Curriculum Vitae

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Alessandro D'Innocenzo, PhD

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Education

- **April 2nd, 2007:** Accomplishment of the International Curriculum Option of Doctoral Studies in Hybrid Control for Complex, Distributed and Heterogeneous Embedded Systems.
- **January 29th, 2007:** PhD Degree in Electrical and Information Engineering, Department of Electrical and Information Engineering, University of L'Aquila, Italy. *Title*: Observability and Temporal Properties of Hybrid Systems: Analysis and Verification. *Advisor*: Prof. M.D. Di Benedetto. *PhD Commission*: Prof. M.D. Di Benedetto, Prof. M.G. Di Benedetto, Prof. N. Benvenuto, Prof. G.J. Pappas.
- **From November 2003 to January 2007:** PhD student at the Department of Electrical and Information Engineering, University of L'Aquila, Italy.
- **July 21st, 2000:** Laurea Degree in Electronic Engineering, Department of Electrical Engineering, University of L'Aquila, Italy. 110/110 *cum laude*.
- **June 1994:** High School Diploma, Liceo Scientifico F. Masci, Chieti, Italy. 60/60.

Foreign Languages

- English and German (fluent)

Work Experience

Since January 2010, Ricercatore a tempo determinato (Assistant Professor): *Department of Information Engineering, Computer Science and Mathematics, Centre of Excellence DEWS, University of L'Aquila.*

January 2007 - December 2009, Post-Doc: *Centre of Excellence DEWS, University of L'Aquila.* Prof. M.D. Di Benedetto.

March – December 2008, Post-Doc: *Department of Electrical and Systems Engineering, University of Pennsylvania.* Prof. G.J. Pappas.

July 2005 – December 2006, Consultant: *Centre of Excellence DEWS, University of L'Aquila.* HYCON Project, *Hybrid Control: Taming Heterogeneity and Complexity of Networked Embedded Systems*, IST, Network of Excellence, contract n.511368.

January 2003 – December 2004, Consultant: *Centre of Excellence DEWS, University of L'Aquila.* Distributed Control and Stochastic Analysis of Hybrid Systems Supporting Safety Critical Real-Time Systems Design Project IST-2001-32460 HYBRIDGE.

May – June 2004, Consultant: *Department of mathematics "Federigo Enriques", University of Milano*. Topological interpretations of the transformations of a rectangle: cylinder, torus, Moebius strip, projective plan.

March 2002 – December 2003, Consultant: *Digital Video S.r.l., Roma.* Computer Graphics Programming.

October 2000 – December 2004, Employee: *Marconi, Chieti.* Communication Systems (GSM and UMTS): Software Engineer.

September 2000, Post-thesis stage: *Telecom Italia Lab, Torino*. Voice over IP – Circuit network gateway.

September 1999 – July 2000, Industrial Thesis: *Telecom Italia Lab, Torino*. Voice over IP – Circuit network gateway.

Awards and Qualifications

- 2015: Best Application Paper Award, 14th annual European Control Conference (ECC'15)
- 2014: National scientific qualification as Associate Professor in Control Theory
- 2014: Elsevier Certificate of Excellence in reviewing.
- 2005: "Fondazione Filauro" Scholarship, University of L'Aquila, Italy.
- 1994 - 1999: Student scholarships, University of L'Aquila, Italy.

Editorial Activities

- 1st International Conference on Wireless Sensor Networks (WSN'12), Program Committee
- 12th European Control Conference (ECC'13), Program Committee Member
- 4th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys'13), Program Committee Member
- 13th European Control Conference (ECC'14), Associate Editor
- 14th European Control Conference (ECC'15), Associate Editor
- 5th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys'15), International Program Committee Member
- ACM International Conference on Hybrid Systems: Computation and Control (HSCC'16), Program Committee Member
- 15th European Control Conference (ECC'16), Associate Editor
- ACM International Conference on Hybrid Systems: Computation and Control (HSCC'17), Program Committee Member
- Workshop on COMMUNICATION AND NETWORKING TECHNIQUES FOR CONTEMPORARY VIDEO, IEEE International Conference on Computer Communications (IEEE INFOCOM'17), Program Committee Member
- 16th European Control Conference (ECC'18), Associate Editor
- 6th IFAC Conference on Analysis and Design of Hybrid Systems (ADHS'18). International Program Committee Member

- 7th IFAC Workshop on Distributed Estimation and Control in Networked Systems (NecSys'18). Associate Editor

Since 2005 reviewer for the most relevant conferences and journals in the control, computer science and communication scientific communities.

