Resume

Ricardo S. Sánchez Peña (14-Aug-1954)

`rsanchez@itba.edu.ar`
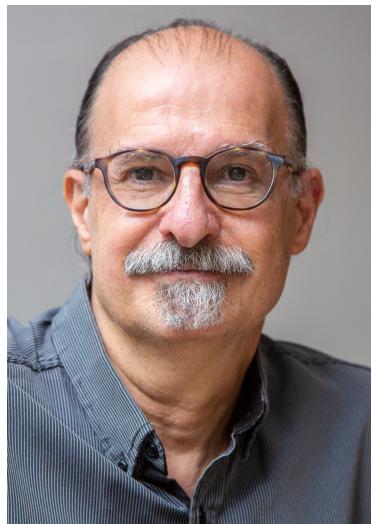
Contents

1 PERSONAL INFORMATION

- Name: Ricardo S. Sánchez-Peña

- Work Address: Depto. de Investigación y Doctorado, Buenos Aires Institute of Technology (ITBA), Lavarden 315, Ciudad Autónoma de Buenos Aures (C.A.B.A.), Argentina.

2 EDUCATION

- Ph.D. in Electrical Engineering (June 1988), California Institute of Technology (CalTech)

- Master of Science in Electrical Eng. (1985), California Institute of Technology

- Electromechanical Engineer, Electronics orientation (1978), School of Engineering, University of Buenos Aires (UBA).

3 POSITIONS

3.1 Universities

3.1.1 ITBA/CONICET (2009–)

Superior Researcher (Investigador Superior) of the National Research Council (CONICET) working at the Instituto Tecnológico de Buenos Aires (ITBA). Full Professor and Head of the PhD Department at ITBA until 2022. PI of several national and international financed projects (see section ??). Teaches undergrad and graduate courses in the area of Control Systems. His work is focused on identification and control applied to Diabetes type I, Neuroscience using *optogenetics*, Unmanned aerial vehicles (UAV), active noise control and H_2 fuel cells.

3.1.2 UPC/ICREA (Spain, 2004-09)

Between 2004-2005, he was *Ramón y Cajal* researcher in Spain (with the highest score 100/100) and between 2005-09 he was Senior Researcher (or Research Professor) of the Institució Catalana de Recerca i Estudis Avançats (ICREA), both at the Sistemas Avanzados de Control (ESAII), Universitat Politècnica de Catalunya (UPC), in Terrassa, Barcelona. He worked in several theoretical problems (LPV control, Robust Identification, model invalidation) and applications (active noise control, open pool canals, wind turbines). He also headed a group at UPC in the area of UAVs. He was Principal Investigator (IP) of several projects financed by the R&D Ministry of Spain (see section ??).

Since 2005, he taught courses on *Identification and Robust Control* for UPC professors, PhD and Master students, courses of *Control and Automation* for Aeronautic undergrad students and a summer course on *Attitude Control in aerospace* at the Arianne cities Program of the EU (CosmoCaixa, Barcelona).

3.1.3 School of Engineering, UBA (1989-2004)

Professor in the Automatic Control area, Dept. of Electronics, starting as a Teaching Assistant and since 1994 as Full Professor, winning a Prof. contest in 1997 and in 2005 promoted to Plenary full Professor. Selected as Professor-Researcher in "A" category since 1994 for the national categorization program. Director of the Identification and Robust Control group (GICOR) with approx. 14 members and of several ANPCyT[1] and UBA (6 projects since 1991) projects, see section **??**. He taught *Optimal Control*, *Robust Control*, *LPV Control System* and *Robust Identification* courses. Member of the Master, PhD and Research evaluation Committees.

3.1.4 CalTech (USA, 1984-88)

At the California Institute of Technology he obtained his Master's and PhD degrees. From 1986-88 he was *Teaching Assistant* in the Master/PhD courses *"Introduction to Systems & Control A, B, C"*, *"Nonlinear Systems"* and *"Adaptive Control Systems"*. He was also *Research Assistant* for the NASA project *NCC2*-477, on the analysis of the experimental X-29 airplane controller, under the supervision of Professors J.C. Doyle and A. Sideris.

3.1.5 UTN-CNIE (1980-84)

For the graduate Space Technology Master program, a cooperation between CNIE[2]-UTN[3], he was Teaching Assistant for *Celestial Mechanics* and *Control theory* courses and Professor of *Gyroscopic instruments and Space dynamics*.

3.2 R&D Centers

- **CONICET (2022–)** Superior Researcher retired (*ad-honorem*) at ITBA.

- **CONICET (2018–22)** Superior Researcher (*Investigador Superior*) at ITBA (see subsection **??**).

- **CONICET (2009–18)** Principal Researcher (*Investigador Principal*) at ITBA.

- **ICREA (Spain, 2005-09)** Senior Researcher at UPC (see subsection **??**).

- **UPC (Spain, 2004-05)** Ramón y Cajal Researcher (see subsection **??**).

- **CONAE (1994-2004)** Researcher with category A.1.a from the Argentine Space Agency (CONAE). He directed the attitude and orbit control and solar panel design and power profileof satellite SAC-C and also the control using differential GPS of satellite SAC-A. He participated in the Satellite Groupat the Argentine Space plan 1995-2006. He directed the Navigation, Guidance and Control area at the Space Access sector with loca developments. In this same years he was:

    - Member of the National Comm. of Dual use exportations (CONACE) that develops argentine legislation on the area (2002-03).

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[1]National Agency for the Promotion of Science and Technology.
[2]National Commission of Space Research.
[3]National Technology University, Haedo.

– Cooperation with Brazil and Ucrania in the area of satellite launchers. First Director of the rocket payload project VS30 with Brazil.

- **CNEA**[4] **(1989-94)**: Researcher at the Scientific Applications Division of CNEA. There he developed signal analysis and Control theory for several projects: D_2O chemical plant, Failure detection for heat exchangers, identification and control of theTATU-M robot arm. In tha period he also visited:

  – **ICAM-VPISU (USA, 1990-91)** Collaboration with Professors from the Dept. of Mathematics of the Virginia Polytechnic Institute & State University (VPISU) at the Interdisciplinary Center for Applied Mathematics (ICAM), on modelling and control flexible structures and stability margin computation of dynamic systems governed by PDEs.

- **IIAE (1988-89)**: Works at the Aeronautics and Space research Institute (IIAE).

- **CNIE (1979-84)**: Space System group of the National Comm. of Space Reseach (CNIE), Argentina. He worked in the area of simulation, identificatioon, modelling and control of dynamical systems. This was applied to gyroscopic systems, inertial navigationand Celestial Mechanics (supervised by CONICET Superior Researcher P.E. Zadunaisky). Participation in the installation of the Inertial Testing Laboratory (1980), and development of software to test gyroscopes and inertial platforms. In this period he also participated in:

  – **CRICYT-IAFE** Sounding ballon campaign, project IAFE-CNIE, Mendoza, Argentina, 1979.

  – **DLR (Germany)** 4 months working at the attitude control system for *Astro-Helium* rocket project, as part of the Movile Rocket Basis (MORABA) at the German Space Agency DLR, Oberpfaffenhofen, Germany, 1979. This project was a cooperatiion between the University of Berlin, DLR and Dornier.

  – **INPE (Brazil)** Final verification and integration for the launch of sounding rocket Skylark 12 (3 stages - apogee 850 Km), for the aforementiioned project, during 2 weeks at *Barrera do Inferno* rocket base, Instituto de Pesquisas Espaciais (INPE), Natal, Brazil, 1979.

  – **ADERSA-GERBIOS (France)** 2 month intense course in Pariis, France, 1982 on modelling, simulation, identification and control of dynamical systems.

