

UNIVERSITÀ DEGLI STUDI DI MILANO

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Alberto STABILE CURRICULUM VITAE

INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)

COGNOME	STABILE
NOME	ALBERTO
DATA DI NASCITA	5 DICEMBRE 1982

Current / past positions

- 5 SET 2015 – Post-doctoral researcher (“borsista: vincitore grant di gruppo V”) ¹ as **national team leader** of the Innovative Multi-chip system for Multi-purpose PAttern Recognition Task (IMPART) project, Istituto Nazionale di Fisica Nucleare (INFN) - CSN5.
- 5 MAR 2015 – 4 SET 2015 Post-doctoral researcher (“collaboratore di ricerca”) as **national team leader** of IMPART project, Istituto Nazionale di Fisica Nucleare (INFN) - CSN5.
- 5 MAR 2013 – 4 MAR 2015 Post-doctoral researcher (“assegno di ricerca: sviluppo di circuiti integrati per esperimenti di fisica nucleare e subnucleare”) as **team leader** of the associative memory chip design group for the ATLAS FastTracKer (FTK), Istituto Nazionale di Fisica Nucleare (INFN) - CSN1.
- 1 MAR 2012 – 28 FEB 2013 Post-doctoral researcher (“assegno di ricerca: Progetto di prototipo hardware per l'elaborazione parallela di tracce in rivelatori di vertice”), Supervisor: Prof. Valentino Liberali, Department of Physics, University of Milano.
- 1 MAR 2011 – 28 FEB 2012 Post-doctoral researcher (“assegno di ricerca”) for the study and simulation of open-quantistic systems. Supervisor: Prof. Bassano Vacchini, Department of Physics, University of Milano.
- 1 MAR 2010 – 28 FEB 2011 Post-doctoral researcher (“collaboratore di ricerca”) for the design of radiation hard memories, Industry: Sanitas AG, Milano.
- 1 NOV 2009 – 28 FEB 2010 Post-doctoral researcher (“collaboratore di ricerca”) for the design of radiation hard memories, Industry: RedCat devices, Milano.

¹ Si veda la graduatoria allegata

Education

- 2007-2010 **Ph.D. in Computer Science**, University of Milano.
Final dissertation title: *Design methodologies for radiation-hardened memories in CMOS technology*, date: **26 March 2010**.
Supervisor: Prof. Valentino Liberali.
- 2004-2006 **M.Sc. in Computer Science**, University of Milano.
Final dissertation title: *Memorie non volatile per applicazioni aerospaziali*, date: **9 October 2006**.
Supervisor: Prof. Valentino Liberali.
- 2001-2004 **B.Sc. in Computer Science**, University of Milano.
Final dissertation title: *Codifica in descrizioni multiple di sequenze video con filtraggio spaziale e spazio-temporale*, date: **14 December 2004**.
Supervisor: Prof. Valentino Liberali.

Awards

- 2014 Award for a **research project** with a two-year duration to foster excellence among young researchers working in the fields of National Institute of Nuclear Physics (INFN) for the research and the technological development (electronics/information technology): total budget: 210 000 € (60 000 € for the salary and 150 000 € for the research);
- 2010 Award for the **best oral presentation** at the International Conference on Microelectronics (MIEL 2010);
- 2008 **Award for applied research (cooperation between Academia and SME)**. This award was funded by European Union, Social European Fund, and Lombardy region for the development of radiation hardened integrated circuits.

Main research skills

- **Integrated circuit designer** (radiation-hard memories, associative memories, pixel detectors, FPGA firmware, and telecommunication systems);
- Study, development, software programmer of **physics models** (e.g., open-quantistic systems², IC-radiation interaction simulators, etc...).

² A Smirne, et al., doi:10.1088/0031-8949/2013/T153/014057.