Roles in Research Projects

Present:

- **INCIPICT:** INnovating CIty Planning through Information and Communication Technologies. Funded by the Italian Government under Cipe resolution n.135, Dec. 21, 2012. **Management committee member.**
- **SAFECOP:** Safe Cooperating Cyber-Physical Systems using Wireless Communication. ECSEL PAB 2015.15 - Funding Call 2015-1. **Researcher.**
- **AQUAS:** Aggregated QUality Assurance for Systems.
  ECSEL Research and Innovation Actions (RIA) - Calls 2016. **Researcher.**

Former:

- **HYCON2:** Highly-complex and networked control systems. EU FP7 NoE, 2010-2014. **Responsible Univ. of L'Aquila.**
- **MAREA:** Mathematical approach towards resilience engineering in ATM. SESAR WP-E, 2011-2013. **Researcher.**
- **iFly:** Safety, Complexity and Responsibility based design and validation of highly automated Air Traffic Management. EU FP6 STREP, 2007-2011. **Responsible Univ. of L'Aquila from Month 1 to Month 24.**
- **PRIN05:** Forecast and control systems for landslides: local sensor distributed networks integration, monitoring techniques and hydro-geological models. MIUR, 2006-2007. **Researcher.**
- **HYCON:** Hybrid Control: Taming Heterogeneity and Complexity of Networked Embedded Systems. EU FP6 NoE, 2004-2008. **Responsible Univ. of L'Aquila.**
- **HYBRIDGE:** Distributed Control and Stochastic Analysis of Hybrid Systems Supporting Safety Critical Real-Time Systems Design. EU FP5 STREP, 2002-2005. **Researcher.**

Transfer of Technology

- **Scientific responsible** of a project on "Model based methods for fault detection and control of the Telecom Italia service provider network", funded by an annual agreement with Telecom Italia. 2013-2015
- **Principal investigator** of the Remote Environmental Monitoring (REM) business project, which passed the first and second phase of the RICOSTRUIRE call for entrepreneurial ideas. 2013-2015

Invited plenary lectures

September 22, 2015: Invited plenary speaker in the 9th International Workshop on Reachability Problems (RP'15). Warsaw, Poland, September 21-23, 2015.

Invited lectures in Workshops

January 10, 2017: Invited speaker in the WORKSHOP on "HYBRID DYNAMICAL SYSTEMS: OPTIMIZATION, STABILITY AND APPLICATIONS", University of Trento.

October 27, 2016: Invited speaker in the Co4 Workshop on "Control subject to Computational and Communication Constraints", Toulose.

June 24, 2014: Tutorial on "Modeling, analysis and design over wireless networking protocols for control tasks", Workshop on "Control of large-scale distributed and cooperating systems", 13th European Control Conference.

April 12th 2010: *Probabilistic Model checking of Stochastic Hybrid Systems by Abstraction and application to air traffic management,* given at the Workshop on Modeling and Verification of Uncertain Hybrid Systems, affiliated event of Cyber-physical Systems Week CPS2010, Stockholm.

November 3rd 2009: *Observability and Diagnosability of Hybrid Automata, and their application in Air Traffic Management,* given at the Workshop on Formal Methods in Aerospace, affiliated event of Formal Methods Week FM2009, Eindhoven.

April 30th 2009: *Wireless mining ventilation control: a HYCON test case for networked control,* given at the INTERNATIONAL WORKSHOP ON HYBRID AND PREDICTIVE CONTROL FOR NONLINEAR INDUSTRIAL APPLICATIONS, University of Strathclyde, Glasgow, April 28-30, 2009.

