

# Andre S. Yoon

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CONTACT INFORMATION	Big Data Tech. Lab, SK Telecom Co., Ltd. SKT Future R&D Center, Kyong-Gi, South Korea	<i>Mobile:</i> (+82)10-4140-1312 <i>E-mail:</i> Qravity@gmail.com
RESEARCH INTERESTS	Large-scale data analysis and modeling, Scalable machine learning, Computational methods and system architecture, High energy physics	
EDUCATION	<b>Massachusetts Institute of Technology</b> , MA, USA Ph.D. in Physics Advisor: Prof. Wit Busza Dissertation title: Study of High Transverse Momentum Charged Particle Suppression in Heavy Ion Collisions at LHC  <b>University of Illinois at Urbana-Champaign</b> , IL, USA B.A., Physics and Mathematics Early graduation with High distinction in Physics	2006 – 2012        2002 – 2005
PROFESSIONAL EXPERIENCE	<b>SK Telecom Co., Ltd</b> , Bundang-Gu, Kyong-Gi, South Korea <i>Machine Learning Data Scientist</i>  <b>Samsung Electronics Co., Ltd</b> , Hwaseong, Kyong-Gi, South Korea <i>Senior Research Scientist and Engineer</i> <i>Alternative military service (07/2012 – 07/2015)</i>  <b>Massachusetts Institute of Technology</b> , MA, USA <i>Graduate Research Assistant</i>	06/2016 – Present    07/2012 – 05/2016    09/2006 - 06/2012
HONORS AND AWARDS	First Penguin Award, “For the recognition of taking risks in pursuing an advanced R&D project”, Memory Division, Samsung Electronics, 2016  Researcher of the Month, “For the contribution toward the feasibility study of In-Storage Compute capability inside SSD”, Memory Solutions Lab, Samsung Electronics, 2015  Outstanding Contribution Award, “For the successful completion of an advanced R&D project”, Samsung Electronics, 2015  The 30 innovative ideas with the highest potential, 2 <sup>nd</sup> Samsung Group-wide Creativity Competition, Samsung Group, 2013  Graduation with High Distinction in Physics, University of Illinois at Urbana Champaign, 2005  Travel and Lodging Award for Excellence in Undergraduate Research, APS conference, American Physical Society (APS), 2004  Deans List, University of Illinois at Urbana Champaign, 2003, 2004, 2005	

COMPUTER SKILLS	Languages: C/C++, Python, and Scala	
	Analysis and visualization: ROOT, R, NumPy, SciPy, Matplotlib, Seaborn, and Scikit-learn	
	Database and distributed system: MySQL, Hadoop, and Spark	
	Benchmarking suits: TPC-C, TPC-H, HiBench, and IOmeter.	
TEACHING EXPERIENCE	<i>Summer Instructor</i> , Hanyoung Foreign Language High School	06/2006 – 08/2006
	<i>Invited Lecturer</i> , Gwacheon Foreign Language High School	05/2006 – 05/2006
PUBLICATIONS	I. Jo, D.-h. Bae, A.S. Yoon, et al., “YourSQL: A High-Performance Database System Leveraging In-Storage Computing, to appear in Proceedings of the 42 <sup>nd</sup> International Conference on Very Large Data Bases, <i>VLDB</i> 2016.	
	B. Gu, A.S. Yoon, D.-H. Bae, et al., “Biscuit: A Framework for Near-Data Processing of Big Data Workloads”, to appear in Proceedings of the 43 <sup>rd</sup> International Symposium on Computer Architectures, <i>ISCA</i> 2016.	
	I. Jo, D.-H. Bae, A.S. Yoon, et al., “YourSQL: A High-Performance Database System Leveraging In-Storage Computing”, (Submitted to 42 <sup>nd</sup> International Conference on Very Large Database, <i>VLDB</i> 2016).	
	Y. Ki, et al. “In-Storage Computing: Ultimate Solution for Accelerating I/O Intensive Applications”, in Proceedings of Flash Memory Summit, 2015	
	CMS Collaboration ( <i>as a lead analyzer</i> ), “Study of high- $p_T$ charged particle suppression in PbPb compared to pp collisions at $\sqrt{s_{NN}} = 2.76$ TeV, <i>Eur. Phys. J. C</i> (2012) 72:1945	
	A.S. Yoon for the CMS collaboration, “Centrality and $p_T$ dependence of charged particle $R_{AA}$ in PbPb collisions at $\sqrt{s_{NN}} = 2.76$ TeV”, <i>J.Phys.</i> G38 124116 (2011)	
	CMS Collaboration ( <i>as a lead analyzer</i> ), “Charged particle transverse momentum spectra in pp collisions at 0.9 and 7 TeV and interpolated spectra at 2.76 TeV”, <i>JHEP</i> 08 (2011) 086	
	CMS Collaboration, “Observation and studies of jet quenching in PbPb collisions at 2.76 TeV”, <i>Phys. Rev.C</i> 84, 024906 (2011)	
	F. Arleo, D. d’Enterria, A.S. Yoon, “Single-inclusive production of large- $p_T$ charged particles in hadronic collisions at TeV energies and perturbative QCD predictions”, <i>JHEP</i> 06 (2010) 035	
	A.S. Yoon, E. Wenger, G. Roland, “Convoluting jet spectra with fragmentation functions: a cross-check of the charged particle $p_T$ spectrum”, <i>arXiv</i> :1003.5928	
	CMS Collaboration, “Transverse momentum and pseudorapidity distributions of charged hadrons in pp collisions at $\sqrt{s} = 0.9$ and 2.36 TeV”, <i>JHEP</i> 02 (2010) 041	
	CMS Collaboration, “Transverse-momentum and pseudorapidity distributions of charged hadrons in pp collisions at $\sqrt{s} = 7$ TeV”, <i>Phys Rev Lett</i> 105 (2010) 022002	
	Y. Chen, V. Chetluru, Y.J. Lee, C. Loizides, C. Roland, G. Roland, M.B. Tonjes, Y. Yilmaz, A.S. Yoon, “Study of photon-tagged jet events in high-energy heavy ion collisions with CMS”, <i>Eur. Phys. J. C</i> 4 (2009) 61:649-658	

