Department of Physics
Faculty of Science / University of Peradeniya



Dr. Rachitha Mendis

B.Sc. (KLN), Ph.D. (Kansas, USA)

Senior Lecturer

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About Me

I graduated from University of Kelaniya in 2012 with honors degree in Physics. In 2013, I joined the Department of Physics, University of Peradeniya as a Probationary Lecturer. In 2014 I went abroad for my PhD. I obtained my PhD from Kansas State University in 2019 and my PhD research project is “Search for vector-like T quarks using events with oppositely-charged lepton pairs and jets in proton-proton collisions at centre-of-mass energy of 13 TeV with CMS detector”. Currently I’m working as a Senior Lecturer at the Department of Physics, University of Peradeniya.

Higher Education Qualifications

PhD

Kansas State University
USA
(2019)

BSc

University of Kelaniya
(2012)

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Awards, Scholarships, Memberships & Fellowships

- Pheno Travel Award, 2018
- Physical Science awards for Physics – 2012, SLAAS
- Gold medal for academic excellence in Physics special degree, 2012

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Positions Held

- Visiting Lecturer, South Eastern University of Sri Lanka- (Jan 2019 - Present)
- Member - Career Enhancement and Guidance Committee (CEGC)- (2020 - Present)
- Volunteer student counsellor- (2020 - Present)
- Department Coordinator - Science Education Unit (SEU)- (2019 - Present)
- Senior Lecturer Gr II, Department of Physics, University of Peradeniya- (May 2019 - Present)
- Lecturer (Probationary), Department of Physics, University of Peradeniya- (March 2013 - May 2019)
- Graduate Teaching Assistant, Department of Physics, Kansas State University- (2014-2015)
- Graduate Research Assistant, Department of Phsics, Kansas State University- (2015-2019)

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My Teachings

- PH365: Modern Particle Physics
- PH383: Advnced Physcis Laboratory I
- PH423: Electromagnetic Theory
- PH433: Nuclear and Reactor Physcis

Research Interests (Research Fields/ Projects)

High Energy Physics - Specially related to vector-like-quarks (VLQ's) and beyond standard model (BSM)

Ongoing Research and Projects

- **Construction of an Ionization chamber to detect Alpha and Beta Particles**
- **Construction of Galvanic cell using Biodegradable Materials**

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Key Publications

Regular Article - Experimental Physics Eur. Phys. J. C - (2019)

Search for vector-like quarks in events with two oppositely charged leptons and jets in proton–proton collisions at?s=13 TeV

Conferences

APS April Meeting 2019

HELD AT : Denver, Colorado, USA - (April 13-16, 2019)
TOPIC : *Search for vector-like quarks in events with two oppositely charged leptons and jets in proton-proton collisions at ?s = 13 TeV*

2017 Meeting of the APS Division of Particles and Fields (DPF 2017)

HELD AT : Fermilab, Batavia, IL, USA - (Jul 31 - Aug 4)
TOPIC : *Search for vector-like quarks with oppositely-charged dilepton pairs, jets, and missing transverse energy in proton-proton collisions at centre-of-mass energy of 13 TeV*

Phenomenology 2018 Symposium (Pheno 2018)

HELD AT : University of Pittsburgh, PA, USA - (May 7-9, 2018)
TOPIC : *Searches for vector-like quarks at CMS*

2017 US LHC User Association Meeting

HELD AT : Fermilab, Batavia, IL, USA - (Nov 1 -3, 2017)
TOPIC : *Search for vector-like T quarks with oppositely-charged dilepton pairs and jets in proton-proton collisions at 13 TeV*

My Publications

Please goto the website.

https://sci.pdn.ac.lk/physics/staff/Rachitha-Mendis

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