

Curriculum di Giovanni Sparacino

Laureato in Ingegneria Elettronica con 110/110 e lode presso l'Università di Padova nel 1992. Ha conseguito il Dottorato di Ricerca in Bioingegneria presso il Politecnico di Milano nel 1996. Dal 2.1.1997 è di ruolo presso l'Università di Padova: fino al 21.12.1998 come Collaboratore Tecnico (VII.q.f.) del Servizio di Audiologia e Foniatria della Facoltà di Medicina e Chirurgia; poi, fino al 31.12.2004, come Ricercatore Universitario della Facoltà di Ingegneria per il SSD ING-INF/06 Bioingegneria Elettronica ed Informatica presso il Dipartimento di Ingegneria dell'Informazione - DEI; dal 1.1.2005 al 31.3.2019 come Professore Associato e dal 1.4.2019 ad oggi come Professore Ordinario presso lo stesso dipartimento e sempre per il SSD ING-INF/06.

Attività didattica

Dall'A.A. 1999/2000 ad oggi ha tenuto 30 insegnamenti pieni presso la Facoltà/Scuola di Ingegneria dell'Università di Padova. Tra l'A.A. 1997/98 e l'A.A.2017/2018 ha tenuto 59 moduli di corso integrato presso la Facoltà/Scuola di Medicina e Chirurgia. Attualmente è titolare dei corsi di "Informatica Medica" e di "Analisi di Dati Biologici", entrambi per il corso di Laurea Magistrale in Bioingegneria. Ha inoltre tenuto insegnamenti in ambito post-lauream, sia in corsi di dottorato che in master di secondo livello. E' stato relatore, presso la Facoltà/Scuola di Ingegneria dell'Università di Padova, di oltre 100 tesi di laurea, quinquennale (v.o.) o specialistica (DM 509/99) o magistrale (DM 270/04), e di decine di elaborati presentati per il conseguimento di titoli universitari di primo livello (diploma universitario o laurea).

Attività di ricerca

I suoi principali interessi di ricerca riguardano: misura, analisi ed elaborazione di dati e segnali biologici (in particolare serie temporali endocrino-metaboliche, EEG, e potenziali evocati); deconvoluzione e tecniche di stima parametrica per la modellistica di sistemi biologici; algoritmi (calibrazione, filtraggio, predizione) per sensori di monitoraggio in continuo della glicemia. Su questi argomenti ha pubblicato, ad oggi, 127 articoli su riviste internazionali censite nel data base Scopus (su tale data base ha un H-index pari a 34 e 3680 citazioni). E' nell'Editorial Board delle riviste scientifiche Internazionali Sensors e Open Diabetes Journal (entrambe censite Scopus). In carriera ha partecipato a 4 progetti di ricerca PRIN del MIUR (di cui ad uno come responsabile di unità di ricerca), ad un progetto europeo FP6 e a 4 progetti europei FP7. Attualmente è responsabile dell'unità di ricerca dell'Università di Padova nel progetto europeo H2020-IMI2 "Hypo-RESOLVE (Hypoglycaemia – Redefining SOLUTIONS for better LIVES)" (2018-2022, budget dell'unità di 392.000 Euro). E' stato supervisore di 12 dottori di ricerca della Scuola/Corso di Dottorato in Ingegneria dell'Informazione (indirizzo/curriculum Bioingegneria) e supervisore scientifico di 4 assegnisti di ricerca.

Attività di terza missione

E' co-autore di 10 patent application nel campo dei sensori della glicemia (di cui 7 poi cedute ad aziende private attraverso il Servizio di Trasferimento di Tecnologia dell'Università di Padova). E', o è stato, responsabile di vari contratti di ricerca con aziende biomedicali, per un corrispettivo al dipartimento di oltre 1 ML di Euro negli ultimi 10 anni.