L. Agostino et al. , “Commissioning of the CMS High Level Trigger”, 2009 JINST 4 P10005

#### SEMINARS AND PRESENTATIONS

Seminar at the Multidisciplinary club of scientists and engineers, CKB, Seoul, South Korea, November, 2014, “Physics of GPS”

Invited lecture for the annual field engineer training session, Samsung Electronics, Memory Division, August 2013, “Introduction to Flash Translation Layer”

Invited talk for Heavy Ion Meeting (HIM), Jeonju, South Korea, October 2012, “Jet Quenching and  $R_{AA}$ : Experiment”

Invited talk at Q2C center, Seoul National University, Seoul, Korea, August 2011, “Measurement of jet quenching in single-inclusive production of large momentum charged particles in PbPb collisions at the LHC

Invited talk at the Nuclear Laboratory, Korea University, Seoul, Korea, August 2011, “Measurement of  $R_{AA}$  in PbPb collisions at the LHC with CMS detector

Invited talk at the Nuclear Laboratory, Yonsei University, Seoul, August 2011, “Measurement of  $R_{AA}$  in PbPb collisions at the LHC with CMS detector

Invited talk for Korean Teachers Program at CERN, Geneva, Switzerland, August 07–12, “Heavy Ion Physics with ALICE and CMS at LHC”

Talk for High- $p_T$  Probes of High-Density QCD at the LHC, Ecole Polytechnique, Palaiseau, France, May 30–June 01, 2011, “ $R_{AA}$  in CMS”

Parallel talk for XXII International Conference on Ultrarelativistic Nucleus-Nucleus Collisions (Quark Matter), Annecy, France, May 23–28, 2011, “Centrality and transverse momentum dependence of the nuclear modification of charged particle spectra in PbPb collisions at 2.76 TeV from CMS”

Poster presentation for the site-visit of NSF, University of Illinois at Urbana-Champaign, IL, 2005, “Test of charge symmetry breaking via W-production at PHENIX”

Poster presentation for the 2004 Fall Meeting of the Nuclear Physics in Chicago, IL, 2004, “Resistive plate counters for the PHENIX muon trigger upgrade”

#### PATENTS

U.S. Patent (filed), I. Jo, A.S. Yoon, et al. “Method for Searching Data From Storage Device”

Korea Patent (filed), I. Jo, A.S. Yoon, et al. “Method for Searching Data From Storage Device”

U.S. Patent (filed), B. Gu, et al. “Operating Method of Computing Device Comprising Storage Device Including Nonvolatile Memory Device, Buffer, and Controller”,

Korea Patent (filed), B. Gu, et al. “Operating Method of Computing Device Comprising Storage Device Including Nonvolatile Memory Device, Buffer, and Controller”

#### REFERENCE

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