

Publications related to the AP project in Argentina

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1. Books

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

2. Book chapters

1. Colmegna P., Garelli F., De Battista H., Sánchez Peña R., *Proyecto Páncreas Artificial en Argentina*, in Bioingeniería en la Argentina, ANCEFN, 2017.
2. Colmegna P., Garelli F., De Battista H., Bianchi F., Sánchez Peña R., *The ARG algorithm: clinical trials in Argentina*, in Artificial Pancreas: current situation and future directions, Academic Press, Elsevier Inc., 2019.

3. Journals

1. Sánchez Peña R., Ghersin A., Bianchi F., *Time varying procedures for Diabetes type I control*, Número Especial *Electrical and Computer Technology for Effective Diabetes Management and Treatment*, Journal of Electrical and Computer Engineering, DOI:[10.1155/2011/697543](https://doi.org/10.1155/2011/697543), 2011.
2. Colmegna P., Sánchez Peña R., *Insulin dependent Diabetes Mellitus control*, Latin American Applied Research (Special issue), Vol. 43, No. 3, july 2013.
3. Colmegna P., Sánchez Peña R., *Analysis of three T1DM simulation models for evaluating robust closed-loop controllers*, Computer Methods and Programs in Biomedicine, Vol. 113, No. 1, pp. 371-382, 2014.
4. 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.

5. Colmegna P., R. Sánchez-Peña, R. Gondhalekar, E. Dassau and F. J. Doyle III, *Switched LPV Glucose Control in Type 1 Diabetes*, IEEE Transactions on Biomedical Engineering, vol. 63, N^o 6, pp. 1192-1200, 2016.
6. Colmegna P., R. Sánchez-Peña, R. Gondhalekar, E. Dassau and F. J. Doyle III, *Reducing Glucose Variability Due to Meals and Exercise in T1DM Using Switched LPV Control*, Journal of Diabetes Science and Technology, vol. 10, N^o 3, pp. 744-753, 2016.
7. Colmegna P., R. Sánchez-Peña, R. Gondhalekar, *Linear Parameter-Varying Model to Design Control Laws for an Artificial Pancreas*, Biomedical Signal Processing and Control, Vol. 40, pp. 204-213, 2018.
8. Colmegna P., F. Garelli, H. DeBattista, R. Sánchez-Peña, *Automatic Regulatory Control In Type 1 Diabetes Without Carbohydrate Counting*, Control Engineering Practice, Vol. 74, pp. 22-32, 2018.
9. Sánchez-Peña R., Colmegna P., F. Garelli, De Battista H., García-Violini D., Moscoso-Vásquez M., Rosales N., Fushimi E., Campos-Náñez E., Breton M., Beruto V., Scibona P., Rodríguez C., Giunta J., Simonovich V., Belloso W.H., Cheriavsky D., Grosebacher L., *Artificial Pancreas: Clinical Study in Latin America without Without Premeal Insulin Boluses*, Journal of Diabetes Science and Technology, Volume 12, No. 5, pp. 914-925, 2018.
10. F. Bianchi, M. Moscoso-Vásquez, P. Colmegna, R. S. Sánchez-Peña, *Invalidation and Low-Order Model Set for Artificial Pancreas Robust Control Design*, Journal of Process Control, Special Issue on *Advances in Artificial Pancreas Control Systems*, Vol. 76, pp. Pages 133-140, abril 2019.
11. E. Fushimi, P. Colmegna, H. De Battista, F. Garelli, R. S. Sánchez-Peña, *Artificial Pancreas: evaluating the ARG algorithm without meal announcement*, Journal of Diabetes Science and Technology, Vol. 13, No. 6, pp. 1035-1043, 2019.
12. P. Colmegna, F. Garelli, E. Fushimi, M. Moscoso-Vásquez, N. Rosales, D. García-Violini, H. De Battista, R. S. Sánchez-Peña, *Artificial Pancreas: the Argentine experience*, Science Reviews – from the end of the world, Vol. 1, No. 1, 2019, DOI [10.52712/sciencereviews.v1i1.7](https://doi.org/10.52712/sciencereviews.v1i1.7)
13. Moscoso M., Colmegna P., N. Rosales, F. Garelli, R. Sánchez-Peña, *Control-Oriented Model with Intra-Patient Variations for an Artificial Pancreas*, IEEE Journal of Biomedical and Health Informatics, Vol. 24, No 9, pp. 2168-2194, 2020. DOI:[10.1109/JBHI.2020.2969389](https://doi.org/10.1109/JBHI.2020.2969389)
14. Garelli F., Rosales N., Fushimi E., Arrambari D., Mendoza L., De Battista H., Sánchez-Peña, R., et al., *Remote Glucose Monitoring Platform for Multiple Simultaneous Patients at COVID19 Intensive Care Units: Case Report Including Adults and Children*, Diabetes Technology & Therapeutics, Vol. 23, No. 5, 2021. DOI: [10.1089/dia.2020.0556](https://doi.org/10.1089/dia.2020.0556)
15. P. Colmegna, F.D. Bianchi, R.S. Sánchez-Peña, *Automatic glucose control during meals and exercise in type 1 diabetes: In silico tests using a switched LPV approach*, IEEE Control System Letters, Vol 5, No. 5, pp. 1489-94, 2021, DOI: [10.1109/LCSYS.2020.3041211](https://doi.org/10.1109/LCSYS.2020.3041211)