- **CITEFA (1977-79)**, Research Ministry of Defense Center (presently CITEDEF): Reliability in Microelectronics group, national developments of transistor and hybrid circuit tests and analysis.

3.3 Institutional positions

- **ITBA (2009–)**: Director of the Engineering PhD Department (2009-13), Director of the PhD Dept. (2013-16), Diirector of the Research and PhD Dept. (2016-22).

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[4]Atomic Energy Commission.

- **ANPCyT (2011-)**: Member of the *ad-hoc* Commission to evaluate PID (2011) and PICT (2017) projects.

- **CONICET (2011-2015)**: Member of the Investigator Career Admission Committee in Engineering (2011-15) and Evaluation Committee for Research Institutes (2017–). Member of the Committee of Qualifications and promotions (*Junta de Calificación y Promoción*) since 2023.

- **ICREA (2010-2014)**: Member of the Evaluation Comm. for Senior researchers (2010) and Admission Comm. for Senior researchers (2011-14), area of Technology.

- **NASA-CONAE (2005-11)** Member of the Standing Review Board for SAC-D/Aquarius (satellite/instrument) in the cooperation NASA and CONAE.

- **United Nations (2000-02)** Technical expert at the UNMOVIC courses in Argentina.

- **MTCR (2000-03)** argentine representative for the Technical expert group of the Missile Technology Control Regime (MTCR) in Berlín and Helsinki (2000), Ottawa (2001), Warsaw (2002), Vienna and Buenos Aires (2003).

4 PERSONNEL TUTORING

4.1 Student Advisor

- Undergraduates: 12 thesis at the School of Engineering, UBA (1989–2004).

- Master:

    1. Fernando D´Amato (UNLP[5])
    2. David Lavernia (UPC, 2009, in collaboration with Dr. B. Morcego)
    3. Kevin Schneider (ETH, 2019-20, in collaboration with Dr. M. Moscoso)

- PhD:

    1. Darío Baldelli (UBA, graduated Dec. 1999)
    2. Mauricio Anigstein (UBA, graduated Nov. 2002)
    3. Pablo Servidia (UBA, graduated Aug. 2009, w/10 Suma Cum Laude)
    4. Alejandro Ghersin (UBA, graduated Dec. 2009 w/10 Suma Cum Laude)
    5. Miquel Cugueró (UPC, graduated March 2010, w/10 Cum Laude)
    6. Cristian Filici (UBA, graduated June 2010, w/10)
    7. Yolanda Bolea (UPC, graduated Nov. 2010 w/10 Cum Laude)
    8. Patricio Colmegna (ITBA, ANPCyT fellowship, graduated Oct. 2014)
    9. Demián García Violini (ITBA, ANPCyT fellowship, graduated Aug. 2015)
    10. Rosa Castañé (UPC, 2006-2008, transfered to TUM, Germany)

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[5]Universidad Nacional de La Plata.

11. Massiel Rebaza (ITBA, 2010-2013, ANPCyT fellowship, returned to Perú)

12. Marcos Bierzychudek (ITBA, graduated April 2016), Co-Director

13. Marcela Moscoso-Vázquez (ITBA, graduated March 2019, CONICET fellowship)

14. Lucía Antunez (ITBA, CONICET fellowship, 2019-20)

15. Martín David (ITBA, graduated Nov. 2021, CONICET fellowship)

16. Sebastián Martínez, (ITBA, since 2020, ANPCyT/CONICET fellowships)

4.2   R&D Personnel

- CONICET Researchers

  1. Dr. A. Ghersin, Assistant Researcher CIC (2011–23)

  2. Dr. I. Mas, Assistant Researcher CIC (2012–18)

  3. Dr. P. Colmegna, Assistant Researcher CIC (2017-22)

  4. Dr. D. García-Violini, Assistant Researcher CIC (2021–)

  5. Dr. Juan Maffi, Assistant Researcher CIC (2023–)

- PosDocs

  1. Dr. Fernando Bianchi, Program (MCI) at UPC, Spain, (2006-2007)

  2. Dr. I. Mas (2011-2012, CONICET Posdoc Fellow)

  3. Dr. P. Colmegna (2015-2016, CONICET Posdoc Fellow). Co-Director Dr. D. Golombek (UnQ).

  4. Dr. D. García-Violini (2016-2018, CONICET Posdoc Fellow). Co-Director Dr. J. Piriz (UBA).

  5. Ing. Marcela Moscoso-Vázquez (2019-2020, CONICET Posdoc Fellow). Co-Director Dr. F. Garelli (UNLP).

- CONICET or ANPCyT PhD Fellowships

  1. Lic. Massiel Rebazza, ANPCyT Fellow (2010-13)

  2. Ing. P. Colmegna, ANPCyT Fellow (2010-14)

  3. Ing. D. García-Violini, ANPCyT Fellow (2010-15)

  4. Ing. Marcela Moscoso-Vázquez, CONICET Fellow (2014–19)

  5. Ing. Martín David, CONICET Fellow (2015–20)

  6. Ing. Sebastián Martínez, ANPCyT Fellow (2020-23), CONICET Fellow (2024-25)

  7. Ing. Valentín Costa, CONICET Fellow (2022–2023)

- CONICET techician: Lic. Laura Pérez (1991-94)

- 7 undergraduate Research fellows at the School of Engineering (UBA) 1989-2004. 1 Graduate research fellow (ITBA), 2018.

- Visitors

  1. Eng. Santiago Hernández (PhD student ITBA), at UPC, April, 2008
  2. Eng. Necmiye Ozay (PhD student Northeastern Univ.), at UPC, Aug. 2008
  3. Eng. Roberto Bunge (PhD student Stanford Univ.), at ITBA, Aug. 2011
  4. Dr. Carlos Ocampo Martínez (researcher UPC), at ITBA, July–Sept. 2013
  5. Eng. Kevin Schneider (Master student ETH), at ITBA, Oct. 2019–april 2020

5 SCIENCE & TECHNOLOGY PRODUCTION

5.1 Scientific contributions

More than 200 journal and conference publications, 6 books in 3 internacional publishing companies: Wiley, Springer, Academic Press (Elsevier) and 3 national ones: AADECA[6], ANCEFN[7] and EUDEBA[8]; plus 7 book chapters.
Research Gate (RG): > 48.000 views and Research interest > 1.900, a score larger than 97% of researchers in the area of *System and Control* y and 96% of members of RG.
Google Scholar: Citations > 4.100, **h=33, i10=68**.
https://scholar.google.com/citations?hl=es&user=B_Xkd0sAAAAJ

5.2 Technological contributions

5.2.1 Patents/software registration

The Artificial Pancreas control algorithm ARG (Automatic Regulation of Glucose) is registered as software RL-20 18-12151300-APN -DNDA#MJ (23/3/2018) which was verified by inpatient (june 2017) and outpatient (march 2021) clinical trials.

5.2.2 Consulting

- **2005-08 and 2016** Consultant for ZONA Technology (Phoenix, USA) at: Phase I and first half of Phase II for NASA project: NSF/SBIR NSF04-551, *Applications of LPV techniques to Aeroelastic Morphing in aeronautical UAV Systems*, Phase II project SBIR 04-II-A2 *Model updating Nonlinear System Identification Toolbox* and short course teaching.

- **2012/13** Consultant for the Secretary of Planning, Ministry of Defense.

- **2011** Consultant (*ad-honorem*) for VENG (New generation space vehicle), area of attitude control of VEX-I (CONAE's prototype satellite launch vehicle) Tronador II series.

- **2009** Six month contract for STI (Integrated Technological Services) for the attitude and orbit control of satellite SARE from CONAE.

