

Gergely DÁLYA

PERSONAL DATA

PLACE AND DATE OF BIRTH: Budapest, Hungary | 22 September 1993
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EDUCATION

2017 - 2021 PhD studies in ASTROPHYSICS, **Eötvös Loránd University**, Hungary
Thesis: Multi-messenger Astronomy and Source Parameter Estimation with Gravitational Waves
2015 - 2017 Master studies in PHYSICS, **Eötvös Loránd University**, Hungary
Thesis: Development of a galaxy catalog and its application in identifying host galaxies of electromagnetic and gravitational-wave transients
2012 - 2015 Bachelor studies in PHYSICS, **Eötvös Loránd University**, Hungary
Thesis: Discovering companions around pulsating variable stars using data from the *Kepler* space telescope
2010 - 2012 **ELTE Apáczai Csere János Gyakorló Gimnázium**

POSITIONS

Sept 2021 - Postdoctoral researcher at **Universiteit Gent**, Ghent, Belgium
Jan 2020 - Apr 2020 LSC Fellow at **LIGO Livingston Observatory**, LA, USA
May 2016 - Sept 2021 Mentor and module leader at **Milestone Institute**, Budapest
July 2016 - Sept 2016 Summer student at the **University of Glasgow**, Glasgow, UK
Sept 2015 - July 2016 Research assistant at **Konkoly Observatory of the Hungarian Academy of Sciences**, Budapest

SCHOLARSHIPS AND AWARDS

February 2021 Certificate of Merit from the Ministry of Human Capacities for successful preparation of the Hungarian team for the International Olympiad on Astronomy & Astrophysics
February 2020 Certificate of Merit from the Ministry of Human Capacities for successful preparation of the Hungarian team for the International Olympiad on Astronomy & Astrophysics
August 2019 New National Excellence Program
February 2019 Certificate of Merit from the Ministry of Human Capacities for successful preparation of the Hungarian team for the International Olympiad on Astronomy & Astrophysics
August 2018 New National Excellence Program
April 2017 Certificate of Merit from the Ministry of Human Capacities for successful preparation of the Hungarian team for the International Olympiad on Astronomy & Astrophysics
August 2016 New National Excellence Program
July 2016 Scholarship for the undergraduate summer student program of the University of Glasgow
March 2016 Templeton Fellow
March 2016 Scholarship of the National Talent Program of the Ministry of Human Capacities
February 2016 Certificate of Merit from the Ministry of Human Capacities for successful preparation of the Hungarian team for the International Olympiad on Astronomy & Astrophysics
October 2015 Student-Scholar of the Hungarian Republic Award

May 2015	Excellence in Undergradual Studies Award, Eötvös University, Faculty of Sciences
January 2015	Certificate of Merit from the Ministry of Human Capacities for successful preparation of the Hungarian team for the International Olympiad on Astronomy & Astrophysics
May 2014	Excellence in Undergradual Studies Award, Eötvös University, Faculty of Sciences
January 2014	Certificate of Merit from the Ministry of Human Capacities for successful preparation of the Hungarian team for the International Olympiad on Astronomy & Astrophysics
March 2013	Young Talent of the 16th District of Budapest Award (Science category)
March 2013	Scholarship of the Prime Minister of Hungary

