofili a Firenze.

Calogero Oddo è titolare di corsi universitari presso la Scuola Sant'Anna e l'Università di Pisa, ha seguito oltre 60 tesi di laurea e 8 tesi di dottorato di ricerca, ha svolto lezioni e seminari presso rilevanti centri di ricerca e università internazionali, tra cui l'École polytechnique fédérale de Lausanne, l'Università di Lund, l'Istitut de la Vision a Parigi, e nell'ambito di conferenze e workshop in Europa, Giappone, Africa, Cina, USA.

Per lo svolgimento delle sue ricerche Calogero Oddo ha ottenuto finanziamenti per vari milioni di euro, come responsabile scientifico o co-responsabile dei progetti, assegnati su base competitiva dall'Unione Europea nell'ambito del Settimo Programma Quadro (progetti Nanobiotouch e Nebias), Horizon 2020 (progetti Endoo e NeuHeart), per progetti nazionali (progetto PRIN HandBot, progetto PARLOMA Smart Cities and Social Innovation), nell'ambito del Piano Nazionale Impresa 4.0, e in vari progetti di ricerca supportati dalla Regione Toscana, tra cui i progetti CENTAURO e FID-U4E su tecnologie in ambito Industria 4.0, il progetto EOLO sullo sviluppo di tecnologie sostenibili per monitoraggio ambientale, il progetto IMEROS per nuove tecnologie di robotica biomedicale.

Ai sensi del Regolamento Generale sulla protezione dei dati (RGPD n. 679/2016), autorizzo il trattamento di tutti i dati personali contenuti nel presente curriculum vitae.

Tutto quanto dichiarato corrisponde a verità ai sensi delle norme in materia di dichiarazioni sostitutive di cui all'art. 46 e ss. del D.P.R. 445/2000.

Pisa, 2 dicembre 2019

Firmato digitalmente da: ODDO CALOGERO MARIA
Data: 02/12/2019 00:43:35

In fede,
Calogero Maria Oddo

Teaching, supplementary teaching and service to students (last 3 years)

List of the courses

- Course with formal appointment N. 1
 - Title: Neuromorphic Electronic Systems
 - Academic year: 2016/2017
 - Length: 30 hours (3 ECTS)
 - Students level: bachelor and master students in Industrial and Information Engineering of the Honours College of Sant'Anna School of Advanced Studies
 - Number of students: 5 (source: number of exams registered)
- Course with formal appointment N. 2
 - Title: Neuromorphic Engineering
 - Academic year: 2016/2017
 - Length: 60 hours (6 ECTS)
 - Students level: master students of the MSc degree in Bionics Engineering, jointly activated by the University of Pisa and Sant'Anna School of Advanced Studies. Furthermore, part of this course was also opened (mutuato) for PhD students in BioRobotics of Sant'Anna School of Advanced Studies, with the title Graphical Programming for measurement, test and control systems in bioengineering (3 ECTS)
 - Number of students: 20 (source: number of exams registered)
 - Additional information: **the course received an overall rating of 3.7/4 by the students**, based on the anonymous questionnaires filed at the end of the lectures (15 questionnaires)
 - As a **benchmarking reference**: please note that the overall rating of the courses within the MSc degree in Bionics Engineering jointly activated by the University of Pisa and Sant'Anna School of Advanced Studies was 3.0/4 (out of 188 questionnaires)
- Course with formal appointment N. 3
 - Title: Natural and Artificial Senses
 - Academic year: 2016/2017
 - Length: 60 hours (6 ECTS module of the course on Sensory systems – 12 ECTS)
 - Students level: bachelor students of the BSc degree in Biomedical Engineering of the University of Pisa. The appointment for this course has been formalized within the inter-university institutional agreement (convenzione) between the University of Pisa and Sant'Anna School of Advanced Studies
 - Number of students: 42 (source: number of evaluation questionnaires filed by the students)
 - Additional information: **the course received an overall rating of 3.5/4 by the students**, based on the anonymous questionnaires filed at the end of the lectures (42 questionnaires)
 - As a **benchmarking reference**: please note that the overall rating of the courses within the BSc degree in Biomedical Engineering of the University of Pisa was 3.0/4 (out of 2666 questionnaires)
- Course with formal appointment N. 4
 - Title: Neuromorphic Computing
 - Academic year: 2017/2018
 - Length: 30 hours (3 ECTS)
 - Students level: bachelor and master students in Industrial and Information Engineering of the Honours College of Sant'Anna School of Advanced Studies
 - Number of students: 1 (source: number of exams registered)
- Course with formal appointment N. 5
 - Title: Neuromorphic Engineering
 - Academic year: 2017/2018
 - Length: 60 hours (6 ECTS, 2 of which under the co-responsibility of Dr. Alberto Mazzoni)
 - Students level: master students of the MSc degree in Bionics Engineering, jointly activated by the University of Pisa and Sant'Anna School of Advanced Studies. Furthermore, part of this course was also opened (mutuato) for PhD students in BioRobotics of Sant'Anna School of Advanced Studies, with the title Graphical Programming for measurement, test and control systems in bioengineering (3 ECTS)
 - Number of students: 13 (source: number of exams registered)
 - Additional information: **the course received an overall rating of 3.3/4 by the students**, based on the anonymous questionnaires filed at the end of the lectures (10 questionnaires).
 - As a **benchmarking reference**: please note that the overall rating of the courses within the MSc degree in Bionics Engineering jointly activated by the University of Pisa and Sant'Anna School of Advanced Studies was 3.0/4 (out of 188 questionnaires)
- Course with formal appointment N. 6