Invited lectures

September 28, 2016: Seminar on "Modeling and Co--design of Control Tasks over Wireless Networking Protocols", University of Pennsylvania, Philadelphia PA

May 3, 2016: Seminar on "Modeling and Co-design of Control Tasks over Wireless Networking Protocols", University of Oxford.

February 23, 2016: Seminar on "Modeling and Co--design of Control Tasks over Wireless Networking Protocols", TU-Berlin.

March 4, 2014: Invited seminar on "Formal methods for analysis and co-design of Wireless Networked Control Systems", given at the Centre for Systems Engineering and Applied Mechanics, Universite' Catholique de Louvain (UCL), Louvain-la-Neuve, Belgium.

February 5, 2014: Seminar on "Modelling, Analysis, Design and Fault Detection in Wireless Networked Control Systems", given at Siemens AG, München, Germany.

June 10, 2013: Seminar on "Fault tolerant control of multi-hop control networks", given at the Department of Electrical, Computer, and Systems Engineering, Rensselaer Polytechnic Institute, Troy NY.

February 9, 2012: Minicourse on *Modeling, analysis and design of multi-hop control networks*, given at the Department of Mechanical Engineering, Eindhoven University of Technology (TU/e), Eindhoven, Netherlands**.**

December 6th 2011: *Modeling, analysis and design of multi-hop control networks,* invited seminar given at the Centre for Systems Engineering and Applied Mechanics (CESAME), UCL - Université catholique de Louvain (UCL), Louvain-la-Neuve, Belgium.

October 7th 2008: *Finite approximate abstractions of Stochastic Hybrid Automata,* given at the University of Pisa, College of Engineering, Pisa, Italy.

June 26th 2008: *Wireless mining ventilation control: a HYCON test case for networked control,* given at the MIT, Lisbon, Portugal.

January 31st 2008: *Finite Abstractions of Hybrid Automata,* given at the KTH School of Electrical Engineering, Stockholm, Sweden.

November 19th 2007: *Observability and diagnosability of hybrid systems,* given at the IASI-CNR Institute (Istituto di Analisi dei Sistemi ed Informatica "A. Ruberti"), Rome.

September 8th 2006: *A Theoretical Framework for Control over Wireless Networks,* given at the NEWCOM-HYCON Technical Workshop on Embedded Systems and Infrastructureless Networks, Laboratoire des Signaux et Systemes, Centre National de la Recherche Scientifique, Supelec.

June 20th 2006: *On the observability problem for hybrid systems,* given at the Laboratoire des Signaux et Systemes, Centre National de la Recherche Scientifique, Supelec. Gif-sur-Yvette, France.

May 22nd 2006: *A Theoretical Framework for Control over Wireless Networks,* given at the NEWCOM-HYCON Technical Workshop on Embedded Systems and Infrastructureless Networks, Florence, Italy

February 16th-17th 2006: *Modeling of adaptive behaviors in control over wireless networks*, given at the Hycon WP4d meeting, PARADES, Rome, Italy

February 8th 2006: *Observability of Hybrid Automata by Abstraction*, given at the Department of Electrical and Systems Engineering of the University of Pennsylvania (Philadelphia)

December 6th 2005: *Observability of Hybrid Automata by Abstraction*, given at the EECS Department of the University of California Berkeley.

February 21st 2005: *Observability of Hybrid Systems and Application to Air Traffic Management*, given at the Grasp Lab, Department of Electrical and Systems Engineering, University of Pennsylvania.

Post-Docs, PhD Students, Master/Bachelor Thesis students

Currently supervised Post-Docs:

- F. Smarra: Disaster Resilience and Energy Efficiency in Building Automation Systems (within INCIPICT Project), Scientific Responsible.
- Yuriy Zacchia Lun, SAFECOP Project, Scientific Responsible
- G.D. Di Girolamo, Resilience and Energy Efficiency in Building Automation Systems (within INCIPICT Project), Scientific Responsible

- Vittorio De Iuliis, Model identification for large-scale Cyber-Physical Systems (within INCIPICT project), Scientific Responsible (co-supervised with Prof. Costanzo Manes)

Former Post-Docs:

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Currently supervised PhD students:

- Jimmy Tjen, 1st year PhD student.
- Enrico Reticcioli, 1st year PhD student, co-tutored with Prof. F. Graziosi.

