

Dr. Gilgamesh Luis Raya

Correo electrónico institucional: gilgamesh@upp.edu.mx

Página WEB:

<https://scholar.google.com/citations?authuser=1&user=pcQ9bMtL1vcC>

<https://www.scopus.com/authid/detail.uri?authorId=57194577232>



Realizó estudios de Licenciatura en Química en la Universidad Autónoma del Estado de Hidalgo, México. Es doctor en Ciencias en el Área de Materiales por la Universidad Autónoma del Estado de Hidalgo, México. Realizó una estancia posdoctoral en el Observatorio HAWC (High Altitude Water Cherenkov gamma-ray observatory), México. Pertenece al Sistema Nacional de Investigadores (SNI) de CONACYT en el nivel 1. Es perfil deseable PRODEP, miembro de la Sociedad Mexicana de Cristalografía, Miembro fundador de la Sociedad Mexicana de Luz Sincrotrón, Miembro completo de la Colaboración HAWC, Miembro de la Red Temática HAWC, del Laboratorio Nacional HAWC y la Red de Usuarios de Luz Sincrotrón de CONACyT. Es miembro del

Consejo Nacional Técnico del Sincrotrón Mexicano en Hidalgo. En el año 2016 obtuvo la distinción de la International Union of Crystallography (IUCr) "Journals Student Prize"

Sus principales líneas de investigación son: instrumentación en el área de astropartículas, desarrollo y caracterización de nuevos materiales con aplicaciones automotrices y sistemas optoelectrónicos, difracción de rayos-X de ángulo rasante (GIXD), determinación estructural, refinamiento Rietveld en compuestos orgánicos e inorgánicos, síntesis orgánica, desarrollo de prototipos de análisis para instrumentación en la industria Minera, Petrolera y Aeroespacial con técnicas como LIBS y RAMAN.

Actualmente es Profesor Investigador Titular "B" en la Universidad Politécnica de Pachuca. Pertenece al núcleo básico del Doctorado en Ciencias y Tecnologías Avanzadas. Es miembro del Cuerpo Académico Fuentes de energía y sólidos cristalinos aplicados en dispositivos optoelectrónicos.

Principal producción académica:

2026 Citas

Índice h 14

Artículos en revista indexada

- Multiple Galactic Sources with Emission Above 56 TeV Detected by HAWC. Physical Review Letters, 124, 021102, 2020. <https://doi.org/10.1103/PhysRevLett.124.021102>
- Elastic Cross Sections for $^3\text{He} + ^{58}\text{Ni}$ above the Coulomb Barrier. World Journal of Nuclear Science and Technology, 10, 1-8, 2020. doi.org/10.4236/wjnst.2020.101001