	<ul style="list-style-type: none"> ○ Title: Neuromorphic Computing ○ Academic year: 2018/2019 ○ Length: 30 hours (3 ECTS) ○ Students level: bachelor and master students in Industrial and Information Engineering of the Honours College of Sant'Anna School of Advanced Studies. Furthermore, this course was also opened (mutuato) for PhD students in BioRobotics of Sant'Anna School of Advanced Studies ○ Number of students: 6 (source: number of students of Sant'Anna School of Advanced Studies that attended the course; the course was concluded in May 2019, and the students will discuss the exams within the end of the ongoing academic year) ● <u>Course with formal appointment N. 7</u> <ul style="list-style-type: none"> ○ Title: Neuromorphic Engineering ○ Academic year: 2018/2019 ○ Length: 60 hours (6 ECTS, 2 of which under the co-responsibility of Dr. Alberto Mazzoni) ○ Students level: master students of the MSc degree in Bionics Engineering, jointly activated by the University of Pisa and Sant'Anna School of Advanced Studies. Furthermore, part of this course was also opened (mutuato) for PhD students in BioRobotics of Sant'Anna School of Advanced Studies, with the title Graphical Programming for measurement, test and control systems in bioengineering (3 ECTS) ○ Number of students: 17 (source: number of exams registered) ○ Additional information: the course received an overall rating of 3.9/4 by the students, based on the anonymous questionnaires filed at the end of the lectures (7 questionnaires; to be updated with a second release that will be issued by the administrative offices of the University of Pisa within the ongoing academic year) ○ As a benchmarking reference: please note that the overall rating of the courses within the MSc degree in Bionics Engineering jointly activated by the University of Pisa and Sant'Anna School of Advanced Studies was 3.0/4 (out of 188 questionnaires)
Participation in committees set up for the exams	<ul style="list-style-type: none"> ● Member of the evaluation committee for the recruitment of Sant'Anna School of Advanced Studies Honours College students in Industrial and Information Engineering (August-September, 2018) ● Member of the evaluation committee (1st session, June 18, 2018) for the award of 1st level diploma in Industrial and Information Engineering, for Honours College students of Sant'Anna School of Advanced Studies ● Member of the evaluation committee for the recruitment of MSc students in Bionics Engineering of the joint degree activated by the University of Pisa and Sant'Anna School of Advanced Studies (committees for the recruitment of EU students in August-September 2018) ● Member of the evaluation committee (November 4, 2016) for the award of the PhD in BioRobotics of Sant'Anna School of Advanced Studies to Nicola Di Lecce and Domenico Camboni ● Member of the evaluation committee (June 26, 2017) for the award of the PhD in BioRobotics of Sant'Anna School of Advanced Studies to Udaya Bhaskar Rongala, Ali Leylavi Shoushtari and Chiara Fanciullacci ● Member of the evaluation committee (June 1, 2018) for the award of the PhD in BioRobotics of Sant'Anna School of Advanced Studies to Francesca Sorgini ● Member of the evaluation committee (June 6, 2018) for the award of the PhD in BioRobotics of Sant'Anna School of Advanced Studies to Alice Rita Salgarella ● Member of the evaluation committee (June 29, 2018) for the award of the PhD in BioRobotics of Sant'Anna School of Advanced Studies to Antonio Ranaudo, Clara Genna, Sergio Tarantino and Ilario Imbinto, Yasmin Ansari, Anand Kumar Mishra, Syed Taimoor Hassan Shah, Lorenzo Vannucci and Renato Calìo ● Member of the evaluation committee (May 31, 2019) for the award of the PhD in BioRobotics of Sant'Anna School of Advanced Studies to Arianna Saracino, Izadyar Tamadon and Luca Massari ● Member of the evaluation committee for the recruitment of PhD students in BioRobotics at Sant'Anna School of Advanced Studies (since the 2014 call, each year, up to today) ● Member of the evaluation committee for the annual assessment of the activities of PhD students in BioRobotics at Sant'anna School of Advanced Studies during the annual retreat of The BioRobotics Institute at SIAF in Volterra in July 2017 and 2018 ● Member of the PhD Board of the PhD programme in BioRobotics, The BioRobotics Institute, Sant'Anna School of Advanced Studies (since September 25, 2013, continuously up to today) ● Member of the joint Student and Teachers Board (commissione paritetica, link) of Sant'Anna School of Advanced Studies (since November 1, 2017 up to today) ● Member of the Council of the Experimental and Applied Sciences Academic Class of Sant'Anna School of Advanced Studies, as representative (elected) of all Assistant Professors in Engineering ● Member of the evaluation committee of the PhD thesis of Rocco Romeo at Università Campus Bio-Medico di Roma, Italy ● Member of the evaluation committee of the PhD thesis of Gianluca Barabino at Università degli

	<p>Studi di Cagliari, Italy</p> <ul style="list-style-type: none"> • Member of the evaluation committee of the PhD thesis of Priscilla Corsi at the University of L'Aquila, Italy • Member of the evaluation committee of the PhD thesis of Béryll Jehenne on November 21, 2017, at Université Paris Descartes, France
Seminar	<ul style="list-style-type: none"> • Co-organizer of the Workshop on Tactile Coding and Neuroprostheses, on December 1-2, 2016, at The BioRobotics Institute of Scuola Superiore Sant'Anna, Pontedera. The workshop was co-funded by the Italian-Ministry of Foreign Affairs and International Cooperation, within the Italy-Sweden bilateral project which supported the collaboration with Lund University. • Delivered an invited seminar on "Neuromorphic artificial sense of touch: for bionics and biorobotics" on November 24, 2016, at the Department of Physics of the University of Pisa (invited by Prof. Alberto Di Lieto) • Delivered an invited lecture on "Neuromorphic artificial sense of touch: for bionic limb prostheses bridging biorobotics and neuroscience" on February 13-14, 2017, at the Laboratory for Somatosensory Information Processing and Plasticity, Cognitive Neuroscience Sector, Scuola Internazionale Superiore di Studi Avanzati, Trieste, within the ERC workshop on "Real-time spike-timing control over sensation and perception" (invited by Prof. Mathew Diamond) • Co-organizer and speaker with a lecture on "Translating bioengineering research into industry 4.0 applications: the case study of multisensory telepresence" on May 18, 2017, at the 61st International Fair of Technics and Technical Achievements in Belgrade (Serbia) with the Research to Business Conference of the Italian-Serbian Collaboration Platform in Advanced Manufacturing (local organizer: Prof. Petar Petrovic) • Invited panelist at the 6th Tunisi Investment Forum on November 16, 2017, together with a delegation of Italian companies and Institutional representatives (link) • Delivered an invited seminar on "Neuromorphic encoding of tactile information: from bionic hand prostheses to haptic telepresence" on May 11, 2018, within the Biorobotics course for students in Biomedical engineering at Università Campus Bio-Medico di Roma (invited by Prof. Eugenio Guglielmelli) • Co-organizer and speaker within a panel discussion about "5th Anniversary of the ISCP – Plan for the Next five years" on June 14, 2018, at the University of Novi Sad (Serbia) with the Research to Business Conference of the Italian-Serbian Collaboration Platform in Advanced Manufacturing (local organizer: Prof. Petar Petrovic) • Delivered an invited lecture about the "Italy Chapter of the IEEE Sensors Council: objectives and opportunities for students and a case study on the combined use of force, ultrasound and vision sensors for anatomopathological analyses in the IMEROS project" within the Summer School on Information Engineering organized on July 26, 2018 in Brixen by the University of Padova (link) • Invited panelist in the session about "Intelligenze Artificiali e Robot: Sfide Etiche" at the 6th Seminar – "Persona, lavoro e innovazione" organized by Fondazione lavoro per la persona on September 15, 2018 in Offida, Italy (link) • Invited lecture about "Tactile feedback in laparoscopic and robotic surgery" on September 29, 2018, in Pisa within the workshop on "New technologies in surgery surgical education through simulation" at the International Robotics Festival (link) • Delivered an invited presentation on "Robotics and Artificial Intelligence applied to the industrial context" within the VAREvolution initiative organized by VAR Group company at the University of Florence on November 22, 2018 (link) • Delivered an invited presentation about the ARTES 4.0 Competence Center within a workshop for entrepreneurs organized by the R.E.V.TEC.h 4.0 Tuscany Region POR FSE project on January 21, 2019 (link) • Delivered an invited seminar (12 hours) on "Tactile sensing and perception: from understanding the human somatosensory system towards the development of an artificial sense of touch for biorobotics", on February 25-26, 2019, at the 2nd level university master in Robotics organized by the University of Trieste • Delivered an invited presentation about the ARTES 4.0 Competence Center within the "Essere Impresa 4.0" seminar organized by Confindustria Toscana Nord on March 28, 2019, in Prato (link) • Delivered an invited presentation on "Nuovi mestieri: tra robot e intelligenza artificiali" at the Italian Chamber of Deputies on May 29, 2019, in Rome
Tutorials and mentoring of students	<ul style="list-style-type: none"> • Tutor of the following students of the Honours College of SSSA or based on an institutional agreement with IUSS: <ul style="list-style-type: none"> ○ Angela Mazzeo (IUSS, since 2016) ○ Paolo Pennoni (SSSA, since 2017) ○ Jacopo Quagliarini (SSSA, since 2018) • Supervisor of Ms. Angela Mazzeo, 1st level degree at IUSS Pavia (100/100 cum laude) • Supervisor of the following BSc theses in Biomedical Engineering at the University of Pisa: Mr. Marcello Pantano, Mr. Claudio Pighini, Ms. Maria Conte, Mr. Matteo Lo Preti, Ms. Melinda Bechini,

