

# Kevin Nash

Research Associate  
Rutgers University  
Department of Physics & Astronomy  
136 Frelinghuysen Rd  
Piscataway, NJ 08854

Email: [knash@physics.rutgers.edu](mailto:knash@physics.rutgers.edu)  
Phone: (434) 760-1424

## Education

**Johns Hopkins University**, Ph.D. Physics, 2015  
**Johns Hopkins University**, M.A. Physics, 2012  
**James Madison University**, B.S. Physics, 2009

## Experience

### Research

**Rutgers University**, Research Associate, 2020–Present  
**Rutgers University**, Post-Doctoral Associate, 2015–2020  
**Fermilab**, LPC Distinguished Researcher, 2021  
**Beyond 2 Generations: Resonances (B2GRES)**, Subgroup Convener, 2018–2020  
**JetMET Algorithms and Reconstruction (JMAR)**, Subgroup Convener, 2017–2018  
**FTBF T1209 Experiment**, Spokesperson, 2017–Present  
**CMS Collaboration**, Physics, 2010–Present  
**HL-LHC CMS Detector**, Electronics, 2015–Present  
**Jefferson Lab**, Electronics, 2009–2010  
**MINERvA Experiment**, Electronics, 2008–2009

### Teaching

**Johns Hopkins University**, 2010–2012

### Outreach

**USA Science and Engineering Festival**, 2013, 2014  
**Baltimore area high school seminars**, 2013  
**JHU Physics Fair**, 2011–2014

# Publications

## Primary contributors

*Search for a  $W'$  boson decaying to a vector-like quark and a top or bottom quark in the all-jets final state (Full Run 2)*

The CMS Collaboration, **CMS Paper (in progress, post approval)**, B2G-20-002

*Identification of heavy, energetic, hadronically decaying particles using machine-learning techniques*

The CMS Collaboration, **CMS Paper**, [JINST 06 2020 P06005](#)

*Search for a  $W'$  boson decaying to a vector-like quark and a top or bottom quark in the all-jets final state*

The CMS Collaboration, **CMS Paper**, [JHEP 03 2019 127](#)

*Search for  $W' \rightarrow tb$  in the all-hadronic final state at  $\sqrt{s} = 13$  TeV*

The CMS Collaboration, **CMS Paper**, [JHEP 08 2017 029](#)

*Search for  $W' \rightarrow tb$  in proton-proton collisions at  $\sqrt{s} = 8$  TeV*

The CMS Collaboration, **CMS Paper**, [JHEP 02 2016 122](#)

*Search for the production of an excited bottom quark decaying to  $tW$  in proton-proton collisions at  $\sqrt{s} = 8$  TeV*

The CMS Collaboration, **CMS Paper**, [JHEP 01 2016 166](#)

## Secondary contributors

*Search for a heavy resonance decaying to a top quark and a W boson at  $\sqrt{s} = 13$  TeV in the fully hadronic final state*

The CMS Collaboration, **CMS Paper (in progress, post approval)**, B2G-19-003

*Search for Physics beyond the Standard Model in Events with Overlapping Photons and Jets*

The CMS Collaboration, **CMS Paper**, [Phys. Rev. Lett. 123 241801 2019](#)

*The Phase-2 Upgrade of the CMS Tracker*

The CMS Collaboration, **CMS Technical Design Report**, [CDS \(Fig 3.23\)](#)

*Boosted Top Jet Tagging at CMS*

The CMS Collaboration, **CMS Physics Analysis Summary**, [CMS-PAS-JME-13-007](#)

*Search for new physics using the  $t\bar{t}$  invariant mass distribution in pp collisions at  $\sqrt{s} = 8$  TeV*

The CMS Collaboration, **CMS Paper**, [Phys. Rev. Lett. 111 211804 2013](#)

# Presentations at Conferences

*Search for new resonances coupling to third generation quarks at CMS,*

**ICHEP**, Seoul, KR., July 2018

*Studies of the MaPSA-light Module for the CMS Phase II Upgrade,*

**Trento**, Munich, DE., February 2018

*Search for New Massive Resonances with Boosted Top Signatures at CMS,*

**Boost**, Zurich, CH., July 2016

*Boosted top quarks in physics analyses,*

**Boost**, London, UK., August 2014