Supervised PhD theses:

- Y. Zacchia Lun. **Stability and optimal control of polytopic time-inhomogeneous Markov jump linear systems.** PhD Thesis, Gran Sasso Science Institute, September 2017
- G.D. Di Girolamo. **Co-design of controllers and information flows in networked control systems.** PhD Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, July 2017
- F. Smarra. **Fault Tolerant Control of Multi-hop Networked Control Systems.** PhD Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, April 2014.
- E. Serra. **Design & Verification of Multi-Hop Networked Control Systems.** PhD Thesis, Department of Electrical and Information Engineering, University of L'Aquila, March 2011.

Supervised master theses:

- J. Tjen. **Data-Predictive Control for Energy Efficient Building Management: Implementation on A Building of the University of L'Aquila.** Master Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2017
- E. Reticcioli. **Design and integration of a low-cost device for people counting in a SCADA building automation system.** Master Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2017
- A. Ibrahim. **Validation of a Model Predictive Control Algorithm for Priority-Based Routing.** Master Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2016.
- B. Mehrabi. **QoE based optimal control of priority queuing in a service provider network.** Master Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2015.
- A. Veeraraghavan. **Modeling of Traffic Congestion in a QoS Based Service Provider Network.** Master Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2014.
- A. Di Loreto. **Modellazione dell'effetto dei guasti nel Backbone di Telecom Italia sulla qualità dei servizi agli utenti.** Master Thesis (in Italian), Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2013.
- G.D. Di Girolamo. **Sincronizzazione di clock su reti WirelessHART usando algoritmi di consenso.** Master Thesis (in Italian), Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2013.

- R. Lalli. **Controllo della temperatura mediante l'uso di reti wireless negli "smart buildings".** Master Thesis (in Italian), Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2012.
- S. Ferella. **Security di reti wireless: modellistica e analisi per sistemi MIMO.** Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- M. Cecamore. **Analisi Formale e Progettazione di Procedure di Sicurezza in Infrastrutture Critiche Mediante la Tecnologia Bluetooth Low Energy.** Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- G. Cacciavillani. **Analisi formale e progettazione di procedure di sicurezza in infrastrutture critiche mediante l'uso di NFC.** Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- A. Di Domenico. **Analisi stocastica della stabilità di reti di controllo multi-hop con perdita di pacchetti**. Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- N. Dell'Aquila. **Ottimizzazione della potenza di trasmissione per un sistema di controllo soggetto ad errori di comunicazione e quantizzazione**. Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- A. Alessandri **Modellistica e analisi di problemi di security per sistemi di controllo su reti wireless**. Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- C. Di Camillo. **Realizzazione di una Classe in C++ per la Costruzione Automatica di un Osservatore per Sistemi ad Eventi Discreti**. Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- A. Marchegiani. **Controllo robusto di un veicolo mediante controllo digitale self-triggered**. Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- G. Di Matteo. **Model checking probabilistico di procedure di controllo del tra-co aereo**. Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2009.
- P. Proia. **Implementazione in linguaggio C++ della semantica "Hybrid System Interchange Format" per sistemi ibridi.** Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, July 2008.
- L. Riccucci. **Analisi del consumo di potenza in un sistema di controllo della ventilazione di una miniera.** Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, June 2008.
- A. Petriccone. **Modelli ibridi per la rappresentazione di procedure di controllo del traffico aereo.** Master Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, April 2008.
- M. Colageo. **Hybrid modeling and observability analysis of the ATSA-In Trail Procedure.** Master Thesis (in English), Department of Electrical Engineering and Computer Science, University of L'Aquila, April 2008.
- A. Di Francesco. **Hybrid observability analysis in an air traffic management multi-agent environment.** Master Thesis (in English), Department of Electrical Engineering and Computer Science, University of L'Aquila, April 2008.