	<p>Ms. Giulia Sciarrino, Mr. Walter Alabiso, Mr. Alfio Di Paola, Mr. Antonio Labattaglia, Mr. Andrea Velieri, Mr. Antonio Frusciante, Mr. Simone Garzia, Ms. Mariana Scutari, Mr. Valerio Pelusi, Mr. Simone Sola, Mr. Marco De Fusco, Mr. Pietro Navalesi, Ms. Piera Mancini, Mr. Cosimo Lorenzetto Bologna, Mr. Davide Vazzana, Ms. Roberta Tralongo, Ms. Laura De Rosa, Ms. Claudia Paci, Ms. Laura Salucci, Mr. Tommaso Tuci, Ms. Martina Corsi, Mr. Mattia Biagianti, Ms. Denise Luchetta, Mr. Alessio Siliberto, Ms. Rachele Zampolini, Ms. Eleonora D'Agostino, Ms. Monica Galluccio, Ms. Angelica Masi, Ms. Adriana Vicari, Mr. Sergio Longo, Ms. Francesca Tonelli, Ms. Elena Pasini, Ms. Marianna Venditti, Mr. Francesco Grillo</p> <ul style="list-style-type: none"> • Supervisor of Mr. Davide Ferraro, BSc thesis in Biomedical Engineering at the University of Pisa (110/110 cum laude), while being a student of the Honours College of SSSA (now student at the MSc in Bionics Engineering jointly activated between the University of Pisa and Sant'Anna School of Advanced Studies) • Supervisor of Ms. Elena Vicari, BSc thesis in Biomedical Engineering at the University of Pisa (110/110 cum laude), while being a student of the Honours College of SSSA (now student at the MSc in Bionics Engineering jointly activated between the University of Pisa and Sant'Anna School of Advanced Studies) • Supervisor of Ms. Barbara Jongbloed, visiting student in 2017 at The BioRobotics Institute of SSSA from Delft University of Technology (The Netherlands), within the Erasmus program • Supervisor of Mr. Sapan Agrawal and Mr. Vinit Sarode, visiting students in 2017 at The BioRobotics Institute of SSSA from the Visvesvaraya National Institute of Technology (Nagpur, India) • Supervisor of Ms. Domitilla Taxis di Bordonina e Valnigra, visiting student in 2018 at The BioRobotics Institute of SSSA from the University of Twente (The Netherlands), within the Erasmus program • Supervisor of Ms. Madalena Valente, visiting student in 2018 at The BioRobotics Institute of SSSA from the Universidade de Lisboa (Portugal), within the Erasmus program • Supervisor of Mr. Aditya Anant Bastapure, Mr. Subhanshu Gupta, Ms. Disha Kamale and Mr. Sharath Chandra Raparthy, visiting students in 2018 at The BioRobotics Institute of SSSA from the Visvesvaraya National Institute of Technology (Nagpur, India) • Supervisor of Mr. Ujjwal Anand, visiting student in 2018 at The BioRobotics Institute of SSSA from Birla Institute of Technology & Science (Pilani, India) • Supervisor of Mr. Debadrata Sarkar, visiting student in 2018 at The BioRobotics Institute of SSSA from the National Institute of Technology Durgapur (Durgapur, West Bengal, India) • Coordinator of the 2017-2020 inter-institutional Erasmus+ agreement between Sant'Anna School of Advanced Studies and Poznan University of Technology and of the Memorandum of Understanding with The BioRobotics Institute of SSSA
Theses for Master of Arts/Master of Science Degree	<ul style="list-style-type: none"> • Supervisor of Ms. Jessica D'Abbraccio (MSc in Biomedical Engineering, Università La Sapienza di Roma, that carried out her experimental thesis at the BioRobotics Institute of Sant'Anna School of Advanced Studies, with mobility formalized based on the institutional agreement between the two universities; 110/110 cum laude, graduated in March 2017; now PhD Student at The BioRobotics Institute of Sant'Anna School of Advanced Studies) • Supervisor of Ms. Laura Baldini, MSc thesis in Biomedical Engineering at the University La Sapienza of Rome (MSc in Biomedical Engineering, Università La Sapienza di Roma, that carried out her experimental thesis at the BioRobotics Institute of Sant'Anna School of Advanced Studies, with mobility formalized based on the institutional agreement between the two universities; 110/110 cum laude, graduated in March 2018) • Supervisor of Ms. Mariangela Filosa, MSc thesis in Biomedical Engineering at the University of Pisa (110/110 cum laude; now research fellow at Ca' Foscari University of Venice and affiliated at The BioRobotics Institute of Sant'Anna School of Advanced Studies) • Supervisor of Mr. Simone Scaduto (MSc thesis in Electronic Engineering Politecnico di Milano, that carried out his experimental thesis at the BioRobotics Institute of Sant'Anna School of Advanced Studies, with mobility formalized based on the institutional agreement between the two universities; 110/110 cum laude, graduated in July 2018; now Analog Designer in ST Microelectronics S.p.A.) • Supervisor of Ms. Martina Zaltieri (MSc in Biomedical Engineering, Università La Sapienza di Roma, that carried out her experimental thesis at the BioRobotics Institute of Sant'Anna School of Advanced Studies, with mobility formalized based on the institutional agreement between the two universities; 110/110 cum laude, graduated in March 2019; now research fellow at Ca' Foscari University of Venice and affiliated at The BioRobotics Institute of Sant'Anna School of Advanced Studies) • Supervisor of Ms. Giulia Fransvea (MSc in Biomedical Engineering, Università La Sapienza di Roma, that is carrying out her experimental thesis at the BioRobotics Institute of Sant'Anna School of Advanced Studies, with mobility formalized based on the institutional agreement between the two universities; the thesis is ongoing)