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[6]Argentine Association of Automatic Control.
[7]National Academy of Exact, Physical and Natural Sciences.
[8]University of Buenos Aires Editors.

- **2008-09** One year contract to head the project *"Multivaribale robust control of a wind turbine"* for Alstom-Ecotecnia (Barcelona, Spain).

- **1992-94** He participated in the controller dessign for the first scientific argentine satellite SAC-B (joint project NASA–CONAE), as CONAE's consultant (Argentina).

5.2.3 Applications

As a result of the work at Institutes and universities, consulting and projects, I have appplied control and identificatiion to several problems in different branches of Engineering, Medicine and Neurobiology.[9] See podcast:
https://open.spotify.com/episode/1dEHaQGgdEaKOCvxZvH4OH?si=g6vbyB7LSa6ve9cyfJ76zQ

- Reliability for national transistors and hybrid circuits (CITEFA)

- Test and analysis of inertial sensors for space navigation (CNIE)

- Control of robotic manipulators (CNEA, School of Engineering UBA)

- Vibration control of flexible mechanical structures (CNEA, School of Engineering UBA, ICAM-Virginia Polytechnic Inst. & State Univ.)

- Attitude control of satellites: SAC-A, B and C (CONAE), SARE (STI) and passive control of pico-satellite MSU-1 (School of Engineering UBA)

- Sounding rocket control: Astro-Helium (DLR, Germany) and VS30 (INPE, Brazil)

- Optimization of SAC-C solar panels (CONAE)

- H_2 PEM fuel cell control (UPC, Spain)

- Wind turbine control (Alstom–Ecotecnia, Spain)

- Analysis of X-29 experimental aircraft (NASA-Dryden/CalTech, USA)

- Active noise control in air tubes and motorcycle helmets (UPC, Spain and ITBA)

- UAVs and flight formation control: variable structure aircraft *Z-wing* (AFRL, USA), helicopters (UPC, Spain), and quadrotors/hexacopters (ITBA, Argentina)

- Modeling, validation and Control of lockouts (quarantine) during COVID19 pandemic, including blood donation of recovered patients.

- Signal analysis and control applied to Neurobiology using *optogenetics*, in collaboration with CONICET researchers in the School of Medicine at UBA and ITBA.

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[9]The papers derived from this variety of applications have been published in 8 different IEEE[10] journals (see section **??**).

- Director of the Artificial Pancreas project for Diabetes Mellitus tipo 1 (diabetek.org) patients. In 2016/17 we had the first clinical trials in Latin America with a locallly developed algorithm, the ARG[11]. In 2021 we performed the 3rd clinical trial (outpatient, 6 days-5 patients) with the **InsuMate** system, also locally developed and in 2024 a sstress and physical activity trial. We collaborate in Argentina with the groups at UNLP and HIBA[12]and in the USA with the Univ. of Harvard (previously at Univ. of California-Santa Barbara) and Virginia.

  One of the results of this project was the first worldwide book in this area with contributions from differents countries:

  Sánchez Peña R., Cherñavvsky D. (Eds.), Artificial Pancreas: current situation and future directions, **Academic Press** (Elsevier Inc.), Biomedical Engineering series, 306 pages, 2019.

6 OTHER CONTRIBUTIONS

6.1 Direction of funded projects

6.1.1 International funds

- **USA (2014-15)** UAV flight formation project, financed by the USA International Technology Center, Latin America (USA). Amount: U$S 48.000.

- **Spain-Argentina (2013-16**) Diabetes control project financed by Cellex (Spain) and Nuria (Argentina) Foundations. Amount: U$S 27.500 (2013-2104) and U$S 86.965 (2015-16).

- **Spain (2009-11)** CICYT project DPI2008-0403 from Ministry of Education and Science (MEC): *Solutions to the gap between Mathematics and Engineering Applications in Systems and Control* with the support from ZONA Technology and Ecotecnia-Alstom. Amount: €161.000.

- **Spain (2007)** Subsidio PEIR de la Generalitat de Catalunya (AGAUR). Amount: €18.000.

- **USA-Spain (2006-07)** PI for thel Balsells Catalunya-California Programme between UPC and the Univ. of California (Irvine). Amount: U$S 30.000.

- **Spain (2005-08)** Project CICYT DPI2005-4722 from Ministry of Education and Science (MEC): *Identification, Diagnostics and Control using LPV techniques.* Amount: €157.000 + €50.000 (plus FPI fellowship).

6.1.2 National Funds

- **ANPCyT (2011-2014)** PRH-PICT (3 years) + PME + 3 PhD felowwships PFDT (4 years), for the *Gap between Mathematics and Engineering Applications in Systems and Control* project.

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[11]Automatic Regulation of Glucose.

[12]Hospital Italiano de Buenos Aires.

- **ITBACyT (2012)** Diabetes Control project ITBACyT (1er. place).

- **ANPCyT (2008)** Repatriation of scientists around the world, PIDRI Human resources Programme (PRH), Science & Technology Ministry, Argentina.

- **UBA (2002-04)**: Director of the pico–satélite MSU-1 student project, financed by the Provost at UBA.

- **UBA (1998-2000)** Several 3-year projects UBACyT from UBA 1991-93 as Co-Director and in 1994-97 and 1998-2000, as project Director.

- **ANPCyT (1997-2004)** Two projects PICT97 (2 years) and one PICT99 (3 years), both as Director.

- **Several (1991-2000)** Grants from *Fundación Antorchas* and AADECA to attend a Robust Control Worshop from IFAC[13] (only Latin american representative) and to work in ICAM-Virginia Polytechnic Inst. & State Univ.

6.2   Awards & Distinctions

- **1992** First proze book contest organized by AADECA, local representative of IFAC, see section **??**.

- **1992-95** Awards for Science & Technology production at UBA during years 1992/93/94/95.

- **2000-06** Selected as *Senior Member* of IEEE (2000) and AIAA[14] (2004). Selected as *Corresponding Member* (2001) and latter as *Full Member* (2006) of the International Academy of Astronautics.

- **2004** UBATEC award (Argentina) "Technology transfer encouragement" as a Director of project *Precision navigation systems to acquire aerial images geo-referenced in high resolution.*

- **2005-08** Designed member of the *Policy Committee* of IFAC.

- **2013**

  – NASA *Group Achievement Award* as part of the Standing Review Board for project Aquarius/SAC-D (USA).

  – *Consagración en Ciencias de la Ingeniería* award granted by ANCEFN. Gold medal and diploma.

- **2014**

  – AADECA award for his *"prestigious international scientific labour"*. Gold covered plaque.

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[13]International Federation of Automatic Control.

[14]American Association of Aeronautics and Astronautics.

– *"Brig. My. Juan Ignacio San Martín"* award from the *Polo de Referentes Industriales de Argentina e Iberoamérica.* Gold covered statue.

– ANCEFN academic. Diploma.

- **2015** Member of the *Board of Governors* of the IEEE Control System Society and also *Executive Member* of the IFAC Industry Committee.

- **2016** IEEE awards: *Ingeniero Eminente* in R9 region (plaque) and Chair of the Multi-conference on Systems & Control (plaque).

- **2017 *Press*encia** award from ITBA: (acrilic statue).

- **2018 *Outstanding reviewer***, for the Journal of Process Control, Elsevier (certificate).

- **2022** *Ingeniero Huergo* award granted by the National Academy of Engineering, in collaboration with Drs. M. David, F. Bianchi and C. Ocampo for the work *Model-based control design for H_2 purity regulation in high-pressure alkaline electrolyzers.*

- **2023** KONEX award in Engineering, selected as one of the 5 most prestigious professionals in the last decade.