16. Krochik, Prieto, Martínez-Mateu, ... Sánchez-Peña, Garelli, *Reporte de altos requerimientos de insulina en pacientes críticos pediátricos con COVID-19. Experiencia con monitoreo remoto continuo de glucosa*, Revista de la Sociedad Argentina de Diabetes, Vol. 55, No 2, 2021.
17. Garelli, F., Fushimi, E., Rosales, N., Arrambari, D., Serafini, C., De Battista, H., Grosembacher, L., Sánchez-Peña, R., *Control no-híbrido de glucemia ensayado en pacientes ambulatorios con Diabetes Tipo 1*, Revista Iberoamericana de Automática e Informática Industrial, Nro. especial “Técnicas de control y optimización como solución a problemas de la sociedad”, No. 19, pp. 318-329, DOI: [10.4995/riai.2022.16652](https://doi.org/10.4995/riai.2022.16652), 2022.
18. Garelli F., Fushimi E., Rosales N., Arambarri D., Mendoza L., Serafini C., Moscoso-Vásquez M., Stasi M., Duette P., García-Arabeheity J., Giunta J., De Battista H., Sánchez-Peña R., Grosembacher L., *First outpatient clinical trial of a full closed-loop artificial pancreas system in South America*, Journal of Diabetes Science and Technology, DOI: [10.1177/19322968221096162](https://doi.org/10.1177/19322968221096162), 2022.

4. International Conferences

1. Sánchez Peña R., Ghersin A., *LPV control of glucose for Diabetes type I*, Actas de 32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society, pp. 680-83, Buenos Aires, Sept. 2010.
2. Colmegna P., Sánchez-Peña R., *Time-Varying controllers for Diabetes type 1 (poster)*, 6th International Conference on Advanced Technologies & Treatments for Diabetes, Paris, February 2013.
3. Colmegna P., Sánchez-Peña R., *LPV Control to Minimize Risks in Type 1 Diabetes*, IFAC World Congress, Cape Town, pp. 9253-9257, August 2014.
4. Colmegna P., F. Garelli, H. De Battista, R. Sánchez-Peña, *Switched LPV Glucose Control with insulin-on-board Limitation in Type 1 Diabetes*, (poster) 9th International Conference on Advanced Technologies & Treatments for Diabetes, Milan, February 2016.
5. M. Moscoso, P. Colmegna, R. Sánchez-Peña, *Intra-patient Dynamic Variations in Type 1 Diabetes: A Review*, IEEE Multi-Conference on Systems and Control, pp. 416-421, Buenos Aires, Sept. 2016.
6. P. Colmegna, R. Sánchez-Peña, R. Gondhalekar *Control-Oriented Linear Parameter-Varying Model for Glucose Control in Type 1 Diabetes*, IEEE Multi-Conference on Systems and Control, Buenos Aires, pp. 410-415, Sept. 2016.
7. R. Sánchez-Peña, P. Colmegna, L. Grosembacher, M. Breton, H. De Battista, F. Garelli, W. Belloso, E. Campos-Náñez, V. Simonovich, V. Beruto, P. Scibona, D. Chernavsky, *Artificial Pancreas: First Clinical Trials in Argentina*, IFAC World Congress, Toulouse, France, 9-14 July 2017.

8. 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.
9. L. Grosembacher, R. Sánchez-Peña, P. Colmegna, H. De Battista, F. Garelli, W. Beloso, V. Simonovich, V. Beruto, P. Scibona, C. Rodríguez, M. Breton, D. Chernavsky, *Artificial Pancreas: First Clinical Trial in Argentina is safe and feasible*, International Diabetes Federation Congress, Abu Dhabi, 4-8 December 2017.
10. R. Sanchez-Peña, P. Colmegna, F. Garelli, H. De Battista, E. Campos-Nañez, M. Breton, V. Simonovich, V. Beruto, P. Scibona, W.H. Beloso, L. Grosembacher, D. Chernavsky, *First Clinical Trials in Latin America: the ARG algorithm without CHO counting*, 11th International Conference on Advanced Technologies & Treatments for Diabetes (Viena), published in Diabetes Technology & Therapeutics, A-1-A-152, Volume: 20, N^o S1, Feb., 2018. DOI: [10.1089/dia.2018.2525.abstracts](https://doi.org/10.1089/dia.2018.2525.abstracts)
11. 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.
12. 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.
13. E. Fushimi, M.C. Serafini, H. De Battista, R. Sánchez-Peña, F. Garelli, *Pediatric glucose regulation without pre-meal insulin boluses: an approach based on switched control and time-varying IOB constraints*, DIABETES TECHNOLOGY & THERAPEUTICS, pp. A75-A76, 2020.
14. E. Fushimi, M.C. Serafini, R. Sánchez-Peña, H. De Battista, F. Garelli, *Pediatric glucose regulation without pre-meal insulin boluses: an approach based on switched control and time-varying IOB constraints*, IFAC World Congress, Berlín, 2020.
15. P. Colmegna, F.D. Bianchi, R.S. Sánchez-Peña, *Automatic glucose control during meals and exercise in type 1 diabetes: Proof-of-concept in silico tests using a switched LPV approach*, American Control Conference, New Orleans, Mayo 2021.
16. Garelli, Arambarri, Mendoza, Rosales, Fushimi, De Battista, Sanchez Peña, García Ara-behety, 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, junio 2021.