Theses for PhD	<ul style="list-style-type: none"> • Supervisor of Dr. Domenico Camboni, PhD thesis in BioRobotics at SSSA (100/100 cum laude; November 4, 2016; title: Neuromorphic Sense of Touch) • Supervisor of Dr. Udaya Bhaskar Rongala, PhD thesis in BioRobotics at SSSA (100/100 cum laude; June 26, 2017; title: Neurocomputational Modelling of Tactile Perception for the Development of Artificial Sense of Touch) • Supervisor of Dr. Francesca Sorgini, PhD thesis in BioRobotics at SSSA (100/100 cum laude; June 1, 2018; title: Tactile sensorimotor feedback strategies for object categorization in telepresence sensory augmentation applications) • Supervisor of Dr. Renato Calìo, PhD thesis in BioRobotics at SSSA (100/100 cum laude; June 29, 2018; title: Sensing and haptic technologies for applications in medical robotics) • Tutor of Dr. Alice Rita Salgarella, PhD thesis in BioRobotics at SSSA (100/100 cum laude; June 6, 2018; title: Engineering bio/non-bio interfaces for biomedical applications) • Tutor of Dr. Clara Genna, PhD thesis in BioRobotics at SSSA (100/100 cum laude; June 29, 2018; title: Cortical models of sensory processing during tactile stimulation in humans and animals) • Tutor of Dr. Luca Massari, PhD thesis in BioRobotics at SSSA (cum laude; May 31, 2019; title: Tactile Sensing and Haptic Technologies for BioRobotic Applications) • Supervisor of Ms. Magdalena Kowalczyk, visiting PhD student at The BioRobotics Institute of SSSA from Poznan University of Technology (Poland), within the Erasmus program (2018-2019) • Supervisor of Mr. Dawid Apanasiewicz, visiting PhD student at The BioRobotics Institute of SSSA from Poznan University of Technology (Poland), within the Erasmus program (2019)
Scientific Research	
Organization, management coordination of national research groups	<ul style="list-style-type: none"> • Co-Principal Investigator of the “SENSE-RISC – Sviluppo di abiti intelligENti Sensorizzati per prevenzione e mitigazione di RIschi per la SiCurezza dei lavoratori” project. The project is coordinated by Prof. Maria Sabrina Sarto of the University La Sapienza of Rome <ul style="list-style-type: none"> ○ Calogero Oddo is scientific responsible and leader of the Sant’Anna School of Advanced Studies unit, with responsibilities on the development of a demonstrator of sensorized wearable suit for promoting occupational safety in workers ○ Project duration: April 2019 – April 2021 (24 Months) ○ Funding Agency: Italian National Institute for Insurance against Accidents at Work (INAIL), BRIC 2018 call ○ 91.900 € of funding for Sant’Anna School of Advanced Studies under independent scientific responsibility of C.M. Oddo • Co-Principal Investigator within the “IMEROS – Integrated MEDical RObotic Solutions” project, in close collaboration with the scientific responsible, Prof. Arianna Menciassi <ul style="list-style-type: none"> ○ He served as leader of operational objective 1, related to the development of a robotic platform for extemporaneous analysis of biopsy samples by means of vision, tactile and ultrasound sensors ○ Project duration: April 2016-October 2019 (30 Months) ○ Funding agency: Tuscany Region, PAR FAS 2007/2013, FAS Salute 2014 call ○ 303.350 € of funding for SSSA (151,7 k€ under independent scientific responsibility of C.M. Oddo, with signature on a dedicated budget) • Co-Principal Investigator within the “PARLOMA – A Communication System for Deafblind People” project <ul style="list-style-type: none"> ○ He serves as leader of “WP2 – New low-cost haptic interfaces” ○ Project duration: September 2016-September 2019 (36 Months) ○ Funding agency: Italian Ministry for Education, Universities and Research, Smart Cities and Social Innovation young investigator call ○ Total funding is 626.6 k€ (about 194 k€ under independent scientific responsibility of C.M. Oddo). The project is administratively managed at the University of Venice, with authorization of the Rector of Sant’Anna School of Advanced Studies. • Co-Principal Investigator within the “FID-U4E – Fabbrica Intelligente Diffusa – Unity for Efficiency” project, in close collaboration with the scientific responsible, Prof. Paolo Dario <ul style="list-style-type: none"> ○ He serves as leader of Operative Objective 1 about the development of artificial intelligence solutions for Industry 4.0. ○ Project duration: June 2018 – June 2020 (24 Months) ○ Funding agency: Tuscany Region within the call Bando 1 “Progetti strategici di ricerca e sviluppo” of the Regional Operative Programme FESR 2014-2020 ○ 452.799,68 € of funding for SSSA (about 106,5 k€ under independent scientific responsibility of C.M. Oddo, with signature on a dedicated budget) • Co-Principal Investigator within the “EOLO – Sistemi innovativi per la captazione e lo sfruttamento dell’energia mini-eolica in differenti contesti ambientali antropizzati: efficienza, sostenibilità e rivalorizzazione territoriale” project, in close collaboration with the scientific responsible, Prof. Cesare Stefanini <ul style="list-style-type: none"> ○ He has scientific responsibilities within Operative Objective 3, about the development of

measurement platforms and bioinspired energy harvesting systems for transducing wind energy. The project involves 5 companies and Sant'Anna School of Advanced Studies (The BioRobotics Institute and TeCIP Institute) and the Italian Institute of Technology as scientific partners

- Project duration: June 2017-November 2019
- Funding agency: Tuscany Region within the call PAR FAS 2007-2013, Linea d'Azione 1.1 – Bando FAR FAS 2014
- 207.397,29 € of funding for The BioRobotics Institute of Sant'Anna School of Advanced Studies (about 103,6 k€ under independent scientific responsibility of C.M. Oddo, with signature on a dedicated budget)
- Co-Principal Investigator within the "MOTU – Protesi robotica di arto inferiore con smart socket ed interfaccia bidirezionale per amputati di arto inferiore" project, coordinated by Prof. Nicola Vitiello
 - He serves as leader of "Workpackage 5 – Sistema di Feedback Aumentante"
 - Project duration: May 2017-April 2020 (36 Months)
 - Funding agency: Italian National Institute for Insurance against Accidents at Work (INAIL).
 - 3.421.250 € of funding for Sant'Anna School of Advanced Studies (about 320 k€ under main responsibility of C.M. Oddo)
- Co-Principal Investigator within the "CENTAURO – Colavoro, Efficienza, prevenzione nell'industria dei motoveicoli mediante Tecnologie di Automazione e Robotica" project, in close collaboration with the scientific responsible, Prof. Paolo Dario
 - He served as project manager. He was involved in the scientific and technical activities of Operational Objective 1, related to the development of a robotic platform, iGrind, for recognition, evaluation and automatic correction of defects on the bodies of motor vehicles. Within the project, which was a flagship initiative in the area of Industry 4.0, bioengineering methods were used for analysing the biomechanical workload of the workers, and for reverse-engineering their operational gestures in order to design suitable robot-control strategies
 - Project duration: April 2016-October 2019 (30 Months)
 - Funding agency: Tuscany Region, PAR FAS 2007-2013 - FAR-FAS 2014 call
 - 1.897.916 € of funding for Sant'Anna School of Advanced Studies (about 180 k€ under main responsibility of C.M. Oddo)

- Scientific and Technical Responsible of a one-year industrial contract (commessa conto terzi) granted by Crabiz srl (Massa e Cozzile, Italy), starting in December 2017 (total budget 26.000 €), with activities on the analysis of fashion production processes with bioengineering methods and design of Industry 4.0 solutions

- Scientific and Technical Responsible of a nine-months industrial contract (commessa conto terzi) granted by Makor srl (Sinalunga, Italy), starting in July 2018 (total budget 22.000 €), with activities on the analysis of industrial production processes with bioengineering and automation methods and design of Industry 4.0 solutions

- Scientific and Technical Responsible of a six-months industrial contract (commessa conto terzi) granted by Crabiz srl (Massa e Cozzile, Italy), starting in December 2018 (total budget 13.000 €), with activities on the analysis of fashion production processes with bioengineering methods and design of Industry 4.0 solutions

- Scientific and Technical Responsible of a six-months industrial contract (commessa conto terzi) granted by Crabiz srl (Massa e Cozzile, Italy), starting in July 2019 (total budget 13.000 €, currently being signed), with activities on the analysis of fashion production processes with bioengineering methods and design of Industry 4.0 solutions

- Principal investigator of the Neuro-Robotic Touch Laboratory (previously named Human-Machine Nexus Laboratory) since 1st of November 2016 up to today. The laboratory is part of the Neuro-Robotics Area of The BioRobotics Institute of Sant'Anna School of Advanced Studies, Pisa, Italy.

The Neuro-Robotic Touch Laboratory mainly targets the engineering of an artificial tactile sense in parallel to the investigation of human touch.

The Laboratory develops and integrates novel transducers, both synthetic and bio-hybrid, and implements neuromorphic systems, with natural spiking coding of tactile information.

The Neuro-Robotic Touch Laboratory analyses neural data to unveil the neuronal processes underlying the human sense of touch, and implements behavioural protocols to characterize the perception of tactile features.