- SEM, EDS and XRD Study of Heavy-Duty Asbestos Brake Pads. *Microscopy and Microanalysis*, 25. 794, 2019. doi:10.1017/S1431927619004707
- Microanalysis of Antigorite in Brake Pads. *Microscopy and Microanalysis*, 25. 82, 2019. doi:10.1017/S1431927619004896.
- Measurement of the Crab Nebula Spectrum Past 100 TeV with HAWC. *The Astrophysical Journal*, 881, 2, 2019. <https://doi.org/10.3847/1538-4357/ab2f7d>
- Searching for dark matter sub-structure with HAWC. *Journal of Cosmology and Astroparticle Physics*, 022, 2019.
- MAGIC and *Fermi*-LAT gamma-ray results on unassociated HAWC sources. *Monthly Notices of the Royal Astronomical Society*. 485, 1, 2019. <https://doi.org/10.1093/mnras/stz089>
- All-sky Measurement of the Anisotropy of Cosmic Rays at 10 TeV and Mapping of the Local Interstellar Magnetic Field. *The Astrophysical Journal*, 871, 1, 2019. <https://doi.org/10.3847/1538-4357/aaf5cc>
- Constraints on spin-dependent dark matter scattering with long-lived mediators from TeV observations of the Sun with HAWC. *Physical Review D*, 98, 123012, 2018. <https://doi.org/10.1103/PhysRevD.98.123012>
- First HAWC observations of the Sun constrain steady TeV gamma-ray emission. *Physical Review D*, 97, 10, 2018. <https://doi.org/10.1103/PhysRevD.98.123011>
- VERITAS and *Fermi*-LAT Observations of TeV Gamma-Ray Sources Discovered by HAWC in the 2HWC Catalog. *The Astrophysical Journal*, 866, 1, 2018. <https://doi.org/10.3847/1538-4357/aade4e>
- Very-high energy particle acceleration powered by the jets of microquasar SS 433. *Nature*, 562, 82-85, 2018. doi.org/10.1038/s41586-018-0565-5
- Multimessenger Observations of a flaring blazar coincident with high-energy neutrino IceCube -170922A, *Science*, 361, 147, 2018. DOI: 10.1126/science.aat1378
- Microanalysis of Carbon and Glass Fiber obtained by Resin Transfer Molding Process to Manufacture Blades for Wind Turbines. *Microsc. & Microanal.* 24, 1, 2018. doi:10.1017/S1431927618005895
- Study of 1,15-pentadecanediol by Powder X-ray Diffraction and Polarized Light Microscopy. *Microsc. & Microanal.* 24, 1, 2018. doi:10.1017/S143192761801173X
- Study of the High Temperature Phase of 1,16-Hexadecanediol by Polarized Light Microscopy and Glancing Incidence X-Ray Diffraction. *Microsc. & Microanal.* 24, 1, 2018. doi:10.1017/S1431927618011728
- Search for dark matter gamma-ray emission from the Andromeda Galaxy with the High-Altitude Water Cherenkov Observatory. *Journal of Cosmology and Astroparticle Physics*, 06, 43, 2018. doi.org/10.1088/1475-7516/2018/06/043
- Constraining the p/p- Ratio in TeV Cosmic Rays with Observations of the Moon Shadow by HAWC. *Physical Review D*, 97, 10, 2018. doi.org/10.1103/PhysRevD.97.102005
- A search for dark matter in the Galactic halo with HAWC. *Journal of Cosmology and Astroparticle Physics*, 02, 049, 2018. doi.org/10.1088/1475-7516/2018/02/049
- Dark Matter Limits from Dwarf Spheroidal Galaxies with the HAWC Gamma-Ray Observatory. *The Astrophysical Journal*, 154, 13, 2018. doi.org/10.3847/1538-4357/aaa6d8

- All-particle cosmic ray energy spectrum measured by HAWC experiment from 10 to 500 TeV. *Physical Review D*. 96, 122001, 2017. doi.org/10.1103/PhysRevD.96.122001
- Multiwavelength follow-up of a rare IceCube neutrino multiplet. *Astronomy and Astrophysics*, 607, A115, 2017. doi.org/10.1051/0004-6361/201730620
- Extended TeV Gamma-Ray Sources Around Pulsars Constrain, the Origin of the Positron Flux at Earth. *Science*, 358, 911, 2017. DOI: 10.1126/science.aan4880
- Multi-messenger Observation of a Binary Star Merger, *The Astrophysical Journal Letters*, 88, L22, pp 1-59, 2017. doi.org/10.3847/2041-8213/aa91c9
- The HAWC Real-time Flare Monitor for Rapid Detection of Transient Events *The Astrophysical Journal*, 843, 116, pp 1-16, 2017. doi.org/10.3847/1538-4357/aa789f
- Daily Monitoring of TeV Gamma-Ray Emission from Mrk 421, Mrk 501, and the Crab Nebula with HAWC. *The Astrophysical Journal*, 841, 100, pp 1-13, 2017. doi.org/10.3847/1538-4357/aa729e
- Search for Very-high-energy Emission from Gamma-Ray Bursts Using the First 18 Months of Data from the HAWC Gamma-Ray Observatory. *The Astrophysical Journal*, 843, 88, pp 1-14, 2017. doi.org/10.3847/1538-4357/aa756f
- Search for Very High-energy Gamma Rays from the Northern Fermi Bubble Region with HAWC. *The Astrophysical Journal*. 842, 85, pp 1-9, 2017. doi.org/10.3847/1538-4357/aa751a
- From Intermolecular Interactions to Texture in Polycrystalline Surfaces of 1, ω -Alkanediols ($\omega = 10-13$). *Molecules*, 22(6), 956, 1-17, 2017. doi:10.3390/molecules22060956
- Observation of the Crab Nebula with the HAWC Gamma-Ray Observatory. *The Astrophysical Journal*, 843, 39, pp 1-17, 2017. doi.org/10.3847/1538-4357/aa7555
- The 2HWC HAWC Observatory Gamma-Ray Catalog. *The Astrophysical Journal*. 843, 40, pp 1-21, 2017. doi.org/10.3847/1538-4357/aa7556
- Search for TeV gamma-ray emission from point-like sources in the inner galactic plane with a partial configuration of the hawc observatory. *The Astrophysical Journal*. 843, 88, pp 1-14, 2017. doi:10.3847/0004-637X/817/1/3