

Marcin Patecki

Born: 22 November 1989, Tomaszów Mazowiecki, Poland

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EDUCATION

- IV 2019 OMA Advanced School on Medical Accelerators and Particle Therapy.
- X 2013 – X 2016 Doctoral studies at the Warsaw University of Technology, Faculty of Physics performed at CERN in a frame of the Doctoral Students Programme within the CLIC project. Defended with honours in May 2017.
- X 2015 CERN Accelerator School: Advanced Accelerator Physics.
- I 2013 – II 2013 Joint Universities Accelerator School: Science & Physics of Particle Accelerators.
- II 2012 – IX 2013 Master studies at the Warsaw University of Technology, Faculty of Physics performed at CERN in a frame of the Technical Students Programme. Graduated with an excellent note.
- X 2008 – II 2012 Bachelor studies at the Warsaw University of Technology, Faculty of Physics, specialisation: Technical Physics, sub-specialisation: Computer Physics. Finished with the Engineering Diploma with a very good note.

WORK EXPERIENCE

- XII 2016 – V 2019 CERN Fellowship Programme in BE-ABP-HSS, Collimation Team. Designing an off-momentum collimation system for the SPS operating with the HL-LHC beams.
- I, II, V 2016,
IV, V, VI 2015,
II, V, IX, XII 2014 Experimental work in the Accelerator Test Facility, KEK, Japan. Investigating beam focusing limits at the interaction point, working as beam operator, coordinating the beam operation, contributing to ground motion studies. 23 weeks in total.
- XI 2013 – X 2016 CERN Doctoral Students Programme in BE-ABP-LAT, CLIC Project. Optimization analysis and improvement of the effective beam sizes in the Accelerator Test Facility.
- VII 2012 – IX 2013 CERN Technical Students Programme in BE-BI-BL. Development of the Beam Gas Ionisation (BGI) monitor used for the beam size measurements in the LHC and the SPS.
- VII 2011 – IX 2011 Internship in the ALICE experiment. Analysis of the $\Delta\eta\Delta\phi$ two-particle correlation functions coming from the pp collision data registered by the ALICE experiment.
- V 2009 and IX 2010 Coordinator of an exposition of the Almukantarat Astronomy Club at the Scientific Picnic in Warsaw and at the Open Days of M. Kopernik Centre of Astronomy in Warsaw.
- 2007 – 2008 Internship in the MAZE Project in the Andrzej Soltan Institute for Nuclear Research concerning the studies of the cosmic ray.

SKILLS

Data analysis, statistics, signal processing;
Programming in python, C++;
Fluent with MATLAB, ROOT, MADX;
Basis of C, Java, LABView, CST Studio, FLUKA, Geant4, SixTrack;
Computer skills (Windows, Linux);
Operating electronic devices – oscilloscopes, generators, multimeters etc.
Great social skills

LANGUAGES

English – C1 level
French – B2 level

PUBLICATIONS AND CONFERENCES

Main author:

- *Probing half β_y * optics in the Accelerator Test Facility 2*, M. Patecki, D. Bett, E. Marin, F. Plassard, R. Tomás, K. Kubo, S. Kuroda, T. Naito, T. Okugi, T. Tauchi, and N. Terunuma, Phys. Rev. Accel. Beams 19, 101001 (2016).
- *Effects of quadrupole fringe fields in final focus systems for linear colliders*, M. Patecki, R. Tomás, Phys. Rev. ST Accel. Beams 17, 101002 (2014).

Co-author:

- *Compensation of orbit distortion due to quadrupole motion using feed-forward control at KEK ATF*, D. Bett, C. Charrondière, M. Patecki, J. Pflingstner, D. Schulte, R. Tomás, A. Jeremie, K. Kubo, S. Kuroda, T. Naito, T. Okugi, T. Tauchi, N. Terunuma, P. Burrows, G. Christian, C. Perry, Nuclear Inst. and Methods in Physics Research, A 895 (2018) 10–18
- *Mitigation of ground motion effects in linear accelerators via feed-forward control*, J. Pflingstner, K. Artoos, C. Charrondiere, St. Janssens, M. Patecki, Y. Renier, D. Schulte, R. Tomás, A. Jeremie, K. Kubo, S. Kuroda, T. Naito, T. Okugi, T. Tauchi, N. Terunuma, Phys. Rev. ST Accel. Beams 17, 122801 (2014).

International Particle Accelerator Conference 2018, Vancouver, Canada:

- *Conceptual Design of a Collimation System for the CERN SPS*, presented as a poster.

International Particle Accelerator Conference 2016, Busan, South Korea:

- *Progress in Ultra-Low β^* Study at ATF2*, presented as a poster.
- *Ground Motion Compensation Using Feed-Forward Control at ATF2*, presented as a poster.

International Particle Accelerator Conference 2015, Richmond, USA:

- *Towards Ultra-Low β^* in ATF2*, presented as a contributed talk.
- *Contribution of Optical Aberrations to Spot-size Increase with Bunch Intensity at ATF2*, presented as a poster.

FREE TIME INTERESTS

Running: 800m: 1:59, 1500m: 4:07, 5km: 15:27, 10km: 32:49, marathon: 2:58:46.

Football: Secretary and left-midfielder of the CERN Football Team.

Astronomy: Member of the Almukantarat Astronomy Club.