Research and teaching performances

● Scientific responsibilities:

- Since 2015, I am the **national team leader** of an *Innovative Multi-chip system for Multi-purpose PAttern Recognition Task*³ (**IMPART**) project which is an international collaboration involving INFN, Università degli Studi di Milano, Pisa, University of Melbourne (Australia). The project is funded by INFN and consists in developing a cutting edge pattern recognition device for fast image analysis and future trigger processors for High Energy Physics (HEP). This project will achieve an innovative System in Package (SiP) with the final aim of enhancing performance and power saving in electronics devices devoted to pattern recognition tasks for several interdisciplinary applications. The IMPART group is composed by 7 researchers.
- *Track trigger (phase 2)* is an international collaboration involving INFN, Università degli Studi di Milano, Pisa, Bergamo, University of Melbourne (Australia), Laboratoire de physique nucléaire et de hautes énergies, Institut de Physique Nucleaire de Lyon with similar aims of IMPART. Due to the strong superposition with IMPART aims, **I am collaborating to the coordination** of this project. The group is composed by 14 researchers.
- *Fast Tracker*⁴ (**FTK**) is an international collaboration funded by INFN/CERN with the aim to realize a parallel elaboration system to increase the trigger performance at ATLAS experiment at CERN. Since 2013, I am **the team leader** of the group devoted to design and characterize ICs for the pattern recognition. We have designed four successful associative memory chips. This group is composed by 7 researchers. In 2012, I was the **team leader** of a group devoted the implementation of FPGA firmware for the system architecture⁵.

● Scientific collaborations:

- *High Voltage CMOS (HVR_CCPD)* is an national collaboration funded by INFN with the aim to design and characterize a High Voltage CMOS pixel detector and 3D pixel sensors. Since 2015, I am collaborating to the **chip integration and support on the design kits**.
- *Innovative electronics in CMOS 65nm technology for a new generation pixel chip at future High Energy Physics colliders (CHIPIX65) and RD53*⁶ are international collaborations funded by INFN/CERN with the aim to design rad-hard pixel detector and IP core blocks to be used in HEP experiments. Since 2014, my task for this project is the **chip integration and standard cells design**.
- SkyFlash is an international project funded with the FP7 of the European Union. The goal is the development of rad-hard non-volatile flash memories for space applications. I collaborated to the design of a **radiation hard charge pump**⁷.
- AIDA is an international project funded with the FP7 of the European Union. The project addresses infrastructures required for detector development for future particle physics experiments. I collaborated to the design of **radiation hard SRAM**⁸.

³ A Annovi, et al., doi:10.1109/ICECS.2015.7440331.

⁴ A Andreani, et al., doi:10.1109/TNS.2011.2179670.

⁵ F. Alberti, et al., doi:10.1088/1748-0221/8/01/C01040; V. Cavaliere, et al., doi:10.1088/1748-0221/11/02/C02056.

⁶ N. Demaria., et al: doi:10.1109/IWASI.2015.7184947.

⁷ Bellotti G., et al., doi:10.1109/RADECS.2013.6937373.

⁸ Shojaii S., et al., doi:10.1109/MIEL.2014.6842164.

● **Publication summary:**

	#	Journal	Proceeding	Scopus ⁹		Google ¹⁰		WoS ¹¹	
				h-index	citations	h-index	citations	h-index	citations
Publications outside ATLAS collaboration	46	17	29	5	74	9	235		
Publications within ATLAS collaboration ¹²	61	61	0	4	58	9	478		
Total	107	78	29	5	132	11	713	5	126
Patent pending	1								
National publications	1								
Technical reports	2								

- **9 oral presentations** at international conferences.
- **3 invited seminar** at IPM, Teheran (Iran).
 - Stabile, A. “Innovative AM chips for fast tracker processors”, Jan. 2016.
 - Stabile, A. “Logic design approaches: full-custom, standard cells, IP block”, Jan. 2016.
 - Stabile, A. “Innovative multi-chip system for multi-purpose pattern recognition task”, Jan. 2016.
- **1 invited seminar** at the Melbourne University and Hobart (Tasmania).
 - Stabile, A. “Innovative AM chips for fast tracker processors”, Feb. 2015.
- **1 invited seminar** at the Computing Systems Week (CSW)- hiPEAC (Milano).
 - Stabile, A. “The Associative Memories chips: the past and the future”, Sep. 2015.
- **Italian patent pending** on associative memory cells (funded by INFN)
 - Annovi A., Frontini L., Liberali V. and Stabile A., "Memoria Cam", ref. P1637IT00
- **Review paper** on the radiation effects and rad-hard CMOS techniques:
 - Camplani A., et al, “CMOS IC radiation hardening by design”, *Facta Universitatis, Series: Electronics and Energetics*, vol. 27, no. 2, pp. 251–258, 2014.

