dong jokim

Curriculum Vitae

Present Status

2021-
+ Senior Lecturer (Adjunct Professor from 2019)
+ Department of Physics, University of Jyvaskyla, Finland

2010-2018
+ Senior Researcher
+ Helsinki Institute of Physics and Department of Physics, University of Helsinki, Finland

2007-2009
+ Postdoctoral Researcher
+ Department of Physics, University of Jyvaskyla, Finland

2005-2006
+ Researcher Associate
+ Department of Physics,University of Yonsei, Republic of Korea
+ Visiting Scientist
+ Los Alamos National Lab, New Mexico, USA

1999-2005
+ Visiting Scientist
+ Brookhaven National Lab, New York, USA

Education

2000-2004 **Ph.D.**, *University of Yonsei*, Seoul, *South Korea*.
1998-1999 **M.Sc.**, *University of Yonsei*, Seoul, *South Korea*.
1992-1998 **B.Sc.**, *University of Yonsei*, Seoul, *2 years Military service*.

Ph.D. thesis

title *J/ψ production in d+Au and p+p collisions at $\sqrt{s} = 200GeV$*
supervisors J.H Kang, Y.J Kweon, I.D Jeon, K.S Ju, I.H Park
description Nuclear Physics

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Master thesis

title *Optical Tension Measurement of Fine Wires for Muon tracking chamber in PHENIX*

supervisors J.H Kang, Y.J Kweon, I.D Jeon

description Nuclear Physics

Research Experience

1997–present **PHENIX Collaboration**, *RHIC*, BNL, Brookhaven National Lab.

Long standing development of PHENIX Muon Tracker from the hardware to Reconstruction software.

Leading role both for the detector calibration and data production and J/ψ and open charm measurements from RHIC Run3 data.

2006–present **ALICE Collaboration**, *LHC*, CERN, European Organization for Nuclear Research.

Leading role for the ALICE Grid Computing project for Finland, enhancing computational efficiency.

Significant contributions to jet and flow correlation analysis, contributing to major publications.

Research activities

1997–1998 **PHENX Muon Identification and Muon Tracking Chamber construction and Electronics test at BNL**, *PHENIX*, RHIC, BNL.

1998–2000 **1.PHENIX Muon Tracking Chamber test setup and Chamber resolution study at BNL**, *PHENIX*, RHIC, BNL.

2.PHENIX Muon Arm Calibration software development, *PHENIX*, RHIC, BNL.

2002–2004 **1.PHENIX Online Calibration Manager at BNL**, *PHENIX*, RHIC, BNL.

2.PHENIX Deputy Data Production Manager at BNL, *PHENIX*, RHIC, BNL.

3.Development of PHENIX Muon Tracker Reconstruction software, *PHENIX*, RHIC, BNL.

4.Establish Yonsei Linux cluster and reconstruction manager of $d+Au$ data for open charm measurement in PHENIX, *PHENIX*, RHIC, BNL.

2004–2007 **1.J/ψ analysis and publications in various collision systems**, *PHENIX*, RHIC, BNL.

2.Final result of open charm measurement in various collision systems, *PHENIX*, RHIC, BNL.

2008–2013 **1.ALICE Jet and Flow Correlation analysis**, *ALICE*, LHC, CERN.

2.PHENIX direct $\gamma - hadron$ Correlation analysis, *PHENIX*, RHIC, BNL.

3.ALICE Grid Computing project leader for Finland, *ALICE*, LHC, CERN.

4.Jyvaskyla M-Grid Computing management, *ALICE*, LHC, Finland.

5.Rapidity Gap analysis in PHENIX/ALICE , *ALICE*, LHC, CERN.

6.ALICE Central Trigger System(CTP) analysis and Monitoring software development, *ALICE*, LHC, CERN.

7.ALICE Jet Correlation Analysis Task contact person, *ALICE*, LHC, CERN.

8.ALICE Shift Management System and Collaboration Database Development and contact person, *ALICE*, LHC, CERN.

2014–current **1.ALICE Flow and Jet Correlation analysis**, *ALICE*, LHC, CERN.

2.ALICE Grid Computing project leader for Finland, *ALICE*, LHC, CERN.