Supervised bachelor theses:

- R. Serino. **Rilevamento persone in un edificio tramite le misure del sistema SCADA di climatizzazione.** Bachelor Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2017

- R. Stante. Conteggio di persone mediante algoritmi di rilevamento di movimento su piattaforma HW Raspberry Pi. Bachelor Thesis, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2017
- R. Mazzoni. **Sviluppo di un tool Matlab per l'ottimizzazione del controllo su una rete multi-hop.** Master Thesis (in Italian), Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2013.
- C. Poliandri. **Rilevamento di guasti di una rete di sensori wireless per il controllo di temperature all'interno di un edificio.** Master Thesis (in Italian), Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila, 2013.
- M. Giannini. **Controllo della temperatura all'interno di un edificio attraverso una rete di sensori wireless soggetta a violazioni della sicurezza.** Bachelor Thesis (in Italian), Department of Electrical Engineering and Computer Science, University of L'Aquila, 2011.
- L. Catenaro. **Sistemi ibridi ed applicazione ad uno scenario di Air Traffic Management.** Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila, April 2007.
- A. Mastroberardino. **Analisi delle interfacce tra nodi Mica2 e attuatori di controllo per mini cars.** Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila, April 2007.
- K. Palluzzi. **Analisi di un microcontrollore per mini cars.** Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila, April 2007.
- M. Di Giorgio. **Realizzazione di una Classe in C++ per la Costruzione Automatica di un Osservatore per Sistemi ad Eventi Discreti.** Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila, December 2006.
- E. Iacobucci. **Diagnosi e osservazione di automi temporizzati**. Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila, July 2006.
- G. Fiore. **Controllo di luminosità con disturbo per reti di sensori wireless**. Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila, April 2006.
- M. Pastore. **Analisi e controllo di un pendolo inverso su rete wireless**. Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila, April 2006.
- V. Ercoli. **Controllo di luminosità per reti di sensori wireless**. Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila, February 2006.
- M. Passerini. **Diagnosi di guasti in reti Wireless di sensori**. Bachelor Thesis (in Italian), Department of Electrical and Information Engineering, University of L'Aquila. December 2005.

International PhD courses

- European Embedded Control Institute (EECI) Graduate School on Control, PhD course on "Modeling, analysis and design of wireless sensor and actuator network", A. D'Innocenzo and C. Fischione, TU-BERLIN, 22/02/2016 – 26/02/2016.

Bachelor and Master courses

Lecturer at the Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila:

2017-2018:
- **Modelling and control of communication networks**, I4T, 9 CFU.
- **Control Systems,** I4W, 6 CFU.

2016-2017:

- **Modelling and control of communication networks**, I4T, 9 CFU.
- **Control Systems,** I4W, 6 CFU.

2015-2016:

- **Modelling and control of communication networks**, I4T, 9 CFU.
- **Control Systems,** I4W, 6 CFU.

2014-2015:

- **Controlli Automatici** (Control systems), I3N, 9 CFU. Prof. Maria D. Di Benedetto (6 CFU) and Dr. Ing. A. D'Innocenzo (3 CFU).
- **Control Systems,** I4W, 6 CFU.
- **Didattica dell'automatica**, TFA A034/A035, 3CFU.

2013-2014:

- **Fondamenti di Automatica** (Elements of Linear Systems Theory), 6 CFU.
- **Control Systems**, 6 CFU.

2012-2013:

- **Didattica di Sistemi Automatici,** TFA, 3CFU.
- **Ingegneria e Tecnologia dei Sistemi di Controllo** (Engineering and Technology of Control Systems), 9 CFU.
- **Control Systems**, 6 CFU. Dr. Ing. A. D'Innocenzo (3 CFU) and Dr. Ing. G. Pola (3 CFU).

2011-2012:

- **Ingegneria e Tecnologia dei Sistemi di Controllo** (Engineering and Technology of Control Systems), 9 CFU. Dr. Ing. A. D'Innocenzo (6 CFU) and Prof. S. Di Gennaro (3 CFU).
- **Control Systems**, 6 CFU. Dr. Ing. A. D'Innocenzo (3 CFU) and Dr. Ing. G. Pola (3 CFU).