● **Teaching:**

- Since 2010, I am a laboratory assistant for the Electronic Laboratory (“Laboratorio di Ottica, Elettronica e Fisica Moderna”) at the Dept. of Physics - Università degli Studi di Milano.
- Since 2011, I am a laboratory assistant for the Computer Science Laboratory (“Informatica”) at the Dept. of Physics - Università degli Studi di Milano.

● **Career supervision:**

- Supervisor of 1 M.Sc. thesis;
- Co-supervisor of 19 theses (1 Ph.D., 5 M.Sc., 13 B.Sc.);
- Supervisor assistant of 4 B.Sc. theses.

⁹ <https://www.scopus.com/authid/detail.uri?authorId=25927574900>

¹⁰ <https://scholar.google.it/citations?user=V9Mbb1wAAAAJ&hl=it>

¹¹ <http://www.researcherid.com/rid/L-3419-2016>

¹² Since 2015, I am in the authorlist of the ATLAS collaboration.

Temporary working places

- **Italy**
 - **INFN Pisa:** I worked on the FTK project: firmware, PCB and ASIC design;
 - **Laboratories of Frascati (LNF):** I worked on the FTK project: PCB and ASIC design;
 - **Laboratories of Legnaro (Padua):** I characterized SRAM memories under radiation;
 - **LENA of Pavia:** I characterized pixel detectors.
- **Switzerland**
 - **CERN:** I have been frequently at CERN, mainly for the FTK project.
- **Australia**
 - **University of Melbourne:** I worked for the IMPART project.
- **France**
 - **LPNHE - Paris:** I worked for the FTK and IMPART projects;
 - **IPNL - Lyon:** I worked for the IMPART projects.
- **Sweden**
 - **Uppsala Universitet:** I characterized FPGAs under proton beam radiation.

Funding

Individual grants

- 2015 - 2017 **IMPART: two-year grant** from the National Institute of Nuclear Physics (INFN) for the research and the technological development (electronics/information technology): total budget: 210 000 € (60 000 € for the salary and 150 000 € for the research);
- 2008 **SME-Academia grant.** Agency: Social European Fund: University of Milan. 10 000 € Design of radiation-hardened memories.

Grants as member of research group

- 2010-2015 **FTK – ATLAS (1 M€)**, University of Milan, INFN, CERN: **Integrated Circuit (IC) designer** of Associative Memory Chip (AMs) used to perform pattern recognition of the particle trajectories.
- Associative Memory Chip (version 6 - **cost ~ 600 000 €**): team leader with Francesco Crescioli and designer. **The chip is fully functional** and ready for the industrial tests. It will be installed inside ATLAS experiment. Designed in 2015, characterized in 2016;
 - Associative Memory Chip¹³ (version 5 - MPW): team leader with Francesco Crescioli and designer. **The chip prototype was fully functional.** Designed in 2013, characterized in 2014;

¹³ M Beretta, et al. doi:10.1088/1748-0221/9/03/C03053; Andreani A. et al., doi:10.1088/1748-0221/9/11/C11006.

