

EUNIL WON

Present Address

Dept. of Physics
Korea University
145, Anam-ro, Seongbuk-gu, Seoul
Republic of Korea
+82-2-3290-3113

Permanent Address

Dept. of Physics
Korea University
145, Anam-ro, Seongbuk-gu, Seoul
Republic of Korea
+82-2-3290-3113

Personal information

Current position: Professor of physics, Korea University
Sex: male
Marital status: married, 3 children
Email: eunil@hep.korea.ac.kr
Personal web site: <http://particle.korea.ac.kr>
Lab web site: <http://hep.korea.ac.kr>

Education

- Ph.D in particle physics, University of Rochester, NY USA, 1997 under the supervision of Thomas Ferbel, with the title of thesis *Top-quark production in multi-jet final states*
- M.A. in particle physics, University of Rochester, NY, 1995
- B.S. in physics, Korea University, Seoul Korea, 1992

Employment

- 2004 - Now: Professor, Korea University (2004-2007: Assistant, 2007-2013: Associate, 2013 - Now: Professor of Physics)
- 2014 - 2015: Guest Scientist of CAPP/IBS at KAIST
- 2007 - 2008: Sabbatical leave at Fermilab in US as an international fellow
- 2002 - 2004: Research Associate, Harvard University
- 2000 - 2002: Postdoctoral fellow, BK21 Physics division, Seoul National University
- 1999 - 2000: Postdoctoral fellow, KEK
- 1997 - 1999: Postdoctoral fellow, Research Institute for Basic Sciences, Seoul National University (military service)

Professional Services

- 2016 - 2018: The deputy head of the Science College, Korea University
- 2014 - Now: Korean ILC task force team leader
- 2012 - Now: Korean Detector Technology Develop convenor for Asia Forum for Accelerators and Detectors
- 2012 - 2013: Team leader for the fundamental science case study utilizing RISP/IBS
- 2011 - 2013: Belle-II Institutional Board Chair
- 2009 - Now: Belle-II Executive Committee member
- 2003 - 2004: BaBar DCH trigger commissioner
- 1999 - 2000: Belle DST production manager

Refereeship

- Physical Review Letters/Physical Review D
- J. of Instrumentation
- J. of High Energy Physics

Academic Honors

2008: Fermilab International Fellowship
1993: Fellowship from Korea Foundation for Advanced Studies
(<http://www.kfas.or.kr>)
1992: Valedictorian of Korea University
1990 - 1992 : Baek Un Fellowship (Department of Physics, Korea University)

Research Interests

I am generally interested in experimental study of the CP violation in B and D meson systems. To carry it out, I have been working on the Belle experiment that is located in KEK/Japan from 1997. My group published $\mathcal{O}(10)$ PRL/PRD journal papers as 1st or corresponding authors in last 10 years and one of them is a half-theoretical. This project is going to be upgraded to collect 50 times more data to address the question of CP violation even further. My group is responsible for the implementation of a 3-dimensional tracking system in the level one trigger stage where huge FPGA based computations are required. This project is to be finished in the year of 2016 when the drift chamber for the Belle II experiment is ready to roll in.

As the Belle experiment was running stable, I got interested in experimental cosmology. I am currently working on a ground based telescope project called GroundBird to detect B -mode of the CMB polarization, which can be a smoking gun level discovery of the inflation model of our universe. This project happened also to be located in KEK/Japan. Our group is working on the focal plane optics, a small R&D on the superconducting film based resonator (MKID: Microwave Kinetic Inductance Detector) for the photon detection, and the readout electronics in the frequency domain.

My hardware experience includes FPGA programming, analog/digital microelectronics (or ASIC), DAQ system, and superconducting thin film resonator development.

Major Publications

- Phys. Rev. Lett. **112**, 111801 (2014), *Observation of $D^0 - \bar{D}^0$ mixing in e^+e^- collisions*, **E. Won (corresponding)**, for the Belle collaboration.
- Journal of High Energy Physics, **02** (2013) 098, *Search for CP Violation in the Decay D^+ to $K_S K^+$* , **E. Won (corresponding)**, for the Belle collaboration.
- Phys. Rev. Lett. **109**, 021601 (2012), *Evidence for CP Violation in the Decay D^+ to $K_S \pi^+$* , **E. Won (corresponding)**, for the Belle collaboration.
- Phys. Rev. D. **84**, 111501(R) (2011), *Effect of nuclear interactions of neutral kaons on CP asymmetry measurements*, **E. Won (corresponding)**, B. R. Ko, B. Golob, P. Pakhlov.
- Phys. Rev. Lett. **107**, 221801 (2011), *Observation of $D^+ \rightarrow K^+ \eta^{(\prime)}$ and Search for CP Violation in $D^+ \rightarrow \pi^+ \eta^{(\prime)}$ Decays*, **E. Won (1st author)** for the Belle collaboration.
- Phys. Rev. Lett. **106**, 211801 (2011), *Search for CP Violation in the Decays D^0 to $K_S^0 P^0$* , **E. Won (corresponding)** for the Belle collaboration.
- Phys. Rev. D. **83**, 071101 (2011) *Measurement of the decay $B^0 \rightarrow \pi \ell \nu$ and determination of $|V_{ub}|$* , **E. Won (corresponding)** for the Belle collaboration.
- Phys. Rev. Lett. **104**, 181602 (2010), *Search for CP violation in the decays $D_S^+ \rightarrow K_S^0 \pi^+$ and $D_S^+ \rightarrow K_S^0 K^+$* , **E. Won (corresponding)** for the Belle collaboration.
- Phys. Rev. D. **80**, 111103 (2009), *Measurement of $D^+ \rightarrow K_S^0 K^+$ and $D_S^+ \rightarrow K_S^0 \pi^+$ branching ratios*, **E. Won (1st author)**, for the Belle collaboration.
- Phys. Rev. Lett. **102**, 221802 (2009), *Observation of the Doubly Cabibbo-Suppressed Decay $D_S^+ \rightarrow K^+ K^+ \pi^-$* , **E. Won (corresponding)** for the Belle collaboration.

- Nuclear Science, IEEE Transactions on Volume 55, Issue 1, Feb. 2008 Page(s):122 - 125, *Upgrade of the Level 1 Global Trigger System in the Belle Experiment*, **E. Won (1st author)**.
- Jour. of Comp. Physics, 227/5, 2970 (2008), *Precise Numerical Solutions of Potential Problems Using Crank-Nicolson Method*, **E. Won (corresponding)**.
- Nucl. Inst. and Meth. A 581, 816 (2007), *A Hardware Implementation of Artificial Neural Network Using Field Programmable Gate Arrays*, **E. Won (single author)**.
- Other papers can be found from <http://inspirehep.net/author/E.Won.1> (866 entries as of 2015).