This body of neuroscientific knowledge and the developed biorobotic technologies converge in a key application domain in upper limb neuroprosthetics, with complementary interests stemming towards safe human-machine co-work, tele-presence for medical robotics and hand-held consumer electronics. The Laboratory has a portfolio of research and innovation projects funded following the application to competitive calls or negotiation with companies.

<https://www.santannapisa.it/en/neuro-robotic-touch-laboratory>

Some team members of the Neuro-Robotic Touch Laboratory are recruited jointly with the following

research Areas of The BioRobotics Institute: Translational Neural Engineering, Surgical Robotics and Allied Technologies, Creative Engineering Design, Robot Companions for Citizens. Part of team members are recruited within the PARLOMA project, which is administratively managed at the University of Venice, and then affiliated at The BioRobotics Institute of Sant'Anna School of Advanced Studies.

Personnel with contracts, supervised or co-supervised, currently ongoing or completed, in the period comprised between November 1, 2016 and today:

- Dr. Alberto Mazzoni, Postdoctoral Fellow/Assistant Professor ongoing (now collaborating, with independent lab at The BioRobotics Institute of SSSA)
- Dr. Domenico Camboni, PhD Student/Postdoctoral Fellow/Technologist ongoing
- Dr. Udaya Bhaskar Rongala, PhD Student/Postdoctoral Fellow ongoing (already recruited at the University of Lund for a second Post-doc)
- Dr. Luca Massari, PhD Student/Postdoctoral Fellow ongoing
- Dr. Andrea Aliperta, Affiliate Professional ongoing
- Dr. Giovanni Tonietti, Postdoctoral Fellow ongoing
- Dr. Rossella Raso, Postdoctoral Fellow (project manager) ongoing
- Ms. Sahana Prasanna, PhD Student ongoing
- Ms. Ilaria Cesini, PhD Student ongoing
- Mr. Tamas Czimmermann, PhD Student ongoing (already recruited in a company in the area of artificial intelligence in USA)
- Ms. Jessica D'Abbraccio, Research fellow/PhD Student ongoing
- Mr. Federico Bianchi, PhD Student ongoing
- Mr. Giuseppe Terruso, Research fellow ongoing
- Ms. Mariangela Filosa, Research fellow ongoing
- Ms. Francesca Franceschi, Research fellow ongoing
- Mr. Enrico Trallori, Research fellow ongoing
- Dr. Giacomo Spigler, Postdoctoral Fellow (now Tenure-Track Assistant Professor in Artificial Intelligence at Tilburg University)
- Dr. Renato Caliò, PhD Student (now Product Test Engineer in ST Microelectronics S.p.A. in Italy)
- Dr. Francesca Sorgini, PhD Student (now R&D engineer at a Coroflo Ltd company in Ireland in the biomedical field)
- Dr. Clara Genna, PhD Student (now data scientist in G.D.S. S.p.A. in Italy)
- Dr. Alice Rita Salgarella, PhD Student (now in a biomedical company)
- Dr. Mario Milazzo, Research fellow (now Marie Skłodowska-Curie Fellow at Massachusetts Institute of Technology)
- Ms. Simona Orvieto, Project manager (now administrative officer at Fondazione Don Carlo Gnocchi Onlus, Italy)
- Ms. Lucia Lauria, Project manager (now administrative officer at Sant'Anna School of Advanced Studies, Italy)
- Member of the Steering Committee of the Microneurography and Microneurostimulation N2Lab, joint laboratory activated between the Clinical Physiology Institute of CNR, the University of Pisa, the University Hospital of Pisa, the Gabriele Monasterio Foundation and SSSA. He promoted the activation of the laboratory jointly with Prof. Silvestro Micera, Prof. Michele Emdin, Prof. Claudio Passino, Dr. Giorgio Iervasi, Dr. Rosa Maria Bruno, Dr. Lorenza Pratali, Prof. Stefano Taddei and Prof. Carmelo Chisari
<https://www.santannapisa.it/en/institute/biorobotics/n2lab-microneurography-and-microneurostimulation-laboratory>
- Member of the Council, Centro di Ricerca Matematica Ennio De Giorgi, Pisa (since May 30, 2019, up to January 8, 2019). In this service, he supported the continuation of the well-established Summer School of Mathematics for Economic and Social Sciences (Prof. Giulio Bottazzi) and he established a collaboration between the De Giorgi Center and the joint research Center for Climate Change studies and Sustainable Actions (3CSA, Prof. Roberto Buizza)
- He significantly contributed to the design and settling-up of the ARTES 4.0 (Advanced Robotics and enabling digital TEchnologies and Systems 4.0) Competence Center, as member of the strategic-level working group of Sant'Anna School of Advanced Studies, that is the coordinating institution of the initiative. Calogero Oddo contributed to all phases of the design of the initiative, in close collaboration with all the 127 partners of the ARTES 4.0 Registered Association, and he participated to all negotiation meetings at the Italian Ministry of Economic Development. The negotiation ended the 27th of January 2019, with a 10,66 M€ funding approved for the Competence Center. **Within the program of activities of ARTES 4.0, Calogero Oddo is responsible of the Innovation and Demonstration Node (IDN) of The BioRobotics Institute of Sant'Anna School of Advanced Studies, and he represents Sant'Anna School of Advanced Studies as one of the 16 delegates in the Assembly of the Association (since February 2, 2019)**