PUBLICATIONS, OUTREACH TALKS AND MEDIA APPEARANCES

Refereed short author list publications

10. **G. Dály**, R. Díaz, F. R. Bouchet, et al.: GLADE+: An Extended Galaxy Catalogue for Multimessenger Searches with Advanced Gravitational-wave Detectors, 2021, arXiv: 2110.06184
9. P. Nguyen, R. M. S. Schofield, ... **G. Dály**, ... et al.: Environmental noise in advanced LIGO detectors, CQG, 2021, doi:10.1088/1361-6382/ac011a, **10 citations**
8. K. Kapás, T. Bozóki, **G. Dály**, et al.: Attitude determination for nano-satellites - I. Spherical projections for large field of view infrasensors, Experimental Astronomy, 2021, doi:10.1007/s10686-021-09730-y
7. **G. Dály**, P. Raffai, B. Bécsy: Bayesian Reconstruction of Gravitational-wave Signals from Binary Black Holes with Nonzero Eccentricities, Classical and Quantum Gravity, 2021, Volume 38, 6, **3 citations**
6. T. Bozóki, E. Prácsér, G. Sători, **G. Dály**, et al.: Modeling Schuman resonances with schupy, Journal of Atmospheric and Solar-Terrestrial Physics, 2019, Volume 196, 105144
5. A. Derekas, S. J. Murphy, **G. Dály**, et al.: Spectroscopic confirmation of the binary nature of the hybrid pulsator KIC 5709664 found with the frequency modulation method, MNRAS, 2019, Volume 486, p. 2129, **3 citations**
4. M. Fishbach, R. Gray, ... **G. Dály**, ... et al.: A standard siren measurement of the Hubble constant from GW170817 without the electromagnetic counterpart, Astrophysical Journal Letters, 2019, Volume 871, issue L13, **83 citations**
3. **G. Dály**, G. Galgóczi, L. Dobos, et al.: GLADE: A galaxy catalogue for multimessenger searches in the advanced gravitational-wave detector era, MNRAS, 2018, Volume 479, issue 2, p. 2374-2381, **75 citations**
2. Á. Szölgvény, **G. Dály**, L. Gondán, P. Raffai: Target-based optimization of advanced gravitational-wave detector network operations, Classical and Quantum Gravity, 2017, Volume 34, issue 7, id. 075011
1. R. Szabó, M. Gy. Szabó, **G. Dály**, et al.: Multiple planets or exomoons in Kepler hot Jupiter systems with transit timing variations?, Astronomy & Astrophysics, 2013, Volume 553, id. A17, 10 pp., **46 citations**

LSC publications I made notable contributions to

4. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: All-sky search for short gravitational-wave bursts in the third Advanced LIGO and Advanced Virgo run, arXiv:2107.03701, 2021

3. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: A gravitational-wave measurement of the Hubble constant following the second observing run of Advanced LIGO and Virgo, *Astrophysical Journal*, 2020, Volume 909, Issue 2, **98 citations**
2. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: A gravitational-wave standard siren measurement of the Hubble constant, *Nature*, 2017, Volume 551, issue 7678, pp. 85-88, **557 citations**
1. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: Search for Gravitational Waves Associated with Gamma-Ray Bursts During the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B, *Astrophysical Journal*, 2017, Volume 841, Issue 89, **45 citations**

Publications as a member of the LSC

45. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: GW190814: Gravitational Waves from the Coalescence of a 23 Solar Mass Black Hole with a 2.6 Solar Mass Compact Object, *Astrophysical Journal Letters*, 2020, Volume 896, issue 2, id. L44, **18 citations**
44. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: A Joint Fermi-GBM and LIGO/Virgo Analysis of Compact Binary Mergers from the First and Second Gravitational-wave Observing Runs, *Astrophysical Journal*, 2020, Volume 893, issue 2, id. 100
43. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: A guide to LIGO-Virgo detector noise and extraction of transient gravitational-wave signals, *Classical and Quantum Gravity*, 2020, Volume 37, issue 5, id. 055002, **7 citations**
42. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: GW190425: Observation of a Compact Binary Coalescence with Total Mass $\sim 3.4 M_{\odot}$, *Astrophysical Journal Letters*, 2020, Volume 892, issue 1, id. L3, **197 citations**
41. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: Model comparison from LIGO–Virgo data on GW170817’s binary components and consequences for the merger remnant, *Classical and Quantum Gravity*, 2020, Volume 37, issue 4, id. 045006, **39 citations**
40. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: Search for gravitational waves from Scorpius X-1 in the second Advanced LIGO observing run with an improved hidden Markov model, *Physical Review D*, 2019, Volume 100, issue 12, id. 122002, **6 citations**
39. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: Tests of general relativity with the binary black hole signals from the LIGO-Virgo catalog GWTC-1, *Physical Review D*, 2019, Volume 100, issue 10, id. 104036, **152 citations**
38. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: Search for Gravitational-wave Signals Associated with Gamma-Ray Bursts during the Second Observing Run of Advanced LIGO and Advanced Virgo, *Astrophysical Journal*, 2019, Volume 886, issue 1, id. 75, 15 pp., **11 citations**
37. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: Search for Subsolar Mass Ultracompact Binaries in Advanced LIGO’s Second Observing Run, *Physical Review Letters*, 2019, Volume 123, issue 16, id. 161102, **12 citations**
36. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**a, ... et al.: Search for Eccentric Binary Black Hole Mergers with Advanced LIGO and Advanced Virgo during Their First and Second Observing Runs, *Astrophysical Journal*, 2019, Volume 883, issue 2, id. 149, 10 pp., **8 citations**

35. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for intermediate mass black hole binaries in the first and second observing runs of the Advanced LIGO and Virgo network, *Physical Review D*, 2019, Volume 100, issue 6, id. 064064, **20 citations**
34. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Directional limits on persistent gravitational waves using data from Advanced LIGO's first two observing runs, *Physical Review D*, 2019 Volume 100, issue 6, id. 062001, **22 citations**
33. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for the isotropic stochastic background using data from Advanced LIGO's second observing run, *Physical Review D*, 2019, Volume 100, issue 6, id. 061101, **71 citations**
32. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Binary Black Hole Population Properties Inferred from the First and Second Observing Runs of Advanced LIGO and Advanced Virgo, *Astrophysical Journal Letters*, 2019, Volume 882, issue 2, id. L24, 30pp., **326 citations**
31. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: GWTC-1: A Gravitational-Wave Transient Catalog of Compact Binary Mergers Observed by LIGO and Virgo during the First and Second Observing Runs, *Physical Review X*, 2019, Volume 9, issue 3, id. 031040, **914 citations**
30. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Tests of General Relativity with GW170817, *Physical Review Letters*, 2019, Volume 123, issue 1, id. 011102, **141 citations**
29. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: All-sky search for short gravitational-wave bursts in the second Advanced LIGO and Advanced Virgo run, *Physical Review D*, 2019, Volume 100, issue 2, id. 024017, **27 citations**
28. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: All-sky search for continuous gravitational waves from isolated neutron stars using Advanced LIGO O2 data, *Physical Review D*, 2019, Volume 100, issue 2, id. 024004, **38 citations**
27. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Searches for Gravitational Waves from Known Pulsars at Two Harmonics in 2015-2017 LIGO Data, *Astrophysical Journal*, 2019, Volume 879, issue 1, id. 10, 28 pp., **33 citations**
26. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Narrow-band search for gravitational waves from known pulsars using the second LIGO observing run, *Physical Review D*, 2019, Volume 99, issue 12, id. 122002, **19 citations**
25. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: All-sky search for long-duration gravitational-wave transients in the second Advanced LIGO observing run, *Physical Review D*, 2019, Volume 99, issue 10, id. 104033, **8 citations**
24. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: First Measurement of the Hubble Constant from a Dark Standard Siren using the Dark Energy Survey Galaxies and the LIGO/Virgo Binary-Black-hole Merger GW170814, *Astrophysical Journal Letters*, 2019, Volume 876, issue 1, id. L7, 15 pp., **58 citations**
23. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Low-latency Gravitational-wave Alerts for Multimessenger Astronomy during the Second Advanced LIGO and Virgo Observing Run, *Astrophysical Journal*, 2019, Volume 875, issue 2, id. 161, 20 pp., **29 citations**
22. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for Gravitational Waves from a Long-lived Remnant of the Binary Neutron Star Merger GW170817, *Astrophysical Journal*, 2019, Volume 875, issue 2, id. 160, 19 pp., **48 citations**

21. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Searches for Continuous Gravitational Waves from 15 Supernova Remnants and Fomalhaut b with Advanced LIGO, *Astrophysical Journal*, 2019, Volume 875, issue 2, id. 122, 15 pp., **19 citations**
20. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for Transient Gravitational-wave Signals Associated with Magnetar Bursts during Advanced LIGO's Second Observing Run, *Astrophysical Journal*, 2019, Volume 874, issue 2, id. 163, 14 pp., **9 citations**
19. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Constraining the p-Mode – g-Mode Tidal Instability with GW170817, *Physical Review Letters*, 2019, Volume 122, issue 6, id. 061104, **19 citations**
18. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Properties of the Binary Neutron Star Merger GW170817, *Physical Review X*, 2019, Volume 9, issue 1, id. 011001, **324 citations**
17. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: A Fermi Gamma-Ray Burst Monitor Search for Electromagnetic Signals Coincident with Gravitational-wave Candidates in Advanced LIGO's First Observing Run, *Astrophysical Journal*, 2019, Volume 871, issue 1, id. 90, 12 pp., **20 citations**
16. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for Multimessenger Sources of Gravitational Waves and High-energy Neutrinos with Advanced LIGO during Its First Observing Run, ANTARES, and IceCube, *Astrophysical Journal*, 2019, Volume 870, issue 2, id. 134, 16 pp., **20 citations**
15. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for Subsolar-Mass Ultracompact Binaries in Advanced LIGO's First Observing Run, *Physical Review Letters*, 2018, Volume 121, issue 23, id. 231103, **38 citations**
14. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: GW170817: Measurements of Neutron Star Radii and Equation of State, *Physical Review Letters*, 2018, Volume 121, issue 16, id. 161101, **582 citations**
13. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for Tensor, Vector, and Scalar Polarizations in the Stochastic Gravitational-Wave Background, *Physical Review Letters*, 2018, Volume 120, issue 20, id. 201102, **50 citations**
12. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Full band all-sky search for periodic gravitational waves in the O1 LIGO data, *Physical Review D*, 2018, Volume 97, issue 10, id. 102003, **23 citations**
11. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: GW170817: Implications for the Stochastic Gravitational-Wave Background from Compact Binary Coalescences, *Physical Review Letters*, 2018, Volume 120, Issue 9, id. 091101, **92 citations**
10. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: First narrow-band search for continuous gravitational waves from known pulsars in advanced detector data, *Physical Review Letters D*, 2017, Volume 96, issue 12, id. 122006, **26 citations**
9. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for Post-merger Gravitational Waves from the Remnant of the Binary Neutron Star Merger GW170817, *Astrophysical Journal Letters*, 2017, Volume 851, issue 1, id. L16, 13 pp., **129 citations**
8. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: On the Progenitor of Binary Neutron Star Merger GW170817, *Astrophysical Journal Letters*,

2017, Volume 850, issue 2, id. L40, 18 pp., **47 citations**

7. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Estimating the Contribution of Dynamical Ejecta in the Kilonova Associated with GW170817, *Astrophysical Journal Letters*, 2017, Volume 850, issue 2, id. L39, 13 pp., **102 citations**
6. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Search for High-energy Neutrinos from Binary Neutron Star Merger GW170817 with ANTARES, IceCube, and the Pierre Auger Observatory, *Astrophysical Journal Letters*, 2017, Volume 850, issue 2, id. L35, 18 pp., **105 citations**
5. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: GW170608: Observation of a 19-solar-mass Binary Black Hole Coalescence, *Astrophysical Journal Letters*, 2017, Volume 851, issue 2, id. L35, 11 pp., **724 citations**
4. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral, *Physical Review Letters*, Volume 119, issue 16, id. 161101, **3346 citations**
3. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A, *Astrophysical Journal Letters*, 2017, Volume 848, issue 2, id. L13, 27 pp., **1265 citations**
2. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: Multimessenger Observations of a Binary Neutron Star Merger, *Astrophysical Journal Letters*, 2017, Volume 848, issue 2, id. L12, 59 pp., **1439 citations**
1. LIGO Scientific Collaboration, Virgo Collaboration, ..., **G. Dály**, ... et al.: GW170814: A three-detector observation of gravitational waves from a binary black hole coalescence, *Physical Review Letters*, 2017, Volume 119, issue 14, id. 141101, **773 citations**

Conference proceedings

4. B. Bécsy, **G. Dály**, P. Raffai: Bayesian reconstruction of gravitational waves from eccentric binary black holes with minimal assumptions, *American Astronomical Society meeting #237*, id. 146.06. *Bulletin of the American Astronomical Society*, Vol. 53, No. 1 e-id 2021n1i146p06, 2021
3. **G. Dály**, J. Takátsy, T. Bozóki, et al.: Towards the attitude determination of nanosatellites with thermal imaging sensors, *Proc. SPIE 11451, Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation*, 2020, 883–891
2. T. Bozóki, G. Sántori, ..., **G. Dály**, ... et al.: Schupy: a python package for modeling and analyzing Schumann resonances, *22nd EGU General Assembly Proceedings*, 2020
1. G. Greco, M. Branchesi, E. Chassande-Mottin, M. W. Coughlin, G. Stratta, **G. Dály**, et al.: Working with gravitational-wave sky localizations: new methods and implementations, *Proceedings of Science*, 2020, Volume 357