2010-2011:

- **Analisi e controllo di sistemi ibridi** (Analysis and control of hybrid systems), 9 CFU. Prof. M.D. Di Benedetto (6 CFU) and Dr. Ing. A. D'Innocenzo (3 CFU).
- **Control Systems**, 6 CFU. Prof. S. Di Gennaro (3 CFU) and Dr. Ing. A. D'Innocenzo (3 CFU).

2009-2010:

- **Analisi e controllo di sistemi ibridi** (Analysis and control of hybrid systems), 9 CFU. Prof. M.D. Di Benedetto (6 CFU) and Dr. Ing. A. D'Innocenzo (3 CFU).

Teaching assistant at the Department of Electrical and Information Engineering, University of L'Aquila:

- **Ingegneria e Tecnologia dei Sistemi di Controllo** (Engineering and Technology of Control Systems), Prof. S. Di Gennaro. Academic Years 2009-2011.
- **Control Systems**, Prof. M.D. Di Benedetto and S. Di Gennaro. Academic Year 2009-2010.
- **Analisi e controllo di sistemi ibridi** (Analysis and control of hybrid systems), Prof. M.D. Di Benedetto.Academic Years 2006-2009.
- **Controlli Automatici** (Automatic Control), Prof. M.D. Di Benedetto and S. Di Gennaro. Academic Years 2006 - 2007.

Institutional activities

- Member of the Energy Audit Commission at the University of L'Aquila (October 2017 – now)
- Member of the Academic Senate at the University of L'Aquila (July 2012 - June 2015)
- Member of the Commission for Research at the University of L'Aquila (July 2012 - June 2013)
- From 2010, Member of various commissions for Master/Bachelor theses dissertation, Engineering state exam, Post-doc and PhD selection procedure, TFA qualification

Publications

Magazine

1. M.D. Di Benedetto and A. D'Innocenzo. Modelling, Analysis and Co-Design of Wireless Control Networks. ERCIM News – Special theme on Cyber-Physical Systems, vol. 97, pp. 9-10, 2014

Journal papers

14. Francesco Smarra, Achin Jain, Tullio de Rubeis, Dario Ambrosini, Alessandro D'Innocenzo, Rahul Mangharam. Data-Driven Model Predictive Control using Random Forests for Building Energy Optimization and Climate Control. Applied Energy (invited paper). 2018, in press.

13. F. Smarra, M.D. Di Benedetto, A. D'Innocenzo. Efficient routing redundancy design over lossy networks. International Journal on robust and nonlinear control. 2018, in press.

12. A. D'Innocenzo, F. Smarra, M.D. Di Benedetto. Resilient Stabilization of MIMO plants over Multi-Hop Control Networks. Automatica, 71:1-9, September 2016.

11. R. M. Jungers, A. D'Innocenzo, M. D. Di Benedetto. Controllability of Linear Systems with Switching Delays. IEEE Transactions on Automatic Control, 61(4):1117-1122, 2016.

10. Yi Deng, A. D'Innocenzo, M. D. Di Benedetto, S. Di Gennaro, A. A. Julius. Verification of Hybrid Automata Diagnosability with Measurement Uncertainty. IEEE Transactions on Automatic Control, 61(4):982-993, 2016.

9. M.D. Di Benedetto, S. Di Gennaro, A. D'Innocenzo. Digital Self Triggered Robust Control of Nonlinear Systems. International Journal of Control, 86:1664-1672, 2013.

8. A. D'Innocenzo, M.D. Di Benedetto, E. Serra. Fault Tolerant Control of Multi-Hop Control Networks. IEEE Transactions on Automatic Control, full paper, 58(6):1377-1389, 2013.

7. R. Alur, D'Innocenzo A., K.H. Johansson, G.J. Pappas, G. Weiss. Compositional Modeling and Analysis of Multi-Hop Control Networks. IEEE Transactions on Automatic Control, Volume: 56, Issue: 10, 2011, Page(s): 2345 - 2357.

6. A. Abate, A. D'Innocenzo, M.D. Di Benedetto. Approximate Abstractions of Stochastic Hybrid Systems. IEEE Transactions on Automatic Control. Volume: 56 , Issue: 11. Page 2688–2694, 2011.