6.3 Plenary/Invited Talks

- **Plenary.** *3er. International Congress in Telecomunications* (Medellín, Colombia, 2013), *Int. Conf. on Innovation in Medicine & Healthcare* (San Sebastián, Spain, 2014), *Workshop on Control Systems and Energy Efficiency in Latin America* (Bogotá, Colombia, 2014), IEEE CCAC (Cartagena, Colombia, 2017), *2nd IFAC Workshop on Linear Parameter Varying Systems* (Florianópolis, Brazil, 2018).

  In argentina: *Congreso Nacional de Control Automático*, Buenos Aires, 1992 and 2012. *Jornadas Argentinas de Robótica* in 2010 (Buenos Aires). *Reuniones de Procesamiento de la Información y Control* (RPIC) in 1997 (San Juan) and in 2011 (Paraná). *Congreso de Matemática Aplicada Computacional e Industrial* in 2011 (Bahía Blanca). *Workshop de Investigadores en Ciencias de la Computación* in 2017 (Buenos Aires). Also invited to speak at the IV Encuentro Académico CICAL en 2017.

- **Invited talks.** As a part of the Robust Control Group of IFAC, he was invited to a small group of less than 30 researchers around the world to Workshops at Kappel Am Albis (Switzerland, 1991), Napa Valley (USA, 1996) and Banyuls sur Mer (France, 2017). Invited at the *American Control Conference* in Chicago (*Invited Sessions*, 1992), Montreal (*Tutorial Sessions*, 2012) and Philadelphia (*Invited Sessions*, 2019). Also to *LASAC'95*, Santiago de Chile (1995), the *Italian–Latin American Conference on Applied & Industrial Mathematics*, Rome (1997) and to the *European Control Conference*, Porto (2001). In 2006 and 2007 he talked at the Science Week in Barcelona and Tarragona invited by *La Caixa.* He delivered a talk at Northrop-Grumman (San Diego, USA) in 2008. He was invited in 2018 to deliver a talk at the Instituto Balseiro (Bariloche) and to participate in the *Café Científico: Diabetes en el siglo XXI* organized by ANCEFN (Bs. As.). In 2019 he was invited by the Center for Diabetes Technology of the Univ. of Virginia to give a talk and to

arrange future collaboration. In 2021 he was invited by the Univ. of California (Sta. Cruz) to give a talk and to guide students from the Cyber-Physical Systems Research Center. Invited by IRI (UPC) in june 2023 to work in the Alternative Energies project: PID2020-115905RB-C21 (L- BEST) financed by MCIN/ AEI /10.13039/501100011033 from Spain. Invited to give a talk at the 50 years celebration of IAM[15] and of OATEC[16], Bs.As., 2023. In 2023/24 que gave 2 (virtual) talks at the Universities of Tübingen and Toronto on Control applied to Neuroscience.

6.4 Fellowships

- **CONICET** Graduate fellowship (Beca de Perfeccionamiento), April 1984 (not used) and International PhD fellowship (Beca Externa) from July '86 to June '88.

- **OEA** International fellowship from the Organization of American States (OEA), from Sept. 1984 to July 1986.

6.5 Conference Organization

6.5.1 National

Member of the Academic Comm. of the Automatic Control national Symposia and RPIC in several ocassions since 1990 and of the *Mathematics Applied toEngineering* (InMat) in 2003 and 2008. Organizer of the GPS sessions of the *First USA-Argentine Conference of Space, Science and Technology for Society* and of the course *GPS/INS Integrated Navigation Systems*, both in Buenos Aires (1997). He has been Co-Chairman of the 9th. Argentino Simposium of Computer Technology (2008) and member of the organizing Comm.of the CASE 2011 (Congreso Argentino de Sistemas Embebidos).

6.5.2 International

He organized and was General Chairman jointly with Prof. M. Sznaier of the IEEE Multi-Conference on Systems and Control for the first time in Latin America (Buenos Aires, 2016). He has also been member of the Policy Comm. (2005-08) and Executive Industry Comm. member from 2015-20, both from IFAC and part of the Board of Governors of the Control System Society of IEEE (2015-16). He has been Associate Editor of the IEEE *Conference on Decision and Control* (CDC) 2008 for Invited Papers, and member of the International Program Committee of CDC in 2013 (Florence, Italy), of the IFAC *Symposium on Robust Control Design* (ROCOND) in 2009 (Haifa, Israel), in 2012 (Aalborg, Denmark) and 2022 (Kyoto, Japan) and of the Symposium on Small Satellites, 2017 (Buenos Aires). He was *Chairman* of IEEE and IFAC international Conferences in severl opportunities and member of the *Technical Committee on Robust Control* from IEEE and IFAC, participating as such in Kappel Am Albis, Switzerland (1991) and Napa Valley, USA (1996).

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[15]Instituto Argentino de Matemática.

[16]Olimpíadas Argentinas de Tecnología.

6.6   Invitation to foreign Centers

- **CalTech** post doctoral stay at the California Institute of Technology (Jun/Jul 1989) in the area of Robust Control.

- **ICAM** Invited by the *Interdisciplinary Center for Applied Mathematics* del Virginia Polytechnic Institute & State University (Aug/Sept 1991).

- **UR** Taught short courses at the Universidad de la República (Montevideo, Uruguay, 1993).

- **PennState** invited by the Dept. of Electrical Eng. of the Pennsylvania State University in Dec. 1994 and Jul/Aug 1996.

- **Purdue Univ.** invited as *Visiting Full Professor*. He taught an undergraduate course at the Aeronautics and Astronautics Dept. of Purdue University and also research during Dec. 1994 and Feb/Mar 2001.

- **UPV/UNED/UPC** Invited by DISA - Univ. Politécnica de Valencia in Jun/Jul 2002 where he taught a Robust control course and was PhD Jury. He also had short invitations during that time to UNED (Madrid), and the Univ. Politécnica de Catalunya (Jul 2002).

- **Center for Diabetes Technology** (Univ. of Virginia). He gave several talks to Prof. and students and research for cooperation (March 2019).

6.7   Invitation to national Centers

In Argentina hw was invited by the Universidad de La Plata, Universidad Nacional del Sur, Universidad de Rosario, Universidad del Comahue, Universidad de Tucum'an, Intec-Conicet (Santa Fé), and the Fundación para el Desarrollo de Nuevas Tecnolog'ias, la Escuela de Ciencias Informáticas (ECI) de la FCEyN (UBA), to teach short courses and talks.

6.8   Evaluation activities

- **Editor/Reviewer**: Since 1988 reviewer for the *IEEE Transactions on Automatic Control, ...on Control Systems Technology, ...on Aerospace and Electronics, ...on Circuits and Systems*. Also *Automatica, International Journal of Control, International Journal of Robust and Nonlinear Control, Control Engineering Practice, Revista Iberoamericana de Automática e Informática Industrial, Conference on Decision and Control, American Control Conference* and *AIAA Conference on Guidance, Navigation & Control*. Book reviewer for Springer-Verlag and Associate Editor for the *Latin American Applied Research* (1993-2003), presently member of the *Advisory Board* and Editor for this journal Special issues with papers from RPIC in 1995, 1997 and 1999. Associate Editor for the *Journal of Control Science and Engineering* (2005-2010).