	<ul style="list-style-type: none"> • Member (ex officio) of the Institute Council of The BioRobotics Institute, Scuola Superiore Sant'Anna, Pisa, Italy (since June 1, 2012 up to today)
Organization, management coordination of international research groups	<ul style="list-style-type: none"> • Principal Investigator of the "Human-Robot Co-Working as a Key Enabling Technology for the Factories of Future" Italy-Serbia project <ul style="list-style-type: none"> ○ He served as Co-ordinator of the Italian Unit ○ Project duration: January 2016-December 2018 (36 Months) ○ Funding agency: Italian Ministry for Foreign Affairs and International Cooperation, Grande Rilevanza call ○ 56 k€ of funding for SSSA under independent scientific responsibility of C.M. Oddo • Principal Investigator of the "Gesture-based robot control with neuromorphic haptic feedback for telemanipulation in space environments" project <ul style="list-style-type: none"> ○ He served as scientific responsible of the project, which targeted the development of tactile telepresence strategies for robotic manipulation in space applications ○ Project duration: July 2018-January 2019 (6 Months) ○ Funding agency: Dubai Future Foundation via the Gaaana.com platform ○ About 14,5 k€ of funding for Sant'Anna School of Advanced Studies, under independent scientific responsibility of C.M. Oddo • Co-Principal Investigator within the EU-H2020 "NeuHeart – A neuroprosthesis to restore the vagal-cardiac closed-loop connection after heart transplantation" project, coordinated by Prof. Silvestro Micera <ul style="list-style-type: none"> ○ He has scientific responsibilities within WP4 "Heart activity mechanotransduction sensor" ○ Project duration: January 2019 – December 2022 ○ Funding agency: European Commission, H2020-EU.1.2.2. - FET Proactive call ○ 1.528.250 € of funding for SSSA (about 251.000 € under independent scientific responsibility of C.M. Oddo, with signature on a dedicated budget) • Co-Principal Investigator within the "NEBIAS – NEurocontrolled BIdirectional Artificial upper limb and hand prosthesis" project <ul style="list-style-type: none"> ○ He served as leader of "Workpackage 6 – Neuromorphic coding of sensory information". ○ Project duration: November 2013-January 2018 ○ Funding agency: European Commission, EU-FP7-ICT-FET ○ 823.300 € of funding for SSSA (213,9 k€ under independent scientific responsibility of C.M. Oddo, with signature on a dedicated budget) • Co-Principal Investigator of the "BrainSens – Brain network mechanisms for integration of natural tactile input patterns" Italy-Sweden <ul style="list-style-type: none"> ○ He served as leader of the scientific activities on the development of neuromorphic tactile sensors for studies on touch neurophysiology ○ Project duration: 2015-2017 ○ Funding agency: Italian Ministry for Foreign Affairs and International Cooperation and Ministry for Education, Universities and Research, Grande Rilevanza call ○ 75 k€ of funding for SSSA (37,5 k€ under main scientific responsibility of C.M. Oddo) • Co-Principal Investigator of the 2018-1-IT02-KA107-047798 project <ul style="list-style-type: none"> ○ He has scientific responsibility on the collaboration with Serbia, implemented by means of exchange of researchers ○ Project duration: 24 months (start: July 16, 2018); ○ Funding Agency: European Commission, Erasmus+ program, Indire agency; ○ 89 k€ of funding for Sant'Anna School of Advanced Studies (C.M Oddo has main scientific responsibility on a budget of about 3,27 k€) • Technical and Operational Responsible of a nine-months contract granted by Technaid S.L. (Spain), starting in March 2018 (total budget about 200.000 €), in close collaboration with the Scientific Responsible of the contract (Prof. Silvestro Micera) and other colleagues, for the organization of the International Conference on Neurorehabilitation (ICNR 2018), of the International Symposium on Wearable Robotics (WeRob 2018), and of the Inclusive Robotics for a better Society Conference (InBots 2018). He also served as finance chair and member of the organizing committee of the ICNR, WeRob and InBots 2018 conferences
Participation at national research groups	<ul style="list-style-type: none"> • Co-Investigator within the "Sviluppo e validazione di una piattaforma robotica per la riabilitazione motoria e il coordinamento visuomotorio degli arti superiori con scenari di realtà virtuale relativi ad attività di vita quotidiana" Robovir project, coordinated by Dr. Stefano Mazzoleni <ul style="list-style-type: none"> ○ Involved in the development of haptic feedback strategies for robot mediated neurorehabilitation ○ Project duration: June 2017 – December 2019 ○ Funding agency: Italian National Institute for Insurance against Accidents at Work (INAIL), BRIC 2016 call ○ 226.000 € of funding for Sant'Anna School of Advanced Studies
Participation at international research groups	<ul style="list-style-type: none"> • Co-Investigator within the "Endoo – Endoscopic versatile robotic guidance, diagnosis and therapy of magnetic driven soft-tethered endoluminal robots" project, coordinated by Prof. Paolo Dario

	<ul style="list-style-type: none"> ○ He serves as leader of Task 3.4 "Smart sensing tool for tissue morphology, stiffness and texture evaluation" ○ Project duration: December 2015 – May 2019 (42 Months) ○ Funding agency: European Commission, EU-H2020-ICT-2015 ○ 833.750 € of funding for Sant'Anna School of Advanced Studies
Ownership of patents	<ul style="list-style-type: none"> ● Capineri, L., Frosini, F., Mazzoni, M., Bulletti, A., Menciacsi, A., Ciuti, G., Massari, L., Oddo, C.M. Apparato per l'analisi intraoperatoria di campioni di tessuto biologico. Number: 102018000001108, submitted in Italy the 16th of January 2018. PCT extension number: PCT/IB2019/050335, submitted the 16th of January 2019 ● Bianchi, M., Ciuti, G., Dario, P., Czimmermann, T., Milazzo, M., Oddo, C.M., Roccella, S., Chiurazzi, M., Farnioli, E., Minutillo M., Bonilla Jimenez J.M., Massari, L., Camboni, D., Carrozza, M.C., Stefanini, C., Leoni, F., Bray, D., Rizzo, T., Bruni, F., Collodi, L. Sistema per l'identificazione di difetti su una superficie di almeno una porzione di una scocca e relativo metodo. Number: 102018000004368, submitted in Italy the 10th of April 2018. PCT extension number: PCT/IB2018/050681, submitted the 9th of April 2019 ● Massari, L., D'Abbraccio, J., Terruso, G., Zaltieri, M., Schena, E., Sinibaldi, E., Oddo, C.M. A tactile sensor device. Number: 102019000003657, submitted in Italy the 13th of March 2019 ● Caliò, R., Menciacsi, A., Ciuti, G., Oddo, C.M., Camboni, D., Bianchi, F., Dario, P., Carrozza, M.C. Dispositivo sondante per l'analisi di una superficie. Number: 102017000103200, submitted in Italy the 14th of September 2017
Speaker at national conferences	<ul style="list-style-type: none"> ● Poster presentation of the following paper at the sixth National Congress of Bioengineering, which was held in Rome on June 25-27, 2018: <ul style="list-style-type: none"> ○ Cesini, I., Kumar, P., Fraleoni Morgera, A., Oddo, C.M. "ZnO nanorod array-based tactile transducers for biomedical applications"
Speaker at international conferences	<ul style="list-style-type: none"> ● Presented the following paper at the 2019 IEEE International Workshop on Metrology for Industry 4.0 and IoT, which was held in Naples on June 4-6, 2019: <ul style="list-style-type: none"> ○ D'Abbraccio, J., Massari, L., Zaltieri, M., Terruso, G., Kowalczyk, M., Aliperta, A., Schena, E., Sinibaldi, E., Palermo, E., Oddo, C.M. "Design and Development of Large-Area FBG-Based Sensing Skin for Collaborative Robotics"
Invited Speaker at national conferences	<ul style="list-style-type: none"> ● Invited lecture on "Telepresenza multisensoriale per operazione remota sicura nell'4.0" on February 21, 2017, at Politecnico di Milano, within the 1st Workshop Cluster Fabbrica Intelligente: La Fabbrica Intelligente nel Piano Nazionale Industria 4.0 (main organizer: Prof. Tullio Tolio). ● Invited lecture on "Dall'automazione industriale ai robot cognitivi: evoluzione della robotica in sanità" within the session on "Disruptive technologies: attualità e frontiere della sanità digitale" at the national conference organized on May 11, 2018 in Rome by the Italian Association of Clinical Engineers
Invited Speaker at international conferences	<ul style="list-style-type: none"> ● Invited presentation on "Experiences from the FET Flagships Interim Evaluation" within a workshop organized in the framework of the ERA-LEAN initiative, delivered on November 8, 2017, in Brussels ● Invited plenary tutorial lecture about "Neuromorphic artificial touch sensors for hand bionic prostheses" at the 13th Annual IEEE International Symposium on Medical Measurements & Applications, delivered on June 13, 2018, in Rome (MeMeA 2018, invited by the general chair Prof. Zaccaria Del Prete) ● Invited tech-talk lecture on "Artificial touch: from bionic hand prostheses to telepresence in healthcare 4.0", delivered on October 29, 2018, at the India-Italy Technology Summit in New Delhi ● Invited lecture on "Artificial touch: from sensory recovery in biomedical applications to industry 4.0", delivered on May 9, 2019, at the 25th World Smart Systems & Micromachine Summit (MMS), in Xi'an, China
National and international awards for research activities and other relevant information (last 3 years)	
National awards	<ul style="list-style-type: none"> ● National Scientific Qualification to serve as Associate Professor in Bioengineering (09/G2 sector), obtained the 30th of March 2017, with unanimous positive evaluation given by all five members of the committee ● In the last evaluation of research quality (VQR) exercise operated by the Italian National Agency for the Evaluation of Universities and Research Institutes (ANVUR), related to the 2011-2014 period, he got all (2 out of 2) research products evaluated as excellent ● Co-founder and elected Vice-Chair of the Italian Chapter of the IEEE Sensors Council (about 230 members) (link) ● Co-founder and member of the National Association for Bioengineering Research ● He served as jury member for the Robotics Innovation Prize (Premio Innovazione Robotica) at the MECSPE 2019 industrial fair ● Selected media coverage: <ul style="list-style-type: none"> ○ http://www.ansa.it/canale_scienza_tecnica/notizie/biotech/2018/08/01/il-cervello-riconosce-gli-oggetti-grazie-al-tatto_6fefa95d-bce2-4632-be43-f81a61e33d9c.html ○ https://www.repubblica.it/scienze/2017/04/04/news/dito_bionico_legame_cervello_tatto-162165488/ ○ http://www.lescienze.it/news/2017/04/05/news/tatto_proteti_sensibili_reti_cerebrali_salute_cervello-3483397/ ○ https://www.santannapisa.it/it/multimedia/rai3-robosimian-il-robot-della-nasa-gestire-emergenze-ha-una-mano-

