

CHOI Young-Il

Professor
Department of Physics



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Key Words CMS experiment, Higgs, Top physics, Super-Kamiokande experiment, Neutrino physics

Research Area My research interests are high energy particle physics and neutrino physics. CMS experiment at CERN in Switzerland since 2000 for high energy particle physics (Top physics, Higgs, SUSY, extra dimension, mini black hole, dark matter searches etc) Super-Kamiokande experiment at Kamioka in Japan since 2002 for neutrino physics (Solar neutrino, atmospheric neutrino, super nova, proton decay searches etc) Belle experiment at KEK in Japan since 1997 for B meson physics (CP violation, B meson decays) RENO experiment at Yeonggwang in Korea since 2006 for reactor neutrino physics (Neutrino oscillation study)

Education

- 1986 PhD University of Pittsburgh
- 1982 MSc University of Pittsburgh
- 1979 BSc Seoul National University

Experience

- 1997 - Professor, Sungkyunkwan University
- 1992 - 1997 Associate Professor, Sungkyunkwan University
- 1989 - 1992 Research Scientist, Purdue University
- 1986 - 1989 Research Associate, Purdue University

Position

- 1997 - 1998 Physics department chairman
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Selected Publication

- "Observation of the rare $B_s0 \rightarrow \mu+\mu-$ decay from the combined analysis of CMS and LHCb data", Nature, 522, 7554, 68-72 (2015.6)
- "Observation of $B0 \rightarrow p\Lambda\bar{D}(*)-$ ", Physical Review Letters, 115, 22, 221803(2015.11)
- "Search for Nucleon and Dinucleon Decays with an Invisible Particle and a Charged Lepton in the Final State at the Super-Kamiokande Experiment", Physical Review Letters, 115, 12, 121803 (2015.9)
- "Evidence for the direct decay of the 125 GeV Higgs boson to fermions", Nature Physics, 10, 557-560 (2014.8)
- "Study of the Mass and Spin-Parity of the Higgs Boson Candidate via Its Decays to Z Boson Pairs", Physical Review Letters, 110, 8, 81803 (2013.2)
- "A New Boson with a Mass of 125 GeV Observed with the CMS Experiment at the Large Hadron Collider", Science, 338, 6114, 1569-1575 (2012.12)
- "Observation of Reactor Electron Antineutrinos Disappearance in the RENO Experiment", Physical Review Letters, 108, 19, 191802(2012.5)
- "Difference in direct charge-parity violation between charged and neutral B meson decays", Nature, 452, 332-335 (2008.3)

Others

- Thomson Scientific names "Hottest" Researchers of 2004–2005.