- **Projects**: Reviewer at the *Preliminary Design Review* of SAC-B satellite (NASA/CONAE project) jointly with Dr. Mariscotti, and Eng. Ciancaglini and Godel (1991). Reviewer for projects of the *Australian Research Council* (1993), the *Programa Iberoamericano para el Desarrollo* (1996), the Universidad Mayor de Montevideo (1997), the *Agencia de Gestión de*

Ayudas Universitarias y de Investigación from the Generalitat de Catalunya, Spain (2006-2008) and member of the *Standing Review Board* (2005-11) for project Aquarius/SAC-D (NASA/CONAE). In Argentina, Jury for the area of Engineering for the *Premios a la Producción Cient'ifica y Tecnológica* from UBA, 1993. Evaluator and President for the *Ad hoc* Informatics, Electronics and Communications Comm. from ANPCyT (1999-2000) and member of the *Ad hoc* Comm. for PID projects of the Ministry of Science & Technology since 2009. Advisor of the National Space Plan 2003-2014 and of projects from the Universities of Buenos Aires, Rosario, La Pampa, S. del Estero, Jujuy, UTN Córdoba and *Antorchas Foundation.*

- **Personnel**: Jury for professorship contests and undergrad thesis of national universities and of the School of Informatics (ESLAI). Jury of 25 PhD and 6 Master thesis from the following universities: Univ. Politécnica de Valencia, Politécnica de Cataluña, Autónoma de Barcelona and Univ. de Ciudad Real (Spain), Universidad Javeriana (Colombia) and in Argentina, University of Buenos Aires (UBA), of Rosario, of La Plata, Mar del Plata and Nacional del Sur. Reviewer for *Categorizaciones de Docentes-Investigadores* for levels I and II, in the area of Engineering, proposed by the CIN (1998). Reviewer for the production of 5 Research professors from ICREA, Barcelona, España (2010). In 2011-14 member of the Admission Comm. for Senior researchers at ICREA. Member of the Admission Comm. for CONICET in the areaa of Engineering in 2013-15. Advisory member for the Quality and Industrial Innovation PhD progam of INTI[17] (2022–).

6.9 Press/Radio/TV

- Interviews in TV, for the first flight of NASA's Space shuttle in 1981.

- Interview in **La Malla Radio**, Barcelona, 2006 (in catalán).

- Newspaper articles from **El País** and **El Punt**, on UAVs, Barcelona, 2006.

- Journal article in **Technology Review**, published by MIT[18] in 2007.

- Newspaper article in **Diari Terrassa**, on UAVs, Barcelona, 2007.

- Interview in **National Radio** at Program *Gente de a pie*, for the inauguration of the *Polo Científico-Tecnológico*, and scientists repatriation, 2011.

- Web publication **Redusers** http://www.redusers.com/noticias, 2012.

- Biographical article in journal **Prensa Libre** - Province of Buenos Aires, 2013.

- Web publication, **TSS Agency** http://www.unsam.edu.ar/tss, 2013.

- Newspaper article in **La Nación**, about NASA award, 2014.

- Article in **Apertura**, Page 42/special edition *Especializaciones en Tecnología*, 2014.

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[17]National Institute for Industrial Technology.

[18]Massachusetts Institute of Technology

- Journal articles in **Information Technology**, published by MIT in 2013 and 2015.

- (July 2016) Interview by journalist Guillermo Lobo at TN channel about the *Artificial Pancreas* project, see http://tn.com.ar/salud/lo-ultimo/algoritmos-para-la-vida_687036

- (Nov. 2016 and 2017) Interviews and articles concerning the 2 first clinical trials in Latin America (Nov. 2016 and June 2017) with our Artificial Pancreas project developed in Argentina, as a Director.

    1. *Newspapers*: Clarín (front page), La Nación, La Prensa.
    2. *TV*: Channel 9, Telefé, Public TV, City Channel, La Nación channel, TN, C5N and the programme *Diagnóstico y Debate* (Metro channel).
    3. *Radios*: Interviews in Noticiero *Segunda mañana* (Eduardo Battaglia), Programme *Formato Paulina* de Radio Latina, Vorterix (Pergolini), Programme de Chiche Gelblumg, Programme *Todos Arriba* (Nicolás Magaldi), Radio Buenos Aires, Radio Millenium (Llamas de Madariaga), Radio Mitre, LT9 AM1150 (Santa Fé), Cadena 3 (Córdoba), *La brújula* FM 931 (Bahía Blanca).
    Mentioned also in: Radio La Red - Novaresio 910, Radio Metro - No somos nadie, Radio Nacional - Poné Primera, Radio Con vos - ¿Y ahora quién podrá defendernos?, Radio Vorterix - Guetap, Radio Mitre - Cada mañana, Radio Continental - La mirada.
    4. *Online digital media*: Agencia EFE (Spain), *Globo Visión* y *Noticias 24* (Venezuela), *Diario el Comercio* and *Crónica Viva* (Perú), Última Hora (Paraguay), El Nuevo Diario (Nicaragua), Agencia TELAM, Clarín On line, Radio LT10, Portal en TELEFE NOTICIAS, Portal Entorno Inteligente, Inversor Salud, Radio La Rotativa Digital, Diario El Día (La Plata), Diario de Cuyo (San Juan), El Nuevo Diario (Santiago del Estero).

6.10   Languages

- English: reading,writing, oral (elementary bilingual school and stays in USA: Michigan 1958-60, California 1984-88)

- Catalan: B1 and B2 courses (Language school at Rubí, Barcelona)

- Russian: 6 month course at CONAE, Argentina and 2 week stay at Ucraine.

7   PUBLICATIONS

7.1   Thesis and Books

1. Sánchez Peña R.S., *Robust analysis of Feedback Systems with Parametric and Dynamic Structured Uncertainty*, PhD. Thesis, California Institute of Technology, Pasadena, CA, USA, June 1988 http://thesis.library.caltech.edu/425/.

2. Sánchez Peña R., Introducción a la Teoría de Control Robusto, **Control Editors S.R.L.** (AADECA), 416 pages., 1st. edition 1992, 2nd. edition. 1999. First prize contest organized by AADECA, local representative of IFAC.

3. Sánchez Peña R., Sznaier M., <u>Robust Systems Theory and Applications</u>, Adaptive & Learning Systems for Signal Processing, Communications and Control Series, **Wiley & Sons**, 490 pages, 1998.

4. Sánchez Peña R., Quevedo Casín J., Puig V. (Eds.), <u>Identification and Control: The gap between theory and practice</u>, **Springer–Verlag**, London, 330 pages, 2007.

5. Sánchez Peña R., Rosen M. (Eds.), <u>Bioingeniería en la Argentina</u>, published by ANCEFN, Bs.As., 2017.

6. Sánchez Peña R., Cherñavvsky D. (Eds.), <u>Artificial Pancreas: current situation and future directions</u>, **Academic Press** (Elsevier Inc.), Biomedical Engineering series, 306 pages, 2019.

7. Sánchez Peña R., Giribet J.I., <u>Fundamentos del control lineal robusto</u>, **EUDEBA**, ISBN 978-950-23-3142-3, 2021.

7.2   Book Chapters

1. Sánchez Peña R., Sideris A., *Robustness with real parametric and structured complex uncertainty*, in <u>Recent Advances in Robust Control</u>, Editors P. Dorato y R.K. Yedavalli, IEEE Press, 1990.

2. Sznaier M., Sánchez Peña R., *Robust Systems*, in <u>The Electrical Engineering Handbook</u>, CRC Press LLC, 1999.

3. Ghersin A., Smith R., Sánchez Peña R., *Classical, Robust and LPV control of a Magnetic Bearing Experiment*, in <u>Identification and Control: The gap between theory and practice</u>, Springer–Verlag, London, 2007.

4. Cugueró M., Morcego B., Sánchez Peña R., *Identification and Control Structure Design in Active (acoustic) Noise Control*, in <u>Identification and Control: The gap between theory and practice</u>, Springer–Verlag, London, 2007.

5. Colmegna P., Garelli F., De Battista H., Sánchez Peña R., *Proyecto Páncreas Artificial en Argentina*, en <u>Bioingeniería en la Argentina</u>, ANCEFN, 2017.