Data catalogs

3. **G. Dály**, G. Galgóczi, L. Dobos, et al.: VizieR Online Data Catalog: GLADE v2.3 catalog, 2018, **1 citation**
2. **G. Dály**, Z. Frei, G. Galgóczi, et al.: VizieR Online Data Catalog: GLADE catalog, 2016, **14 citations**
1. K. Sárnecky, B. Csák, **G. Dály**, et al.: Minor Planet Observations [461 University of Szeged, Piszkesteto Stn. (Konkoly)], *Minor Planet Circular*, 2012, No. 80462, 2

Book chapters published

- **G. Dály**a, Cs. Kalup: A csillagászati diákolimpiák, In: Meteor Csillagászati Évkönyv 2021, Magyar Csillagászati Egyesület, pp. 263-277, 2020
- **G. Dály**a, B. Bécsy: A gravitációs asztrofizika megszületése, In: Meteor Csillagászati Évkönyv 2018, Magyar Csillagászati Egyesület, pp. 261-276, 2017

Books ante hoc fact-checked and proofread

- Zs. Fejes: Csillagfény mellett, 2017, ISBN: 978-963-12-9647-1

Public outreach publications in Hungarian

- **G. Dály**a: Kozmológia gravitációs hullámokkal, Természet Világa, 2021, 152. évf. 9. sz.
- T. Simon, **G. Dály**a, M. Hömöstrei: A bolygók körüli holdak számának meghatározásáról, Fizikai Szemle, 2021, 71. évf. 7-8. sz.
- **G. Dály**a: Újabb Nobel-díj a fekete lyukak kutatásáért, Fizikai Szemle, 2020, 70. évf. 11. sz.
- **G. Dály**a: A fekete lyukak megfigyelésének új módszerei, Magyar Tudomány, 2020, 181/7. sz.
- **G. Dály**a: Mit tanultunk az Univerzumból a gravitációs hullámok legújabb megfigyelési időszakában?, Fizikai Szemle, 2020, 70. évf. 2. sz.
- **G. Dály**a: A munka öröme és a gravitációs hullámok haszna (Interview with Rainer Weiss), Élet és Tudomány, 2019, 74. évf. 10. sz.
- **G. Dály**a, I. Bartos: Kozmikus részecskegyorsító, Természet Világa, 2018, 149. évf. 11. sz.
- **G. Dály**a: Galaxiskatalógussal a világegyetem titkainak nyomában, Természet Világa, 2018, 149. évf. 3. sz.
- B. Bécsy, **G. Dály**a, P. Raffai: Összeütköző neutroncsillagok – a többcsatornás csillagászat forradalma, Meteor, 2017, 47. évf. 12. sz.
- **G. Dály**a, B. Bécsy, P. Raffai: GW150914: először hallottuk az Univerzum zenéjét, Meteor, 2016, 46. évf. 3. sz.
- B. Bécsy, **G. Dály**a, P. Raffai: Interferométerekkel a gravitációs hullámok nyomában, Természet Világa, 2016, 147. évf. 3. sz.
- **G. Dály**a, O. Hanyecz, R. Szabó: Kisbolygóadászat Kepler-űrtávcsővel, Természet Világa, 2015, 146. évf. 11. sz.
- **G. Dály**a, O. Hanyecz, R. Szabó: Új feladat vár a bolygóadászra, Természet Világa, 2014, 145. évf. 4. sz.

Public outreach talks given in English

- JULY 2020, Astronomy with gravitational waves, Milestone Institute Natural Sciences Society, Budapest
- FEBRUARY 2020, Guiding tours at the Science Saturday event at LIGO Livingston Observatory, Louisiana, USA