Attività istituzionali e gestionali

Attualmente è Vice-direttore del Dipartimento di Ingegneria dell'Informazione – DEI e anche Vice-coordinatore della Scuola di Dottorato in Ingegneria dell'Informazione. Ha svolto una lunga serie di servizi presso ateneo, facoltà e dipartimento come membro di varie entità accademiche, ad es. Giunta di Dipartimento, Consiglio Direttivo del Corso di Dottorato, Commissione Scientifica dell'Area "Ingegneria dell'Informazione", Commissione Statistica di Facoltà, Commissione Orientamento di Facoltà, Consiglio Direttivo del Centro Interdipartimentale di Ricerca sulla Modellistica delle Alterazioni Neuropsichiche in Medicina Clinica (Cirmanmec), Commissione Ricerca DEI, Gruppo di Lavoro di Ateneo per i Ranking Internazionali, ... Ha inoltre ricoperto vari ruoli di coordinamento, quali Coordinatore dell'indirizzo "Bioingegneria" nella "Scuola di Dottorato in Ingegneria dell'Informazione" (2012-2014) e Vice-direttore della stessa (2013-2014), Vice-coordinatore del "Corso di Dottorato in Ingegneria dell'Informazione" e referente del curriculum "Bioingegneria" (triennio 2014-2017 e triennio 2017-2020), Vice-direttore del Master di II Livello in "Machine learning e big data nella medicina di precisione e nella ricerca biomedica" (dal'A.A. 2016-2017 al 2019-2020) e Vice-direttore del Dipartimento di Ingegneria dell'Informazione - DEI (dal 1.10.2016 al 30.09.2017 e poi di nuovo dal 1.10.2018 ad oggi). E' stato diverse volte membro della Commissione giudicatrice per il conferimento del titolo di Dottore di Ricerca (presso Università Politecnica delle Marche – Ancona, Università di Pavia, Università di Pisa, Politecnico di Milano, Università di Bologna, Università degli Studi "La Sapienza" – Roma) e membro della Commissione giudicatrice in concorsi pubblici a ricercatore o professore (presso Università di Padova e presso Università di Bologna, Università di Genova, Università di Pavia, Università di Pisa, Università di Trieste, Politecnico di Milano, Università di Sassari). E' stato eletto nel 2019 e poi di nuovo nel 2021 nel Consiglio Direttivo dell'Associazione Gruppo Nazionale di Bioingegneria.

Pubblicazioni (solo in riviste censite in Scopus)

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2. Sparacino, G., Cobelli, C. A stochastic deconvolution method to reconstruct insulin secretion rate after a glucose stimulus (1996) *IEEE Transactions on Biomedical Engineering*, 43 (5), pp. 512-529.
3. De Nicolao, G., Sparacino, G., Cobelli, C. Nonparametric input estimation in physiological systems: Problems, methods, and case studies (1997) *Automatica*, 33 (5), pp. 851-870.
4. Sparacino, G., Cobelli, C. Impulse response model in reconstruction of insulin secretion by deconvolution: Role of input design in the identification experiment (1997) *Annals of Biomedical Engineering*, 25 (2), pp. 398-416.
5. Vicini, P., Sparacino, G., Caumo, A., Cobelli, C. Estimation of endogenous glucose production after a glucose perturbation by nonparametric stochastic deconvolution (1997) *Computer Methods and Programs in Biomedicine*, 52 (3), pp. 147-156.
6. Sparacino, G., Vicini, P., Bonadonna, R., Marraccini, P., Lehtovirta, M., Ferrannini, E., Cobelli, C. Removal of catheter distortion in multiple indicator dilution studies: A deconvolution-based method and case studies on glucose blood-tissue exchange (1997) *Medical and Biological Engineering and Computing*, 35 (4), pp. 337-342.
7. Sparacino, G., Bonadonna, R., Steinhilber, H., Baron, A., Cobelli, C. Estimation of organ transport function from recirculating indicator dilution curves (1998) *Annals of Biomedical Engineering*, 26 (1), pp. 128-137. DOI: 10.1114/1.84
8. Magni, P., Bellazzi, R., Sparacino, G., Cobelli, C. Bayesian Identification of a Population Compartmental Model of C-Peptide Kinetics (2000) *Annals of Biomedical Engineering*, 28 (7), pp. 812-823. DOI: 10.1114/1.1289459
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10. Sparacino, G., Milani, S., Magnavita, V., Arslan, E. Electrocochleography potentials evoked by condensation and rarefaction clicks independently derived by a new numerical filtering approach (2000) *Audiology and Neuro-Otology*, 5 (5), pp. 276-291. DOI: 10.1159/000013892
11. Sparacino, G., Tombolato, C., Cobelli, C. Maximum-likelihood versus maximum a posteriori parameter estimation of physiological system models: The c-peptide impulse response case study (2000) *IEEE Transactions on Biomedical Engineering*, 47 (6), pp. 801-811. DOI: 10.1109/10.844232
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14. Pillonetto, G., Sparacino, G., Cobelli, C. Reconstructing insulin secretion rate after a glucose stimulus by an improved stochastic deconvolution method (2001) *IEEE Transactions on Biomedical Engineering*, 48 (11), pp. 1352-1354. DOI: 10.1109/10.959332
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19. Pillonetto, G., Sparacino, G., Magni, P., Bellazzi, R., Cobelli, C. Minimal model SI=0 problem in NIDDM subjects: Nonzero Bayesian estimates with credible confidence intervals (2002) *American Journal of Physiology - Endocrinology and Metabolism*, 282 (3 45-3), pp. E564-E573.
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