6. Colmegna P., Garelli F., De Battista H., Bianchi F., Sánchez Peña R., *The ARG algorithm: clinical trials in Argentina*, in <u>Artificial Pancreas: current situation and future directions</u>, Academic Press, Elsevier Inc., 2019.

7. Nudelman N., Dickenstein A., Sánchez Peña R., Uchitel S., Laborde M., Vera C., *Perspectiva desde las Ciencias Exactas y Naturales* en <u>Pandemia: los múltiples desafíos que el presente le plantea al porvenir</u>, Interacademy book, 2020.

7.3   International Journals

1. Zadunaisky P., Sánchez Peña R., *On the Estimation of small perturbations in a generalized model of an inertial sensor*, Journal of Guidance, Control & Dynamics, vol. 11, N° 2, 1988.

2. Sideris A., Sánchez Peña R., *Fast Computation of the Multivariable Stability Margin*, IEEE Transactions on Automatic Control, vol. 34, N⁰ 12, 1989.

3. Sideris A., Sánchez Peña R., *Robustness margin calculation with dynamic and real parametric uncertainty*, IEEE Transactions on Automatic Control, vol. 35, N⁰ 8, 1990.

4. Sánchez Peña R., Sideris A., *Robustness with real parametric and structured complex uncertainty*, International Journal of Control, vol. 52, N⁰ 3, 1990.

5. Sánchez Peña R., *On the approximation of Analog controllers for sampled-data systems*, AIAA Journal of Guidance, Dynamics and Control, vol. 13, N⁰ 6, 1990.

6. Rotstein, Sánchez Peña, Bandoni, Desages, Romagnoli, *Robust Characteristic Polynomial Assignment*, Automatica, vol. 27, N⁰ 4, 1991.

7. Sánchez Peña R., Galarza C., *Practical Issues in Robust Identification*, IEEE Transactions on Control Systems Technology, Vol. 2, N⁰ 1, 1994.

8. Sánchez Peña R., *Robust Analysis & Control of a D_2O Plant*, Latin American Applied Research, Vol. 24, N⁰ 3, 1994.

9. Anigstein P., Sánchez Peña R., Yasielski R., Jauregui M., Alonso R., *Mission Mode attitude control for SAC-B*, Revista Brasileira de Ciências Mecânicas, Vol. 16 (Special Issue), pp. 88-95, 1994.

10. Eszter E., Sánchez Peña R., *Computation of Algebraic combinations of uncertainty Value Sets*, IEEE Transactions on Automatic Control, Vol. 39, N⁰ 11, 1994.

11. Parrilo P., Sánchez Peña R., Galarza C., *ℓ_1 Identification applied to a Fluid Dynamics Problem*, IEEE Transactions on Control Systems Technology, Vol. 4, N⁰ 3, 1996.

12. Anigstein P., Sánchez Peña R., *An extension of the Small Gain Theorem in $\mathcal{L}_\infty$*, International Journal of Control, Vol. 65., N⁰ 5, pp. 771-789, 1996.

13. Sánchez Peña R., García R., Fernández Berdaguer E., *Computation of Margins of State Space System Properties*, Latin American Applied Research, Vol. 26, N⁰ 3-4, pp. 167-176, 1996.

14. Galarza C., Sánchez Peña R., *Robust Approximation & Control*, IEEE Control Systems Magazine, Vol. 17. N⁰ 1, 1997.

15. Movsichoff B., Sánchez Peña R., *Preliminary orbit identification based on the Earth's magnetic field: Application to SAC-B*, selected for Special Issue del Latin American Applied Research (RPIC'97), Vol. 27, N⁰ 3, 1997.

16. Anigstein P., Sánchez Peña R., *Analysis of Solar Panel orientation in low orbit satellites*, IEEE Transactions on Aerospace and Electronics, Vol. 34, N⁰ 2, 1998.

17. Parrilo P., Sznaier M., Sánchez Peña R., Inanc T., *Mixed time/frequency-domain based Robust Identification*, Automatica Vol. 34, N⁰ 11, p. 1375-1389, 1998.

18. Alonso R., Anigstein P., Sánchez Peña R., *SAC-A Attitude Control design*, Advances in the Astronautical Sciences, Spaceflight Dynamics Vol. 100, pp. 99-110, 1998.

19. Parrilo P., Sánchez Peña R., Sznaier M., *A parametric extension of Mixed time/frequency Robust Identification*, IEEE Transactions on Automatic Control, Vol. 44, N⚬ 2, 1999.

20. Ferrando C., Pérez A., Sánchez Peña R., *Integer Ambiguity resolution in GPS for spinning spacecrafts*, IEEE Transactions on Aerospace and Electronics, Vol. 35, N⚬ 4, 1999.

21. Baldelli D., Sánchez Peña R., *Uncertainty Modelling in Aerospace Flexible structures*, AIAA Journal of Guidance, Control & Dynamics, Vol. 22, N⚬ 4, 1999.

22. Ghersin A., Sánchez Peña R., *Active Magnetic Bearing Control: Comparison of LTI vs. LPV approaches*, Special Issue dedicado a la memoria del Prof. A. Desages (Latin American Applied Research), Vol. 29, N⚬ 3/4, 1999.

23. Sánchez Peña R., Alonso R., Anigstein P., *Robust Optimal solution to the Attitude/Force control problem*, IEEE Transactions on Aerospace and Electronics, Vol. 36, N⚬ 3, 2000.

24. Inanc T., Sznaier M., Parrilo P., Sánchez Peña R., *Robust Identification with Mixed parametric/nonparametric models and time/frequency domain experiments: Theory and an Application*, IEEE Transactions on Control Systems Technology, Vol. 9, N⚬ 4, 2001.

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26. Mazzaro M.C., Parrilo P., Sánchez Peña R., *Robust Identification: A Practical approach to select the* a priori *information*, International Journal of Control, Vol. 74, N⚬ 12, 2001.

27. Servidia P., Sánchez Peña R., *Thruster Design for the Attitude/Force control of spacecraft*, IEEE Transactions on Aerospace and Electronics, Vol. 38, N⚬ 4, 2002.

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29. Mazzaro C., Parrilo P., Sánchez Peña R., *Robust Identification Toolbox*, Latin American Applied Research, Vol. 34, N° 2, 2004.

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35. Castañé Selga R., Sánchez Peña R., *Control Activo de Ruido Acústico en Cascos de Motociclismo*, Revista Iberoamericana de Automática e Informática Industrial (RIAI–in spanish), Vol. 4, No. 3, pp. 73-85, July 2007.

36. Sánchez Peña R., Cugueró M.A., Masip A., Quevedo J., Puig V., *Robust Identification and Feedback Design: an Active Noise Control Case Study*, Control Engineering Practice Vol. 16, pp. 1265-1274, 2008.

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43. Filici C., Sánchez Peña R., *Online Guidance Updates Using Neural Networks*, Acta Astronautica, Vol. 66, No. 3-4, pp. 477-85, 2010.

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46. Bianchi F., Sánchez Peña R., *Interpolation for gain scheduled control with guarantees*, Automatica, Vol. 47, No.1, pp. 239-243, 2011.

47. García Galiñes R., Sánchez Peña R., Mancilla Aguilar J., *Nehari projection and SOS implementation applied to a Real-time stable identification*, Latin American Applied Research, Vol. 41, No. 3, 2011.

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51. Bierzychudek M. E., R. S. Sánchez Peña, A. Tonina, *Robust Control of a Two-Terminal Cryogenic Current Comparator*, IEEE Transactions on Instrumentation and Measurement, Vol. 62, No. 6, pp. 1736-1742, 2013.