Public outreach talks given in Hungarian

- SEPTEMBER 2021, Csillagászat gravitációs hullámokkal, VCSE Virtuális Csillagászati Klub, online
- OCTOBER 2020, A csillagászat új érzékszervei, Tudományok Fővárosa, Budapest
- SEPTEMBER 2020, Ki dobálja teniszlabdákkal a Földet?, MEMO Science and Innovation Show, Budapest
- APRIL 2020, A csillagászati diákolimpiák, Polaris Observatory, Budapest
- APRIL 2020, A gravitációs hullámok és a LIGO, Space Academy Club, Budapest
- NOVEMBER 2019, A csillagászat új érzékszervei, Astronomy on Tap, Budapest
- OCTOBER 2019, Csillagászat gravitációs hullámokkal, MANT Space Academy Club, BME University, Budapest
- SEPTEMBER 2019, Tudományos vizualizáció 3D-ben, Researchers' Night, Eötvös University, Budapest
- JULY 2019, A csillagászat új érzékszervei, Kiskun Astronomical Camp, Budapest
- FEBRUARY 2019, Többcsatornás csillagászat neutroncsillagokkal, Mafihe Winter School, Eötvös University, Budapest
- SEPTEMBER 2018, Kozmikus részecskegyorsító nyomában a Déli-sarkon, Researchers' Night, Eötvös University, Budapest
- FEBRUARY 2018, Csillagászat gravitációs hullámokkal, Mafihe - Csopa Physics Nights, Csodák Palotája, Budapest
- FEBRUARY 2018, A csillagászat új érzékszervei, Winter camp of Rajk Szakkollégium, Balatonmáriafürdő
- DECEMBER 2017, IOAA 2017 élménybeszámoló, Városi könyvtár, Jászberény
- SEPTEMBER 2017, Többcsatornás csillagászat - az asztrofizika új érzékszervei, Researchers' Night, Uránia Csillagvizsgáló, Szolnok
- SEPTEMBER 2017, Többcsatornás csillagászat - az asztrofizika új érzékszervei, Researchers' Night, Városi könyvtár, Jászberény
- NOVEMBER 2016, Gravitációs hullámok nyomában, Csillagászati hónap, Esztergom
- NOVEMBER 2016, Összeolvadó fekete lyukak nyomában, Náboj International Physics Competition, Budapest
- OCTOBER 2016, Összeolvadó fekete lyukak nyomában, Researchers' Night, Uránia Csillagvizsgáló, Szolnok
- SEPTEMBER 2016, Összeolvadó fekete lyukak nyomában, TIT Uránia Csillagvizsgáló, Budapest
- MAY 2016, GW150914: Először hallottuk az Univerzum rezgését, Geonap, Hungarian Academy of Sciences, Budapest
- MARCH 2016, Először hallottuk az Univerzum rezgését, Apáczai Csere János Gimnázium, Budapest
- MARCH 2016, Először hallottuk az Univerzum rezgését, Szent László Gimnázium, Budapest
- MARCH 2016, Először hallottuk az Univerzum rezgését, Városi könyvtár, Jászberény

- MARCH 2016, GW150914: Először hallottuk az Univerzum rezgését, Hungarian Astronomical Association, Polaris Csillagvizsgáló, Budapest
- JANUARY 2016, Interferométerekkel a gravitációs hullámok nyomában, Eötvös Collegium tehetségnap, Budapest
- NOVEMBER 2015, K2: Új bevetésen a bolygóvadász, Hungarian Astronomical Association, Polaris Csillagvizsgáló, Budapest
- JULY 2015, Exobolygók és a Kepler-űrtávcső: a mikromagnitúdós forradalom, Bajai Csillagvizsgáló csillagászati tábora, Bakonybél

Television appearances

NOVEMBER 11, 2020	Újpest TV, Helyi érték. Topic: GWs and GLADE
OCTOBER 11, 2018	MTV2, Én vagyok itt. Topic: International Olympiad on Astronomy & Astrophysics
JANUARY 27, 2018	MTV5, Ismerd meg!. Topic: Explaining black holes for 8-10 year olds
NOVEMBER 3, 2017	MTV5, Magyar Tudomány Ünnepe. Topic: GW170817 discovery
JANUARY 20, 2017	Spektrum, New Window to the Universe. Documentary about the GWs
MAY 17, 2016	MTV1, Tessék!. Topic: My research and career
MARCH, 2016	24-es körzet TV. Topic: The first direct detection of GWs