- Associative Memory Chip¹⁴ (version 5 - miniasic): team leader with Francesco Crescioli and designer. **The chip prototype was fully functional.** Designed in 2012, characterized in 2013 and fully functional;
 - Associative Memory Chip¹⁵ (version 4): My contribution for this project was the design of the entire chip and the characterization. **The chip prototype was fully functional.** Designed in 2011, characterized in 2012;
- 2013-2015 I am contributing to **AIDA¹⁶ (1.2 M€), SKYFLASH¹⁷ (1.5M€), CHIPIX65¹⁸(400k€)** project with the aim to design rad-hard ICs.
- 2010-2011 Post-doctoral grant for **SuperB**, University of Milan and INFN:
- **Electronic system designer¹⁹**: study of feasibility for the high-frequency communication system at the interface between front-end detector and back-end TDAQ systems.
- 2007-2010 Radiation Immune FLASH memory (**RIFLASH**) funded by Lombardy Region and European Union (~ 100 000 €):
- **IC designer**: my contribution was to design a non-volatile memory able to work in radiation environments²⁰.
- 2007-2010 RAD-hard Memories for Storage Embedded Systems (**RAMSES**) funded by Lombardy Region and European Union (~ 20 000 €):
- **IC designer**: my contribution was to design and to characterize some prototypes of chip containing Static RAM and able to work in radiation environments²¹.
- 2007-2010 Fault Injection Simulation and Analysis for Radiation hard (**FISAR**) (~ 40 000 €):
- **Simulation software programmer²²**: my contribution was to program a simulator of the interaction between radiation and integrated circuits. The results consist in obtaining radiation sensitivity maps.

Other activities

I am orchestra conductor (30 musicians).

¹⁴ L Frontini, et al. doi:10.1109/ICECS.2012.6463629.

¹⁵ A Andreani, et al. doi:10.1088/1748-0221/7/08/C08007; Annovi A. et al., doi:10.1109/NSSMIC.2011.6154467.

¹⁶ S Shojaii, et al. doi:10.1109/MIEL.2014.6842164.

¹⁷ G Bellotti, et al. doi:10.1109/RADECS.2013.6937373.

¹⁸ L Frontini, et al. doi:10.1109/ICECS.2015.7440332; G Bozzola, et al. doi: 10.1109/MOCAS.2016.7495139.

¹⁹ G Rizzo, et al. doi:10.1016/j.nima.2010.12.111.

²⁰ A Stabile, et al., doi:10.1109/ICECS.2008.4674813.

²¹ M Benigni, et al. doi:10.1109/MIEL.2010.5490481 (**best oral paper**); Calligaro C., et al., doi:10.1109/ICECS.2009.5410804.

²² E Do, et al., doi:10.1109/RADECS.2009.5994583.

List of publications outside ATLAS collaboration

Journals:

1. Cavaliere V., et al., "Design of a hardware track finder (Fast Tracker) for the ATLAS trigger", *Journal of Instrumentation*, vol. 11, no. 2, 2016, doi:10.1088/1748-0221/11/02/C02056
2. Andreani A. et al., "The associative memory serial link processor for the fast TracKer (FTK) at ATLAS", *Journal of Instrumentation*, vol. 9, no. 11, 2014, doi:10.1088/1748-0221/9/11/C11006, (citations: 3)
3. Beretta M., et al., "Next generation associative memory devices for the FTK tracking processor of the ATLAS experiment", *Journal of Instrumentation*, vol. 9, no. 3, 2014, doi:10.1088/1748-0221/9/03/C03053, (citations: 9)
4. Camplani A., et al., "CMOS IC radiation hardening by design", *Facta Universitatis, Series: Electronics and Energetics*, vol. 27, no. 2, pp. 251–258, 2014, (citation: 1)
5. Alberti F. et al., "Performance of the AMBFTK board for the FastTracker processor for the ATLAS detector upgrade", *Journal of Instrumentation*, vol. 8, no. 1, 2013, doi:10.1088/1748-0221/8/01/C01040, (citations: 6)
6. Smirne A., et al., "Signatures of non-Markovianity in classical single-time probability distributions", *Physica Scripta*, vol. 87, no. T153, 2013, doi:10.1088/0031-8949/2013/T153/014057, (citations: 3)
7. Paoloni E., et al., "Advances in the development of pixel detector for the SuperB Silicon Vertex Tracker", *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, vol. 731, pp. 25–30, 2013, doi:10.1016/j.nima.2013.06.070, (citations: 2)
8. Balestri G., et al., "Latest results of the R&D on CMOS MAPS for the Layer0 of the SuperB SVT", *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, vol. 732, pp. 484–487, 2013, doi:10.1016/j.nima.2013.05.170, (citation: 1)
9. Anderson J. et al., "A fast hardware tracker for the ATLAS trigger system", *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, vol. 718, pp. 258–259, 2013, doi:10.1016/j.nima.2012.11.133, (citation: 1)
10. Rizzo G. et al., "Recent developments on CMOS MAPS for the SuperB Silicon Vertex Tracker", *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, vol. 718, pp. 283–287, 2013, doi:10.1016/j.nima.2012.10.084, (citations: 6)
11. Giorgi F., et al., "The front-end chip of the SuperB SVT detector", *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, vol. 718, pp. 180–183, 2013, doi:10.1016/j.nima.2012.11.036, (citations: 3)
12. Fabbri L., et al., "Beam test results for the SuperB-SVT thin strip detector", *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, vol. 718, pp. 314–317, 2013, doi:10.1016/j.nima.2012.10.086, (citation: 1)
13. Andreani A. et al., "The AMchip04 and the processing unit prototype for the FastTracker", *Journal of Instrumentation*, vol. 7, no. 8, 2012, doi:10.1088/1748-0221/7/08/C08007, (citations: 11)
14. Andreani A. et al., "The FastTracker real time processor and its impact on Muon isolation, Tau and b-jet online selections at ATLAS", *IEEE Transactions on Nuclear Science*, vol. 59, no. 2, pp. 348–357, 2012, doi:10.1109/TNS.2011.2179670, (citations: 34)
15. Anderson J. et al., "FTK: A Fast Track Trigger for ATLAS", *Journal of Instrumentation*, vol. 7, no. 10, 2012, doi:10.1088/1748-0221/7/10/C10002, (citations: 3)
16. Rizzo G., et al., "Thin pixel development for the SuperB silicon vertex tracker", *Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment*, vol. 6501, pp. 169–173, 2011, doi:10.1016/j.nima.2010.12.111, (citations: 18)
17. Andreani A. et al., "Enhancement of the ATLAS trigger system with a hardware Tracker finder FTK", *Journal of Instrumentation*, vol. 5, no. 12, 2010, doi:10.1088/1748-0221/5/12/C12037, (citation: 1)

Proceedings:

1. Stabile A., et al., "FTK: A hardware real-time track finder for the ATLAS trigger system", *Proceedings of the 5th International Conference on Modern Circuits and Systems Technologies (MOCASST)*, 2016, doi:10.1109/MOCASST.2016.7495135, **(speaker)**
2. Bozzola G., et al., "Improvement of radiation tolerance in CMOS ICs through layout-oriented simulation", *Proceedings of the 5th International Conference on Modern Circuits and Systems Technologies (MOCASST)*, 2016, doi:10.1109/MOCASST.2016.7495139
3. Annovi A., et al., "A XOR-based associative memory block in 28 nm CMOS for interdisciplinary applications", *Proceedings of the IEEE International Conference on Electronics, Circuits, and Systems ICECS 2015*, pp. 392–395, 2016, doi:10.1109/ICECS.2015.7440331, **(speaker)**
4. Frontini L., et al., "Double-redundant design methodology to improve radiation hardness in pixel detector readout ICs", *Proceedings of the IEEE International Conference on Electronics, Circuits ICECS 2015, and Systems*, pp. 396–399, 2016, doi:10.1109/ICECS.2015.7440332