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53. Bianchi F., C. Kunusch, C. Ocampo-Martínez, R. Sánchez Peña, *A gain-scheduled LPV control for oxygen stoichiometry regulation in PEM fuel cell systems*, IEEE Transactions on Control Systems Technology, Vol. 22, No. 5, pp. 1837-1844, 2014.

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55. Colmegna P., R. Sánchez-Peña, R. Gondhalekar, E. Dassau and F. J. Doyle III, *Reducing risks in Type 1 Diabetes using* $\mathcal{H}_\infty$ *control*, IEEE Transactions on Biomedical Engineering, Vol. 61, No. 12, pp. 2939-47, 2014.

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62. Giribet J., R. Sánchez-Peña, A. Ghersin, *Analysis and design of hexacopter fault tolerance*, IEEE Transactions on Aerospace and Electronic Systems, Vol. 52, No. 4. 2016.

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7.4   Foreword and Book reviews

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3. Sánchez Peña R., Sznaier M., Conference report: *The 10th Multi-Conference on Systems and Control (MSC2016)*, IEEE Control Systems Magazine, Vol. 37, No. 2, pp. 197-199, April 2017.

4. Sánchez Peña R., *Foreword for Book:* Con los oídos de la prudencia, C.A. Crespi, D. Szarazgat, Edit. Acercándonos, 2023. ISBN:978-987-8925-27-1

7.5 International Conferences

ACC (ECC) : American (European) Control Conference.

CDC : Conference on Decision and Control.

IWRCS : International Workshop on Robustness of Control Systems.

CLCA : Congreso Latinoamericano de Control Automático.

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15. Anigstein P., Sánchez Peña R., *Robust Stability Analysis of Nonlinear Systems: Application to Attitude Control*, 2nd. Brazilian Symposium on Aerospace Technology, S.J. dos Campos, Brazil, October 1994.

16. Sánchez Peña R., Sznaier M., *Robust Identification with Mixed time/frequency experiments: Consistency and Interpolation algorithms*, Actas de CDC, New Orleans, USA, 1995.

17. Parrilo P., Sánchez Peña R., *Convex Optimization to solve Mixed time/frequency Robust Identification problems*, (invited), Actas de LASAC'95, Santiago de Chile, 1995.

18. DeDoná J., Milocco R., Parrilo P., Sánchez Peña R., *Robust Design of a Feedback-Feedforward controller*, Actas del LASAC'95, Santiago de Chile, 1995.

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38. Ingimundarson A., Sánchez Peña R., *Using the Unfalsified Control Concept to achieve Fault Tolerance*, IFAC World Congress, Korea, 2008.

39. Sánchez Peña R., Cugueró M., *Control-oriented Sensor/Actuator Location Measures for Active Noise Control*, IFAC World Congress, Korea, 2008.

40. Bolea Y., Puig V., Sánchez Peña R., *MIMO Smith Predictor based LPV control of a Multiple pool Canal System*, Actas de ECC, Budapest, Hungary, pp. 3154-59, August 2009.

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54. R. Sánchez-Peña, *Control-oriented LPV model and control of an Artificial Pancreas: first clinical tests*, invited talk presented in the *Roberto Tempo* IFAC Workshop on Uncertain Dynamical Systems (WUDS 2017), Banyuls sur mer, France, 5-7 July, 2017.

55. L. Grosembacher, R. Sánchez-Peña, P. Colmegna, H. De Battista, F. Garelli, W. Belloso, V. Simonovich, V. Beruto, P. Scibona, C. Rodríguez, M. Breton, D. Cherñavvsky, *Artificial Pancreas: First Clinical Trial in Argentina is safe and feasible*, International Diabetes Federation Congress, Abu Dhabi, 4-8 December 2017.

56. R. Sánchez-Peña, P. Colmegna, F. Garelli, H. De Battista, E. Campos-Nañez, M. Breton, V. Simonovich, V. Beruto, P. Scibona, W.H. Belloso, L. Grosembacher, D. Cherñavvsky, *First Clinical Trials in Latin America: the ARG algorithm without CHO counting* (presentación oral) ATTD, Viena, ATTD8-0087, 2018.

57. E. Fushimi, P. Colmegna, H. De Battista, F. Garelli, R. Sánchez-Peña, *Unannounced meal analysis of the ARG algorithm*, American Control Conference (invited session), Philadelphia, USA, 2019.

58. M. David, H. Álvarez, C. Ocampo-Martínez, R.S. Sánchez-Peña, *Phenomenological based Model of Hydrogen production using an Alkaline self-pressurized Electrolyzer*, European Control Conference, Naples, Italy, june 2019.

59. M. Moscoso-Vázquez, P. Colmegna, R.S. Sánchez-Peña, *Control-oriented model including Hyperinsulinemia induced insulin resistance in Type 1 diabetes*, Colombian Conference on Automatic Control, Medellín, Colombia, october 2019.

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63. Garelli, Arambarri, Mendoza, Rosales, Fushimi, De Battista, Sanchez Peña, García Arabehety, Distefano, Barcala, Giunta, Las Heras, Martínez Mateu, Prieto, San Roman, Krochik, Grosembacher, *A Multi-center remote glucose monitoring experience at COVID-19 ICU including adults and children*, ATTD, Paris, P265, #259, 2021.

64. M. David, F. Bianchi, C. Ocampo-Martinez, R. Sánchez-Peña, H_2 *purity control of high-pressure alkaline electrolyzers*, 11th IFAC Symposium on Advanced Control of Chemical Processes, Venecia, junio 2021.

65. Martínez S., Sánchez-Peña R., Belluscio M., Piriz J., García-Violini D., *Towards an experimental control of neural activity: The Wilson-Cowan model*, 1st IFAC Workshop on Control of Complex Systems (COSY), pp. 223-228, Bologna, Italy, Nov. 2022.

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67. Bianchi, Sánchez-Peña, Garelli, *LPV controller for long-term Artificial Pancreas trials*, ATTD, Berlin, EP074, #118, 2023.

68. Krochik, Arambarri, Fushimi, Prieto, Mateu, Barcala, Maderna, Timoni, Moscoso, Costa, Sánchez-Peña, Garelli, *Evaluation of glycemic variability during exercise in pediatric patients with DT1: A pilot study*, (poster) ATTD, Florence, 2024.

69. Sánchez-Peña, Garelli, de Battista, Colmegna, Cherñavvsky, Grosembacher, Krochik, *Artificial Pancreas advances in Argentina*, (poster) ATTD, Florence, 2024.

70. M. David, F. Bianchi, C. Ocampo-Martinez, R. Sánchez-Peña, $\mathcal{H}_\infty$ *control experiments for increasing H_2 purity in high-pressure alkaline electrolyzers*, European Control Conference, Stockholm, 2024.

71. Alonso R., Frouin R., Sánchez-Peña R.S., *A new method for spectral response characterization of Multi-band optical cameras*, IEEE International Geoscience and Remote Sensing Symposium, Athens, 2024.

7.6   National Journals and Conferences

SNCA : Simposio Nacional de Control Automático, biannual, organized by AADECA, local representative of IFAC, with review.

RPIC : Reuniones de Procesamiento de la Información y Control, biannual, with review.

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2. Sánchez Peña, Rotstein, Desages, Romagnoli, *Diseño de filtros y controladores óptimos con un criterio $\mathcal{H}_\infty$*, Actas de RPIC, La Plata, 1989.

3. Rotstein, Sánchez Peña, Desages, Romagnoli, *Programación matemática con incertidumbre: Aplicación a la asignación robusta de polos*, Actas de RPIC, La Plata, 1989.

4. Sánchez Peña, R., *Control Robusto y su aplicación al avión experimental X-29*, Actas de Simposio de Tecnología Aeroespacial, Córdoba, 1989.