	<p>sensorizzata-grazie</p> <ul style="list-style-type: none"> ○ https://tg24.sky.it/tecnologia/hi-tech/2019/04/05/robosimian-robot-nasa-arto-sensibile-sensori-italiani.html ○ http://www.dire.it/22-04-2019/323798-un-robot-per-amico-da-pisa-alla-nasa/
International awards	<ul style="list-style-type: none"> ● In the 2016-2017 period, he was appointed to serve as Senior Advisor (4500 €) within the activities of the H2020 FET Flagships Interim Evaluation Panel (1 Billion € Research and Innovation initiative) (link) ● In the 2017-2018 period, he was appointed to serve as Member of the Advisory Board of the EU H2020 EFFECT project (2250 €) ● He served as finance chair and member of the organizing committee of the ICNR, WeRob and InBots 2018 conferences, which were held in October 16-20, 2018 in Pisa ● He has been appointed to serve as general co-chair of the 2020 IEEE International Workshop on Metrology for Industry 4.0 and IoT, which will be held in June 3-5, 2020 in Rome ● He had a number of editorial responsibilities in international peer reviewed journals and conferences: <ul style="list-style-type: none"> ○ Guest Editor of the research topic on "Neuromorphic Sensory Functions in Neuro-robotics and Bionics and the Underlying Biological Processes", jointly hosted by the international scientific journals Frontiers in Neuroscience (impact factor: 3.877), Frontiers in Neurorobotics (impact factor: 2.606) and Frontiers in Robotics and AI (link) ○ Guest Editor of the research topic on "Human-Like Advances in Robotics: Motion, Actuation, Sensing, Cognition and Control", hosted by the international scientific journal Frontiers in Neurorobotics (impact factor: 2.606) (link) ○ Member of the Editorial Board of Journal of Sensors (impact factor: 2.057) (link) ○ Review editor of Frontiers in Neurorobotics journal (link) ○ Review editor of Frontiers in Bioengineering and Biotechnology journal (link) ○ Associate Editor of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2018 ○ Member of the Executive Program Committee and Associate Editor of the 7th IEEE RAS/EMBS International Conference on Biomedical Robotics and Biomechanics (BioRob) 2018 ○ Associate Editor of the IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS) 2019 ● In the 2016-2019 period, he served as peer-reviewer for the following agencies: <ul style="list-style-type: none"> ○ He served as peer-reviewer for a research grant proposal within the following call: Troisième Programme D'investissements d'Avenir, ANR – Agence National de la Recherche (France) ○ He served as peer-reviewer for research grant proposals within the following calls: OPUS and PRELUDIUM of National Science Centre (Poland) ○ He served as peer-reviewer within the Research Quality Evaluation (VQR) exercise in 2016-2017 (VQR 2011-2014), appointed by the Italian National Agency for the Evaluation of the University and Research Systems (ANVUR) ○ He served as peer-reviewer for research grant proposals submitted to a call of Regione Piemonte ○ He served as peer-reviewer for research grant proposals for the German Academic Exchange Service (DAAD) ● In the 2016-2019 period, he served as peer-reviewer for the following scientific journals and conferences: <ul style="list-style-type: none"> ○ Science Robotics (journal) ○ IEEE Transactions on Neural Systems and Rehabilitation Engineering (journal) ○ IEEE Transactions on Neural Networks and Learning Systems (journal) ○ IEEE Transactions on Cognitive and Developmental Systems (journal) ○ Soft Robotics (journal) ○ Frontiers in Neurorobotics (journal) ○ IEEE Robotics and Automation Magazine (journal) ○ IEEE Sensors journal (journal) ○ Frontiers in Neurorobotics (journal) ○ Bioinspiration and Biomimetics (journal) ○ Disability and Rehabilitation: Assistive Technology (journal) ○ 2017 International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2017) ○ 2017 IEEE International Conference on Rehabilitation Robotics (ICORR 2017) ○ 2017 International Symposium on Circuits and Systems (ISCAS 2017) ○ 2018 International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2018) ● Selected media coverage: <ul style="list-style-type: none"> ○ http://www.xinhuanet.com/english/2019-04/12/c_137969582.htm

Track-record of Dr. Calogero Maria Oddo

EDUCATION

- 2008 – 2011 PhD in Innovative Technologies (curriculum BioRobotics), *with honours*, Scuola Superiore Sant'Anna (SSSA), Pisa, Italy
2010 Visiting PhD Student, Dept of Physiology, Univ. of Gothenburg
2002 – 2007 MSc and BSc, *with honours*, in Electronic Eng, University of Pisa (UNIFI), Pisa, Italy
2002 – 2008 1st and 2nd level degrees, *with honours*, in Information and Industrial Eng, Honours College of SSSA (10 scholarships, 334 applicants)
2005 Course on E-Business in the Digital Age, *A grade*, London School of Economics

CURRENT POSITIONS

- 2019 – today Associate Professor of Bioengineering, SSSA
2015 – today Adj Prof of Neuromorphic Engineering, Bionics Eng MSc, UNIFI and SSSA

PREVIOUS POSITIONS

- 2016 – 2019 Tenure-Track Assistant Professor of Bioengineering, SSSA
2015 – 2017 Adj Prof of Natural and Artificial Senses, Biomedical Eng BSc degree, UNIFI
2012 – 2016 Assistant Prof of BioEngineering (without Tenure-Track), SSSA
2011 – 2012 Postdoctoral fellow in BioEngineering, SSSA

FELLOWSHIPS AND AWARDS

- 2017 National habilitation to serve as Associate Professor of Bioengineering
2016 Comitato dei Cento award for the bionic touch study published by eLife journal
2014 Luigi Bertelè prize received by Alice Salgarella for her MSc thesis in Biomedical Eng. on bio-hybrid tactile sensor (supervised by CM Oddo).
2012 Finalist for Georges Giralt European PhD Award
2011 Working Capital prize awarded by Telecom Italia
2009 Finalist for best student paper award at the IEEE RoBio conference
2006 BioRobotics prize awarded by Alumni Association of SSSA for BSc thesis

SUPERVISION OF GRADUATE STUDENTS AND POSTDOCTORAL FELLOWS

- 2012 – today 7 postdocs ongoing (+7 completed), 5 PhD students ongoing (+8 graduated, all with honours), 4 research assistants ongoing (+5 completed), 1 MSc thesis ongoing (+12 graduated, 9 with honours), 2 BSc theses ongoing (+42 graduated), 1 visiting Erasmus ongoing (+6 completed)