5. Demaria N., et al., "CHPIX65: Developments on a new generation pixel readout ASIC in CMOS 65 nm for HEP experiments", *Proceedings of the 6th IEEE International Workshop on Advances in Sensors and Interfaces, IWASI 2015*, pp. 49–54, 2015, doi:10.1109/IWASI.2015.7184947, (citations: 4)
6. Volpi G., et al., "The ATLAS fast tracker processor design", *Proceedings of Science Vertex2015*, 2015
7. Ciriani V., et al., "Radiation-tolerant standard cell synthesis using double-rail redundant approach", *Proceedings of the 21st IEEE International Conference on Electronics, Circuits and Systems, ICECS 2014*, pp. 626–629, 2014, doi:10.1109/ICECS.2014.7050063, (citations: 2), **(speaker)**
8. Shojaii S., et al., "A radiation hardened static RAM for high-energy physics experiments", *Proceedings of the International Conference on Microelectronics, MIEL*, pp. 359–362, 2014, doi:10.1109/MIEL.2014.6842164, (citations:3)
9. Andreani A. et al., "Characterisation of an Associative Memory Chip for high-energy physics experiments", *Proceedings of the IEEE Instrumentation and Measurement Technology Conference*, pp. 1487–1491, 2014, doi:10.1109/I2MTC.2014.6860993, (citations: 3), **(speaker)**
10. Demaria N., et al., "RD53 Collaboration and CHPIX65 Project for the development of an innovative Pixel Front End Chip for HL-LHC", *Proceedings of the INFN Workshop on Future Detectors for HL-LHC (IFD2014)*, vol. 1, pp. 10, 2014, (citation: 1)
11. Valerio P., et al., "65nm technology for HEP: status et perspective", *Proceedings of Science Vertex2014*, pp. 43, 2014, (citations: 3)
12. Andreani A. et al., "Next generation associative memory devices for the FTK tracking processor of the ATLAS experiment", *Proceedings of the IEEE Nuclear Science Symposium Conference*, 2013, doi:10.1109/NSSMIC.2013.6829550
13. SSMIC.2013.6829550
14. Bellotti G., et al., "A radiation hardened by design charge pump for flash memories", *Proceedings of the European Conference on Radiation and its Effects on Components and Systems, RADECS*, 2013, doi:10.1109/RADECS.2013.6937373
15. Frontini L., et al., "A new XOR-based Content Addressable Memory architecture", *Proceedings of the 19th IEEE International Conference on Electronics, Circuits, and Systems, ICECS 2012*, pp. 701–704, 2012, doi:10.1109/ICECS.2012.6463629, (citations: 10)
16. Vitale L., et al., "The SuperB Silicon Vertex Tracker", *Proceedings of Science, ISSN 1824-8039, Vertex 2012*, 2012
17. Annovi A. et al., "Associative memory design for the fast track processor (FTK) at ATLAS", *Proceedings of the IEEE Nuclear Science Symposium Conference Record*, pp. 141–146, 2012, doi:10.1109/NSSMIC.2011.6154467, (citations: 22), **(speaker)**
18. Giorgi F., et al., "2D and 3D thin pixel technologies for the Layer0 of the SuperB Silicon Vertex Tracker", *Proceedings of the IEEE Nuclear Science Symposium Conference*, pp. 1324–1328, 2012, doi:10.1109/NSSMIC.2011.6154335, (citations: 6)
19. Annovi A. et al., "A new variable-resolution associative memory for high energy physics", *Proceedings of the 2nd International Conference on Advancements in Nuclear Instrumentation, Measurement Methods and their Applications*, 2011, doi:10.1109/ANIMMA.2011.6172856, (citations: 24)
20. Amerio S., et al., "ATLAS FTK: Fast track trigger", *Proceedings of Science ISSN 1824-8039, Vertex2011*, 2011
21. Liberali V., et al., "Design approaches for IC radiation hardening", *Convegno Nazionale AEIT*, 2011, ISBN-10: 8887237298
22. Bettarini S., et al., "R&D Progress on The SuperB Silicon Vertex Tracker", *Proceedings of Science ISSN 1824-8039, RD2011*, 2011
23. Andreani A. et al., "The fast track real time processor and its impact on muon isolation, tau and b-jet online selections at ATLAS", *Proceedings of the 17th IEEE-NPSS Real Time Conference*, RT10, 2010, doi:10.1109/RTC.2010.5750337
24. Casarosa G., et al., "Thin pixel development for the Layer0 of the SuperB silicon vertex tracker", *Proceedings of the IEEE Nuclear Science Symposium Conference*, pp. 1901–1905, 2010, doi:10.1109/NSSMIC.2010.5874105
25. Calligaro C., et al., "A multi-megabit, radiation hardened by design 512 kbit SRAM in CMOS technology", *Proceedings of the International Conference on Microelectronics, ICM*, pp. 375–378, 2010, doi:10.1109/ICM.2010.5696165, (citations: 4)
26. Benigni M., et al., "Design of rad-hard SRAM cells: A comparative study", *Proceedings of the 27th International Conference on Microelectronics, MIEL 2010*, pp. 279–282, 2010, doi:10.1109/MIEL.2010.5490481, (citations: 3), **(speaker and best oral paper)**
27. Do E., et al., "Layout-oriented simulation of non-destructive single event effects in CMOS IC blocks", *Proceedings of the European Conference on Radiation and its Effects on Components and Systems, RADECS*, pp. 217–224, 2009, doi:10.1109/RADECS.2009.5994583, (citations: 9), **(speaker)**
28. Calligaro C., et al., "A radiation hardened 512 kbit SRAM in 180 nm CMOS technology", *Proceedings of the 16th IEEE International Conference on Electronics, Circuits and Systems, ICECS 2009*, pp. 655–658, 2009, doi:10.1109/ICECS.2009.5410804, (citations: 7), **(speaker)**
29. Stabile A., et al., "Design of a rad-hard library of digital cells for space applications", *Proceedings of the 15th IEEE International Conference on Electronics, Circuits and Systems, ICECS 2008*, pp. 149–152, 2008, doi:10.1109/ICECS.2008.4674813, (citations: 20), **(speaker)**