5. M.D. Di Benedetto, S. Di Gennaro, A. D'Innocenzo. Verification of Hybrid Automata Diagnosability by Abstraction. IEEE Transactions on Automatic Control, Volume: 56 , Issue: 9, 2011. Page(s): 2050 – 2061.DOI10.1109/TAC.2011.2105738.

4. E. Witrant, A. D'Innocenzo, G. Sandou, F. Santucci, M. D. Di Benedetto, A. J. Isaksson, K. H. Johansson, S.-I. Niculescu, S. Olaru, E. Serra, S. Tennina and U. Tiberi (2009), Wireless Ventilation Control for Large-Scale Systems: the Mining Industrial Case, International Journal of Robust and Nonlinear Control, Special Issue on Industrial Control over Wireless Networks (ICWN 08). Volume 20, Issue 2, pages 226–251, 25 January 2010. DOI10.1002/rnc.1485.

3. A. Abate, A. D'Innocenzo, M.D. Di Benedetto, S. Sastry (2008). Understanding Deadlock and Livelock Behaviors in Hybrid Control Systems. Nonlinear Analysis: Hybrid Systems, Volume 3, Issue 2, May 2009, Pages 150-162.

2. A.A. Julius, A. D'Innocenzo, G.J. Pappas, M.D. Di Benedetto (2007). Approximate equivalence and synchronization of metric transition systems. Systems & Control Letters, Volume 58, Issue 2, February 2009, Pages 94-101.

1. M.D. Di Benedetto, S. Di Gennaro, A. D'Innocenzo (2007). Discrete State Observability of Hybrid Systems. International Journal of Robust and Nonlinear Control, Special Issue on Observability and Observer Design for Hybrid Systems. Volume 19 Issue 14, Pages 1564 – 1580.

Book chapters

9. A. D'Innocenzo. Modeling and co-design of control tasks over wireless networking protocols. Invited chapter in "Control subject to Computational and Communication Constraints: Current Challenges", Lecture Notes in Control and Information Science (LNCIS), S. Tarbouriech, A. Girard and L. Hetel Eds., Springer-Verlag Berlin, Heidelberg, to appear.

8. M.D. Di Benedetto, S. Di Gennaro, A. D'Innocenzo. Hybrid Systems and Verification by Abstraction. Hybrid Dynamical Systems: Observation and Control, Lecture Notes in Control and Information Sciences, 457/2015:1-26, ISBN 978-3-319-10795-0, M. Djemai and M. Defoort Eds., Springer-Verlag Berlin, Heidelberg 2015.

7. M. D. Di Benedetto, A. Bicchi, A. D'Innocenzo, K. H. Johansson, A. Robertsson, F. Santucci, U. Tiberi, A. Tzes. Networked control. Handbook of Hybrid Systems Control, Theory, Tools, Application. J. Lunze and F. Lamnabhi Eds. - Cambridge University Press, 2009, 106-112.

6. A. Abate, A. D'Innocenzo, M.D. Di Benedetto, S. Sastry (2008). Markov Set-Chains as abstractions of Stochastic Hybrid Systems. In: Hybrid Systems: Computation and Control 2008, Lecture Notes in Computer Science.

5. A. Abate, A. D'Innocenzo, G. Pola, M.D. Di Benedetto, S. Sastry (2007). The Concept of Deadlock and Livelock in Hybrid Control Systems (2007). In: Hybrid Systems: Computation and Control 2007, Lecture Notes in Computer Science. Short paper.

4. M.D. Di Benedetto, S. Di Gennaro, A. D'Innocenzo (2007). Diagnosability Verification for Hybrid Automata. In: Hybrid Systems: Computation and Control 2007, Lecture Notes in Computer Science. Short paper.

3. A. D'Innocenzo, M.D. Di Benedetto, S. Di Gennaro (2006). Finite horizon observability of Hybrid Automata by Abstraction. CTS-HYCON Workshop on Nonlinear and Hybrid Control. July 10-12 2006. Paris La Sorbonne, International Scientific and Technical Encyclopedia (ISTE).

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