TEACHING ACTIVITIES

- 2015 – today Chair of Neuromorphic Eng, for MSc students, SSSA/UNIFI (6 ECTS)
2015 – today Chair of Neuromorphic Comp/Eng, for SSSA honors college students (3 ECTS)
2015 – 2017 Chair of Natural and Artificial Senses, for BSc students, UNIFI (6 ECTS)
2014 – today Chair of Graphical Programming, for PhD students, SSSA (2/3 ECTS, from MSc)
2012 – 2015 Chair of FPGA logics, for Honours College students, SSSA (3 ECTS)
2012 – 2014 Chair of Neuromorphic Eng/Tactile Sensing, for PhD students, SSSA (2 ECTS)

ORGANISATION OF SCIENTIFIC MEETINGS

- 2018 Co-organizer and finance chair, ICNR, WeRob and INBOTS 2018
2016 Co-organizer, Italy-Sweden Workshop on Tactile Coding and Neuroprostheses
2016 – 2019 Associate Editor, IEEE BioRob/IROS Conferences
2013 Program Committee, NEUROTECHNIX International Congress
2012 – 2013 Program Committee, Towards Autonomous Robotic Systems Conferences
2012 Co-chair, session on Bio-Inspired Design and Control of Robot Hands, IEEE BioRob Conf
2012 Co-organizer, session on Tactile Sensors, IEEE BioRob Conf

INSTITUTIONAL RESPONSIBILITIES

- 2013 – today Head of the Neuro-Robotic Touch Lab (previous Human-Machine Nexus Lab), Neuro-Robotics Area, The BioRobotics Institute, SSSA
2019 – today Coordinator of the Innovation and Demonstration Node of The BioRobotics Institute within the ARTES 4.0 Industry 4.0 Competence Center led by SSSA. Nominated SSSA representative within the ARTES 4.0 Assembly
2016 – 2019 Member of the Council, Centro di Ricerca Matematica Ennio De Giorgi, Pisa
2016 – today Member of the Steering Committee, Microneurography and Microstimulation N2Lab, Pisa
2017 – 2019 Member of the Joint Student and Teachers Board, SSSA
2015 – today Elected member of the Academic Class of Applied Sciences of SSSA, representing all Assistant Professors in Engineering of the University
2013 – today Member of the Faculty Board, PhD programme in BioRobotics of SSSA
2013 – 2016 Member of Scientific Committee, 3 editions, 2nd level Master funded by TIM, SSSA
2012 – today Member of the Council, The Biorobotics Institute of SSSA

COMMISSIONS OF TRUST

- 2017 – 2018 Member of Advisory Board, EU H2020 EFFECT project
2016 – 2017 Senior Advisor, H2020 FET Flagships Interim Evaluation Panel
2016 – today Associate Editor, Journal of Sensors, Hindawi

2016 – 2017 Guest Associate Editor, 2 Special Issues on Frontiers in Neuroscience and Frontiers in Neurorobotics
2015 – today Review Editor, Frontiers in Neurorobotics and Frontiers in Bioengineering and Biotech.
2014-2017 Reviewer of research project proposals submitted in Italy, France, Germany, Poland and Israel
2014 – today Member of committees for awarding PhD, MSc and BSc degrees at SSSA and UNIPI, EPFL, Université Pierre et Marie Curie and Université Paris Descartes, Universities of Cagliari, L'Aquila and Rome, Università Campus Bio-Medico
2008 – today Reviewer for 31 international scientific journals, including IEEE TNNLS TRO TMECH TNSRE RAM, J Neural Eng, IJRR, Sensors & Actuators A, Sensors, Science Robotics

MEMBERSHIPS OF SCIENTIFIC SOCIETIES

2012 – today IEEE, IEEE EMBS/RAS/Sensors Council (present vice-chair of IEEE Sensors Council Italian Chapter), National Bioengineering Group

MAJOR COLLABORATIONS

- Prof. Henrik Jörntell, Touch neurophysiology in rodents, Faculty of Medicine, Lund University, SE
- Prof. Mathew Diamond, Touch neurophysiology in rodents, International School for Advanced Studies, IT
- Prof. Hansjoerg Scherberger, Touch neurophysiology in non-human primates, German Primate Center, DE
- Prof. Johan Wessberg, Touch neurophysiology in humans, Dept. Physiology, Univ. of Gothenburg, Sweden
- Prof. Alan Wing, Touch psychophysics, School of Psychology, University of Birmingham, UK
- Prof. Jean-Louis Thonnard, Touch psychophysics, Inst. of Neurosci., Univ. Catholique de Louvain, BE
- Prof. Paolo Maria Rossini, Clinical trials, Faculty of Medicine, Univ. Catt. del Sacro Cuore, IT
- Prof. Ugo Faraguna, Touch neurophysiology in humans, SonnoLab, University of Pisa, IT
- Prof. Francesco Moscato, Heart biomechanics, Center for Medical Physics and Biomedical Engineering, Medical University of Vienna, AT
- Dr. Peter Detemple, Dr. Stefan Schmitt, MEMS sensors, IMM Fraunhofer, Mainz, DE
- Prof. Michael Adams, Touch tribology, School of Chemical Engineering, University of Birmingham, UK
- Prof. Michael Ward, MEMS tactile sensors, School of Engineering, Birmingham City University, UK
- Prof. Gianluca Ciardelli, Dr. Chiara Tonda-Turo, Bio-hybrid tactile sensors, Politecnico di Torino, IT
- Prof. Eugenio Guglielmelli, Prof. Loredana Zollo, Prof. Dino Accoto, Prof. Emiliano Schena, Hand Neuroprosthetics and fiber-optics tactile sensors, Università Campus Bio-medico di Roma, IT
- Prof. Paola Saccomandi, fiber-optics tactile sensors, Politecnico di Milano, IT
- Prof. Luigi Raffo, Prof. Massimo Barbaro, Dr. Danilo Pani, neural stimulation electronics, Università di Cagliari, IT
- Prof. Paolo Prinetto, Haptic assistive technologies, Politecnico di Torino, IT
- Major internal collaborations within active and past grants at SSSA: Prof. Paolo Dario (ARTES4.0 Industry 4.0 Competence Center, H2020-Endoo, Regional Projects CENTAURO and FID-U4E), Prof. Maria Chiara Carrozza (National Projects MOTU and SENSE-RISC, FP7-Nanobiotouch, PRIN HandBot, FP6-Nanobiotact), Prof. Silvestro Micera (H2020-NeuHeart, FP7-NEBIAS, Italy-Sweden BrainSens), Prof. Arianna Menciassi (Regional Project IMEROS), Prof. Nicola Vitiello, Dr. Simona Crea, Dr. Alberto Mazzoni and Prof. Leonardo Ricotti (National Project MOTU), Prof. Christian Cipriani and Dr. Marco Controzzi (FP7-NEBIAS), Prof. Cesare Stefanini (Regional Project EOLO), Dr. Gastone Ciuti (H2020-Endoo, Regional Projects CENTAURO and FID-U4E), Prof. Erica Palmerini and Dr. Andrea Bertolini (FP7-RoboLaw).

Ai sensi del Regolamento Generale sulla protezione dei dati (RGPD n. 679/2016), autorizzo il trattamento di tutti i dati personali contenuti nel presente curriculum vitae. Tutto quanto dichiarato corrisponde a verità ai sensi delle norme in materia di dichiarazioni sostitutive di cui all'art. 46 e ss. del D.P.R. 445/2000.

Pisa, 2 dicembre 2019