List of publications with ATLAS collaboration

1. ATLAS collaboration, "Search for charged Higgs bosons produced in association with a top quark and decaying via $H_{\pm} \rightarrow \tau \nu$ using pp collision data recorded at $\sqrt{s}=13$ TeV by the ATLAS detector", *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, vol. 759, pp. 555–574, 2016, doi:10.1016/j.physletb.2016.06.017
2. ATLAS collaboration, "Charged-particle distributions in $\sqrt{s}=13$ TeV pp interactions measured with the ATLAS detector at the LHC", *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, vol. 758, pp. 67–88, 2016, doi:10.1016/j.physletb.2016.04.050
3. ATLAS collaboration, "Search for single production of a vector-like quark via a heavy gluon in the 4b final state with the ATLAS detector in pp collisions at $\sqrt{s}=8$ TeV", *Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics*, vol. 758, pp. 249–268, 2016, doi:10.1016/j.physletb.2016.04.061
4. ATLAS collaboration, "Charged-particle distributions in pp interactions at $\sqrt{s}=8$ TeV measured with the ATLAS detector", *European Physical Journal C*, vol. 76, no. 7, 2016, doi:10.1140/epjc/s10052-016-4203-9
5. ATLAS collaboration, "Search for squarks and gluinos in final states with jets and missing transverse momentum at $\sqrt{s}=13$ TeV with the ATLAS detector", *European Physical Journal C*, vol. 76, no. 7, 2016, doi:10.1140/epjc/s10052-016-4184-8
6. ATLAS collaboration, "A search for an excited muon decaying to a muon and two jets in pp collisions at $\sqrt{s}=8$ TeV with the ATLAS detector", *New Journal of Physics*, vol. 18, no. 7, 2016, doi:10.1088/1367-2630/18/7/073021
7. ATLAS collaboration, "Measurement of event-shape observables in $Z \rightarrow \ell + \ell$ -events in pp collisions at $\sqrt{s}=7$ TeV with the ATLAS detector at the LHC", *European Physical Journal C*, vol. 76, no. 7, 2016, doi:10.1140/epjc/s10052-016-4176-8
8. ATLAS collaboration, "Search for metastable heavy charged particles with large ionization energy loss in pp collisions at $\sqrt{s}=13$ TeV using the ATLAS experiment", *Physical Review D - Particles, Fields, Gravitation and Cosmology*, vol. 93, no. 11, 2016, doi:10.1103/PhysRevD.93.112015
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