3.CSC project manager, jyy2631 for finnish ALICE-Grid contribution, and 2003154/2003112 for Machine learning, *ALICE*, LHC, CERN.

4.ALICE Correlation and Jet Physics group member, *ALICE*, LHC, CERN.

5.ALICE Flow Analysis working group convenor till 2022, *ALICE*, LHC, CERN.

6.Paper Review Committee member, *ALICE*, LHC, CERN.

Teaching Experience

1992-current .

Long term teaching experience in high school and university.

Implemented active learning techniques to enhance student engagement.

Supervised multiple MSc and PhD students, fostering their growth.

Developed and taught courses in Ultra-relativistic Heavy Ion Physics.

1992–2002 **Tutor for high school students**, *Mathematics*, English, Physics.

1997–1999 **Teaching Assistant**, *Physics*, Yonsei, University.

2001–2002 **Teaching Assistant**, *Physics*, Yonsei, University.

2015–2016 **Teaching**, *Jyvaskyla University*, Experimental Methods in Particle Physics.

2008–current **Teaching**, *Jyvaskyla University*, Ultra-relativistic Heavy Ion Physics.

2018-2019 **Pedagogy class**, *Jyvaskyla University*, University Pedagogy.

Student

2014-2015, *Tomas Snellman*, M.Sc. supervisor, Jyvaskyla University, Finland.

2015-2016, *Elias Barba Moral*, M.Sc. supervisor, Jyvaskyla University, Finland.

2016, *Myeongguen Song*, Ph.D. opponent, Yonsei University, Korea.

2016-2017, *Jasper Parkkila*, M.Sc. supervisor, Jyvaskyla University, Finland.

2017-2018, *Oskari Saarimaki*, M.Sc. supervisor, Jyvaskyla University, Finland.

2021-2022, *Maxim Virta*, M.Sc. supervisor, Helsinki University, Finland.

2023-current, *Teemu Kallio*, M.Sc. supervisor, Jyvaskyla University, Finland.

2016-2019, *Tomas Snellman*, Ph.D. supervisor, Jyvaskyla University, Finland.

2017-2021, *Jasper Parkkila*, Ph.D. supervisor, Jyvaskyla University, Finland.

2018-2023, *Oskari Saarimaki*, Ph.D. supervisor, Jyvaskyla University, Finland.

2018-2019, *Hyeonjoong Kim*, Ph.D. opponent, Yonsei University, Korea.

2020-2023, *Junlee Kim*, Ph.D. supervision, Jeonbuk National University, Korea.

2020-2024, *Anna Onnerstad*, Ph.D. supervisor, Jyvaskyla University, Finland.
2021-2023, *Heidi Rytkonen*, Ph.D. supervisor, Jyvaskyla University, Finland.
2022-current, *Maxim Virta*, Ph.D. supervisor, Jyvaskyla University, Finland.
2024-current, *Constantin Sporleder*, Ph.D. supervisor, Jyvaskyla University, Finland.

Student Training

2009, *Mikko Kervinen*, CERN/HIP Summer Internship, CERN, Switzerland.
2011, *Esko Pohjoisaho*, CERN/HIP Summer Internship, CERN, Switzerland.
2014, *Tomas Snellman*, CERN Summer Internship, CERN, Switzerland.
2015, *Elias Barba Moral*, Jyvaskyla Summer Internship, Jyvaskyla University, Finland.
2016, *Jasper Parkkila*, CERN/HIP Summer Internship, CERN, Switzerland.
2017, *Oskari Saarimaki*, CERN/HIP Summer Internship, CERN, Switzerland.
2017, *Nimmitha Karunarathna*, CERN Summer Internship, CERN, Switzerland.
2017, *Teemu Kovanen*, Jyvaskyla Summer Internship, Jyvaskyla University, Finland.
2018, *Elin Nyman*, CERN/HIP Summer Internship, CERN, Switzerland.
2019, *Jani Penttala*, CERN/HIP Summer Internship, CERN, Switzerland.
2020, *Kevin Gilbert*, Jyvaskyla Summer Internship, Jyvaskyla University, Finland.
2021, *Maxim Virta*, CERN/HIP Summer Internship, CERN, Switzerland.
2022, *Teemu Kallio*, Jyvaskyla Summer Internship, Jyvaskyla University, Finland.
2023, *Elina Huseynzade*, CERN Summer Internship, CERN, Switzerland.
2023, *Pyry Runko*, CERN/HIP Summer Internship, CERN, Switzerland.
2024, *Meeri Harkki*, CERN Summer Internship, CERN, Switzerland.
2024, *Rebecca Overmyer*, Jyvaskyla Summer Internship, Jyvaskyla University, Finland.