5. Sánchez Peña R., *Introducción al Control Robusto*, Course published by the Escuela de Ciencias Informáticas, Facultad de Ciencias Exactas y Naturales, U.B.A., 1989.

6. Sánchez Peña R., Fernández Berdaguer E., *Cómputo de márgenes de estabilidad, estabilizabilidad y detectabilidad de sistemas*, Actas de SNCA, Buenos Aires, 1990.

7. Sánchez Peña R., Fernández Berdaguer E., *Análisis y Control de una Planta de Agua Pesada*, Actas de SNCA, Buenos Aires, 1990.

8. Eszter E., Sánchez Peña R., *Análisis robusto de sistemas con retardo bajo incertidumbres dinámicas y paramétricas*, Actas de SNCA, Buenos Aires, 1990.

9. Sánchez Peña R., *Control of Robotic Manipulators: A Survey*, Actas de Simposio de Inteligencia Artificial y Robótica, Luján, 1990.

10. Eszter E., Sánchez Peña R., *Estructuras paramétricas factorizables: Nuevos resultados*, Actas de RPIC, Buenos Aires, 1991.

11. Galarza C., Sánchez Peña R., *Aproximación y Control de Sistemas de dimensión infinita*, Actas de RPIC, Buenos Aires, 1991.

12. Sánchez Peña R., *Control Robusto Nolineal de Manipuladores Robot*, Actas de SNCA, Buenos Aires, 1992.

13. Galarza C., Sánchez Peña R., *Aproximación de Modelos y Control en $\mathcal{H}_\infty$: Aplicación a Estructuras Flexibles*, Actas de SNCA, Buenos Aires, 1992.

14. Sánchez Peña R., Anigstein P., *Control Robusto Nolineal: Aplicación al Satélite SAC-B*, Actas de SNCA, Buenos Aires, 1992.

15. Fernández de Prado A., Sánchez Peña R., *Identificación de Parámetros en Sistemas nolineales afines*, Actas de RPIC, Tucum'an, 1993.

16. Galarza C., Sánchez Peña R., *Identificación Robusta de Sistemas*, Actas de RPIC, Tucum'an, 1993.

17. DeDoná J., Milocco R., Parrilo P., Sánchez Peña R., *Diseño Robusto de controladores Feedforward*, Actas de RPIC, Bahía Blanca, 1995.

18. D' Amato F., Muravchik C., Sánchez Peña R., *Estimación de Actitud sobre estructuras Flexibles: Aplicación al satélite SAC-C*, Actas de RPIC, Bahía Blanca, 1995.

19. Sánchez Peña R., *Control Robusto*, Cuadernos Profesionales, Editorial Control (AADECA), Vol. 3, Nº 7, 1995.

20. Movsichoff B., Sánchez Peña R., *Preliminary orbit identification based on the Earth's magnetic field: Application to SAC-B*, Actas de RPIC, San Juan, 1997.

21. Baldelli D., Sánchez Peña R., *Uncertainty Modelling in Aerospace Flexible structures*, Actas de RPIC, San Juan, 1997.

22. Mazzaro M.C., Parrilo P., Sánchez Peña R., *Algoritmos numéricos aplicados a la Identificación Robusta*, Actas de RPIC, San Juan, 1997.

23. Ghersin A., Sánchez Peña R., *Pole placement LPV control*, Actas de RPIC, Santa Fé, 2001.

24. Servidia P., Sánchez Peña R., *Determinación autónoma de actitud por reconocimiento de patrones de estrellas*, Actas de RPIC, Santa Fé, 2001.

25. Sánchez Peña R., *La Identidad de Aryabhatta*, 1er. Congreso Internacional de Matemática en Ingeniería y Enseñanza de la Matemática en Ingeniería (InMAT), Bs.As., 2001.

26. Martinelli M., Sánchez Peña R., *Satélite MSU-1: Control Pasivo de Orientación*, Congreso Argentino de Tecnología Espacial, Neuquén, Mayo 2003.

27. Ghersin A., Sánchez Peña R., *Rapid Prototyping with RTAI & xPC: A Survey*, XI RPIC, Río Cuarto, 2005.

28. Castañé Selga R., Bianchi F., Sánchez Peña R., *Active noise control in motorcycle helmets: Feedback, Feedforward, LTI and LPV approaches*, XIII RPIC09, Rosario, 2009.

29. Colmegna P., Sánchez Peña R., *Insulin dependent Diabetes Mellitus control*, XIV RPIC11, pp. 13-17, Oro Verde, Entre Ríos, 2011.

30. Colmegna P., Sánchez Peña R., *Simulators of Diabetes Mellitus Dynamics*, 23º Congreso Argentino de Control Automático, Buenos Aires, 2012.

31. Giribet J., Mas I., Sánchez Peña R, *Navegación integrada con visión de múltiples UAV*, VII Congreso Argentino de Tecnología Espacial, Mayo, Mendoza, 2013.

32. García Violini D., Sánchez Peña R., Velis A., Posse C.M., *Control Activo de Ruido Acústico en Cascos: Identificación y Control*, XV RPIC, Bariloche, pp. 70-75, 2013.

33. Colmegna P., Sánchez Peña R. S., *Personalized Glucose Control Based on Patient Identification*, XV RPIC, pp. 397-402, Bariloche, 2013.

34. Curi S., Mas I., Sánchez Peña R. S., *Autonomous Flight of a Commercial Quadrotor*, IEEE Biennial Congress of Argentina (Argencon), pp. 190-195, Bariloche, 2014.

35. Mas I., Curi S., Sánchez Peña R. S., *Open-source Multi-UAV Simulator for the ROS Environment*, Jornadas Argentinas de Robótica, Buenos Aires, 2014.

36. Moscoso-Vásquez M., Colmegna P., Sánchez Peña R. S., *Models of Intrapatient Variations in Type 1 Diabetes Mellitus*, XVI RPIC, Córdoba, 2015.

37. García-Violini D., Mosqueira A., Colmegna P., Piriz J., Belluscio M., Sánchez-Peña R. *Characterization of δ to θ transitions in the Hippocampus and Lateral Habenula following mechanic or optogenetical stimulation in anesthetized rats*, XXX Congreso anual, Sociedad Argentina de Investigación en Neurociencias, Mar del Plata, 2015.

38. D. García-Violini, N. Bertone-Cueto, S. Martínez, F. Chiesa, V. de la Fuente, M. Belluscio, J. Piriz, R.S. Sánchez-Peña, *Closed-loop in Neuroscience: can a brain be controlled?*, 26º Congreso Argentino de Control Automático, Buenos Aires, Nov. 2018.

39. E. Fushimi, P. Colmegna, R.S. Sánchez-Peña, H. De Battista, F. Garelli, *Páncreas artificial: Evaluación del controlador ARG sin anuncio de comidas*, 26º Congreso Argentino de Control Automático, Buenos Aires, Nov. 2018.

40. D. García-Violini, M. Moscoso, F. Garelli, R.S. Sánchez-Peña, *Impact reduction of COVID19 in AMBA. Part 1: model identification & validation*, 27º Congreso Argentino de Control Automático, Buenos Aires, Oct. 2020.

41. R.S. Sánchez-Peña, D. García-Violini, M. Moscoso, F. Garelli, *Impact reduction of COVID19 in AMBA. Part 2: lockdown control*, 27º Congreso Argentino de Control Automático, Buenos Aires, Oct. 2020.

42. S. Martínez, V. Mazzone, D. García-Violini, A. Silva, M. Belluscio, J. Piriz, R.S. Sánchez-Peña, *Dynamic classification applied to brain recognition of context exploration*, 27º Congreso Argentino de Control Automático, Buenos Aires, Oct. 2020.

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7.7   Most relevant Technical Reports

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