

# Scientific Production

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## 1 Patents

1. US Patent: **Method and system of compensating wave reflections in transmission lines**, (with Mark Spong), Patent No. 7,245,102 B1. Date of patent: July 17, 2007.
2. US Patent: **Repetitive controller to compensate for  $6n + 1$  Harmonics**, (with G. Escobar, P. Hernandez and P. Martinez), Patent No. 2008/0167735 11/650,638 A1. Date of patent: July 10, 2008.
3. Korean Patent: **Sensorless Control Method and System for SPMSM Using Nonlinear Observer**, (with K. Nam, L. Praly, A. Astolfi, J. Hong and J. Lee), Patent No. 10-1091970, 2011.

## 2 Publications: Books

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### 3 Journals

#### Guest Editor

1. Special Issue on Adaptive and Robust Control, *Int. J. on Adap. Cont. and Signal Proc.*, Vol. 2, No. 4, December 1988, (with R. Lozano).
2. Special Issue on Robot Control, *Int. J. on Adap. Cont. and Signal Proc.*, Vol. 4, No. 6, December 1990, (with R. Kelly).
3. Special Issue on Nonlinear and Adaptive Control, *European J. of Control*, Vol. 4, No. 3, 1998.
4. Special Issue on Nonlinear Control of Induction Motors, *Int. J. on Adap. Cont. and Signal Proc.*, Vol. 14, No. 2/3, March - May 2000, (with G. Asher and E. Mendes).
5. Special Issue on Digital Control in Power Electronic Circuits and Drives, *IEEE Transactions on Power Electronics*, Vol 18, No. 1, January 2003, (Ed. E. Leeb).
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7. Special Issue on Advanced Motor Drives, *IEEE. J. of Emerging and Selected Topics on Power Electronics*, November 2013, (Ed. O. Ojo).
8. Special Issue on From Adaptive Control To Variable Structure Systems: Seeking For Harmony, *Int. J. on Adaptive Control and Signal Processing*, Vol, 30, No. 8-10, August-October 2016, (with T. Silva and L. Fridman).
9. Sección Especial, Aportaciones de Investigadores en México al Control Automático, *Revista Iberoamericana de Automática e Informática Industrial*, vol 19, no.4, 2022, (con E. Nuño).

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*(Articles with experimental results indicated with ∗ .)*

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## 4 International Conferences

### Invited Plenary and Semiplenary Conferences

1. *VI Congresso Brasileiro de Automática*, Belo Horizonte, Brazil, November, 1986.
2. *10th World IFAC Congress*, Munich, Germany, July 26–31, 1987.
3. *25th Annual SICE Meeting*, Tokyo, Japan, June 2, 1991.

4. *European Control Conference ECC-91*, Grenoble, France July 2–5, 1991.
5. *5th IFAC Symp. Low Cost Automation*, Vienna, Austria, September, 1992.
6. *XI Congresso Brasileiro de Automática*, São Paulo, Brazil, September 2–6, 1996.
7. *Oberwolfach Workshop in Control Theory*, Oberwolfach, Germany, February 22–29, 1999.
8. *IX Congreso Latinoamericano de Automática*, Cali, Colombia, November 1–3 2000.
9. *IFAC Workshop on Lagrangian and Hamiltonian methods in nonlinear systems*, Seville, Spain, April 3–5, 2003.
10. *22nd Chinese Control Conference*, Yichang, Hubei, China, July 21–25, 2003.
11. *IFAC Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP 04)*, Yokohama, Japan, August 30 – September 1, 2004.
12. *IFAC Workshop on Adaptation and Learning in Control and Signal Processing (ALCOSP 07)*, Saint Petersburg, Russia, August 29–31, 2007, (Presented by A. Astolfi.).
13. *7th IFAC Symposium on Nonlinear Control Systems, NOLCOS'07*, Pretoria, South Africa, August 22 – 24, 2007, (presented by A. van der Schaft.)
14. *3rd IEEE Conference on Industrial Electronics and Applications (ICIEA 2008)*, Singapore, June 3–5, 2008.
15. *50 Ans de l'Automatique à Grenoble*, Saint Martin d'Hères, France, September 15, 2008.
16. *XIII Congreso Latinoamericano de Control Automático*, Mérida, Venezuela, November 25–28, 2008.
17. *Congreso Nacional de la Asociación de México de Control Automático (AMCA 2009)*, Zacatecas, Mexico, September 30–October 2, 2009.
18. *Congreso IEEE-CINVESTAV de Energía Eléctrica*, Chiapas, Mexico, September 8 - 10, 2010.
19. *IFAC Workshop 50 Years of Nonlinear Control and Optimization*, The Royal Society, London, UK, September 30–October 01, 2010.
20. *Segundo Congreso Internacional de Mecatrónica*, Los Lagos, Jalisco, Mexico, June 29 – July 1, 2011.
21. *XI Colombian Conference on Automatic Control (CCAC 2011)*, Bogota, Colombia, October 1 - 4, 2011.
22. *IFAC Workshop on Lagrangian and Hamiltonian Methods for Non-Linear Control*, Bertinoro, Italy, August 29–31, 2012.
23. *Intl. Workshop on Recent Developments in Robotics and Control*, Dallas, USA, November 5–6, 2012.
24. *Workshop on 25 Years of Passivity-based Control*, Mumbai, India, May 19–23, 2014.
25. *2nd Int. Conf. on Robotics and Computing*, Los Cabos, Mexico, April 28–30, 2015.
26. *Workshop on Advanced Nonlinear Control*, Groningen, Holland, July 11–12 2015.
27. *225 Años de la Facultad de Ingeniería, UNAM*, Mexico, August 21–26, 2017.
28. *Scientific Workshop on Micro and Smart Grids*, Paris, France, October 6, 2017.
29. *IEEE 16th Intl. Workshop on Advanced Motion Control*, Kristiansand, Norway, September 14–16, 2020.
30. *2nd Int. Conf. on Control Theory and Applications*, Chengdu, China, November 4–6, 2021.

31. *XXIV Congreso Mexicano de Robotica (COMRob 2022)*, Pachuca, Mexico, 2022.
32. *IEEE Autumn Meeting on Power, Electronics and Computing (ROPEC 2023)*, Ixtapa, Mexico, October 18-20, 2023.
33. *Congreso Internacional de Ciencia y Tecnología Aplicada*, CENIDET, Cuernavaca, Mexico, May 22-24, 2024.
34. *On the Road to New Horizons: A Lighthearted Conference on Control Theory*, INSA Rouen, Normandie, France, June 19-21, 2024.
35. *2º Congreso Nacional Multidisciplinario de Innovación, Ciencia y Tecnología (CoNMyCIT)*, UPIIH-IPN, Hidalgo, México, September 25-27, 2024.
36. *25 Years of the San Luis Potosí Doctoral Engineering Degree*, USLP, San Luis Potosí, México, November 1st, 2024.

## Articles

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6. R. Ortega: Variable Structure Systems - An Alternative to Robust Adaptive Control, *Coll. Nat. CNRS*, Belle Ile, France, 13-18, September 1982, (**invited conference**).
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