

# Armen Rafik Tumasyan

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## Research Institute of Physics

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Senior researcher

## 🌐 Language skills

Русский

## 📖 Publications

Article

### Search for pair production of scalar and vector leptoquarks decaying to muons and bottom quarks in proton-proton collisions at $\sqrt{s}=13$ TeV

Tumasyan A., Hayrapetyan A., et al. 2283

Physical Review D 2024 112003

Article

### Search for flavor changing neutral current interactions of the top quark in final states with a photon and additional jets in proton-proton collisions at $\sqrt{s}=13$ TeV

A. Tumasyan, A. Hayrapetyan, et al. 2319

Physical Review D 2024 072004

Article

### Muon identification using multivariate techniques in the CMS experiment in proton-proton collisions at $\sqrt{s}=13$ TeV

A. Tumasyan, A. Hayrapetyan, CMS collaboration 1917

Journal of Instrumentation 2024 P02031

Article

### Luminosity determination using Z boson production at the CMS experiment

A. Tumasyan, A. Hayrapetyan, CMS Collaboration 2345

European Physical Journal C 2024 26

Article

### Measurement of multijet azimuthal correlations and determination of the strong coupling in proton-proton collisions at $\sqrt{s}=13$ TeV

A. Tumasyan, A. Hayrapetyan, CMS Collaboration 2321

European Physical Journal C 2024 842

Article

### Observation of $WW\gamma$ Production and Search for $H\gamma$ Production in Proton-Proton Collisions at $\sqrt{s}=13$ TeV

A. Tumasyan, A. Hayrapetyan, CMS Collaboration 2191

Physical Review Letters 2024 21901

Article

**New Structures in the  $\pi^0/\eta/\eta'$  Mass Spectrum in Proton-Proton Collisions at  $\sqrt{s}=13$  TeV**

A. Tumasyan, A. Hayrapetyan, CMS Collaboration 2320

Physical Review Letters 2024 111901

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Article

**Two-particle Bose-Einstein correlations and their Lévy parameters in PbPb collisions at  $\sqrt{s_{NN}}=5.02$  TeV**

A. Tumasyan, CMS Collaboration 2288

Physical Review C 2024 024914

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Article

**Measurements of azimuthal anisotropy of nonprompt D0 mesons in PbPb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV**

A. Tumasyan, CMS Collaboration 2312

Physics Letters B 2024 138389

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Article

**Search for new Higgs bosons via same-sign top quark pair production in association with a jet in proton-proton collisions at  $\sqrt{s}=13$  TeV**

A. Tumasyan, A. Hayrapetyan, CMS Collaboration 2305

Physics Letters B 2024 138478

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Article

**Search for long-lived particles decaying to final states with a pair of muons in proton-proton collisions at  $\sqrt{s} = 13.6$  TeV**

A. Tumasyan, Hayrapetyan A., CMS collaboration 2305

Journal of High Energy Physics 2024 47

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Article

**Extracting the speed of sound in quark-gluon plasma with ultrarelativistic lead-lead collisions at the LHC**

A. Tumasyan, A. Hayrapetyan, CMS Collaboration

Reports on Progress in Physics 2024 077801

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Article

**Search for heavy neutral leptons in final states with electrons, muons, and hadronically decaying tau leptons in proton-proton collisions at  $\sqrt{s} = 13$  TeV**

A. Tumasyan, A. A. Hayrapetyan, CMS collaboration

Journal of High Energy Physics 2024 123

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Article

**Measurement of differential cross sections for the production of a Z boson in association with jets in proton-proton collisions at  $\sqrt{s}=13$  TeV**

A. Tumasyan, et al. 2278

Physical Review D 2023 052004

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Article

**Constraints on anomalous Higgs boson couplings to vector bosons and fermions from the production of Higgs bosons using the  $t\bar{t}$  final state**

A. Tumasyan, et al. 2283  
Physical Review D 2023 032013

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*Article*

**Measurements of Higgs boson production in the decay channel with a pair of  $\tau$  leptons in proton-proton collisions at  $\sqrt{s}=13$  TeV**

A. Tumasyan, CMS Collaboration 2338  
European Physical Journal C 2023 562

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*Article*

**Measurement of the top quark mass using a profile likelihood approach with the lepton + jets final states in proton-proton collisions at  $\sqrt{s}=13$  TeV**

A. Tumasyan, CMS Collaboration 2340  
European Physical Journal C 2023 963

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*Article*

**Performance of the local reconstruction algorithms for the CMS hadron calorimeter with Run 2 data**

A. Tumasyan, CMS collaboration 2322  
Journal of Instrumentation 2023 P11017

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*Article*

**Search for Higgs Boson Decay to a Charm Quark-Antiquark Pair in Proton-Proton Collisions at  $\sqrt{s}=13$  TeV**

A. Tumasyan, CMS Collaboration 2362  
Physical Review Letters 2023 061801

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*Article*

**Observation of  $\tau$  Lepton Pair Production in Ultraperipheral Pb-Pb Collisions at  $\sqrt{s_{NN}}=5.02$  TeV**

A. Tumasyan, CMS Collaboration 2335  
Physical Review Letters 2023 151803

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*Article*

**Observation of four top quark production in proton-proton collisions at  $\sqrt{s}=13$  TeV**

A. Tumasyan, CMS Collaboration 2318  
Physics Letters B 2023 138290

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*Article*

**Search for electroweak production of charginos and neutralinos at  $\sqrt{s} = 13$  TeV in final states containing hadronic decays of WW, WZ, or WH and missing transverse momentum**

A. Tumasyan, CMS Collaboration 2295  
Physics Letters B 2023 137460

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*Article*

**Searches for additional Higgs bosons and for vector leptoquarks in  $\tau\tau$  final states in proton-proton collisions at  $\sqrt{s}=13$  TeV**

A. Tumasyan, CMS collaboration 2380  
Journal of High Energy Physics 2023 73

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*Article*

**Search for physics beyond the standard model in top quark production with additional leptons in the context of effective field theory**

A. Tumasyan, A. Hayrapetyan, CMS collaboration

Journal of High Energy Physics 2023 68

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