Computer skills

Database/Web	Developed the ALICE Collaboration Database (ACDB) and Shift Management System (SMS), with concepts adopted by all LHC experiments
GRID	Grid Service management for LHC/ALICE in Finland with Nordic Data Grid Facility(NDGF)
C/C++	Extensive C and C++ programming experiences
Scripting	Extensive use of shell scripting for automatic data processing, shell, perl, tcl/tk, python
Database	Working knowledge of Database(OBJY, PostgreSQL, MySQL)
System	Working knowledge of Unix, Linux(System administration)
System	Experiences of Linux clustering
Programming	Extensive use of ROOT, HTML, Labview and Latex
Programming	Extensive use of Python for machine learning development
Electronics	Working knowledge of CAMAC and VME

Research Interests

(p)QCD	The measurement of partonic primordial momenta, k_T, the fragmentation function, two particle correlation and jets

QGP	The properties of hot partonic matter(so called QGP(Quark Gluon Plasma)) by using flow, heavy flavour and jets
Data Analysis	C++ based large scale data analysis framework development and Grid Computing
Hardware	Fast Jet Trigger module development with EMCAL(Electromagnetic Calorimeter)
Hardware	Detector upgrade projects, Time Projection Chamber, Forward detectors, and ALICE3 in ALICE experiment

Hobbies

1998-2000, *Hapkido*, Seoul, Korea.
2009-2013, *Hapkido*, Jyvaskyla, Finland.
2014-2023, *Football*, Komeetat, JJK Cityketut, Jyvaskyla, Finland.
2013-current, *Ultimate frisbee*, Jyli, Jyvaskyla, Finland.
2000-2005, *Basketball*, BNL Basketball team, New York, USA.
2015-current, *Basketball*, JyNMKY, Jyvaskyla, Finland.
2020-current, *Volleyball*, uMove, Jyvaskyla, Finland.
–, *Running*, Swimming, Cross country ski.

Presentations and Publications

at https://dongjokim.github.io

Leadership Experience

2018-2021 **ALICE Flow Analysis Working Group Convenor**, *ALICE*, LHC, CERN.

2008–current **ALICE Grid Computing Project Leader**, *Finland*.

Leading Finnish contribution to ALICE Grid Computing infrastructure

Managing CSC projects (jyy2631, 2003154, 2003112)

2002–2004 **PHENIX Online Calibration Manager**, *BNL*, USA.

Led online calibration efforts for the PHENIX experiment

Served as Deputy Data Production Manager

2008-2013 **Software Development Lead**, *ALICE*, CERN.

Led development of ALICE Shift Management System (SMS)

Led development of ALICE Collaboration Database (ACDB)

2008–2013 **ALICE Jet Correlation Analysis Task Contact Person**, *ALICE*, LHC, CERN.

Funding

1992-1998 **University of Yonsei**, Seoul, Korea.

Role Student

Impact Full scholarship for the whole duration of the study except for 2 years military service

1999-2003 **Brain Korea 21**, *PHENIX*, BNL, USA.

Role Principal Investigator

Impact Supported the development of the PHENIX Muon Tracker during Master's and Ph.D. studies, stationed in BNL, USA

2004-2006 **Young Scientist Fellowship in Korea**, *PHENIX*.

Role Recipient

Impact Facilitated advanced research in nuclear physics

2022-2029 **Academy of Finland**, *Center of Excellence in Quark Matter*.

Role Co-Investigator

Impact Contributed to significant advancements in understanding quark-gluon plasma

File: 1.djkim_cv.pdf June 1, 2025