Radio appearances

JUNE, 2021	Kossuth rádió, Trend-idők. Topic: Everyday applications of space technologies
JANUARY 24, 2021	Kossuth rádió, Korkóstoló. Topic: Beer brewing and physics
JANUARY 2018	Kossuth rádió, Trend-idők. Topic: Expected interesting astronomical events in 2018
DECEMBER 7, 2017	Kossuth rádió, Trend-idők. Topic: Hungarian participation on the 11 th IOAA
OCTOBER 18, 2017	Hitrádió, Középpont, live. Topic: GW170817
OCTOBER 17, 2017	Kossuth rádió, Trend-idők. Topic: GW170817
DECEMBER 27, 2016	Kossuth rádió, Trend-idők. Topic: Laser Interferometer Space Antenna (LISA)
DECEMBER 13, 2016	Kossuth rádió, Trend-idők. Topic: Start of the O2 observing run of LIGO
JUNE, 2016	Kossuth rádió, Trend-idők. Topic: GW151226
JANUARY 15, 2016	Kossuth rádió, Trend-idők. Topic: Expected interesting astronomical events in 2016
NOVEMBER 26, 2015	Kossuth rádió, Trend-idők. Topic: Discovery of a new, interesting exoplanet
DECEMBER 5., 2014	Kossuth rádió, Tér-idő: a jövő kutatói. Topic: Young talented scientists

Other

SEPTEMBER 2020	Member of the scientific board at the Youth Media Festival
SEPTEMBER 2020	Interactive science quiz show, <i>Ha jobban belegondolsz:</i> https://www.youtube.com/watch?v=hC1kwPZ8xb4
MAY 2019	With 3 colleagues we have planned and installed a sundial at Zsombó, Hungary: https://szegedma.hu/2019/05/naporat-allitottak-az-uj-zsomboi-parkban
MAY 2019	Short movie about me jumping out of an airplane while talking about the physics of gravity, free fall and general relativity: https://www.youtube.com/watch?v=apfcAIFdgEE
FEBRUARY 2019	Researcher of the week: Interview with me in <i>Élet és Tudomány</i>
JANUARY 2019	Szertár podcast. Topic: Gravitational waves, LIGO and multi-messenger astronomy

CONFERENCE AND WORKSHOP PARTICIPATION

SEPTEMBER 2021	Kick-off Workshop of the Einstein Telescope Observational Science Board, online
SEPTEMBER 2021	LIGO-Virgo-KAGRA Collaboration Meeting, online
JUNE 2021	9 th Belgian-Dutch GW Meeting, online Presentation: The GLADE+ galaxy catalogue
MARCH 2021	LIGO-Virgo-KAGRA Collaboration Meeting, online

- JANUARY 2021 **Presentation:** The GLADE+ galaxy catalogue
237th Meeting of the American Astronomical Society, online
- DECEMBER 2020 **Poster:** Bayesian reconstruction of gravitational waves from eccentric binary black holes with minimal assumptions
SPIE Astronomical Telescopes & Instrumentation, online
- SEPTEMBER 2020 **Poster:** Towards the attitude determination of nano-satellites with thermal imaging sensors
LIGO-Virgo-KAGRA Collaboration Meeting, online
- SEPTEMBER 2019 **Presentation:** GLADE for cosmology in O3b and beyond
LIGO-Virgo-KAGRA Collaboration Meeting, Warsaw, Poland
- AUGUST 2019 **Presentation:** Recovery tests with BayesWave on BBH waveforms with non-zero eccentricities
ELFT Physicist Meeting, Sopron, Hungary
- APRIL 2019 **Presentation:** What have we learned about the Universe during LIGO's most recent observing run?
Advanced Software Programming for Astrophysics and Astroparticle Physics, Annecy, France
- MARCH 2019 LIGO-Virgo Collaboration Meeting, Lake Geneva, United States
Presentation: Recovery tests with BayesWave on BBH waveforms with non-zero eccentricities
- SEPTEMBER 2018 LIGO-Virgo Collaboration Meeting, Maastricht, The Netherlands
Poster: GWapps: educational apps for gravitational-wave astronomy
- SEPTEMBER 2018 ELFT Summer School on Astroparticle Physics, Mátraháza, Hungary
Presentation: Detecting binary neutron stars with LIGO
- JULY 2018 **Presentation:** Multimessenger implications of BNS detections
ISAPP-Baikal Summer School "Exploring the Universe through Multiple Messengers", Bolshiye Koty, Russia
- JULY 2018 **Presentation:** GLADE: A galaxy catalog for multimessenger searches in the advanced detector era
Unsolved Problems in Astrophysics and Cosmology - Invitational Workshop, Budapest, Hungary
- SEPTEMBER 2017 IMPRS Summer School on Compact Objects & Gravitational waves, Heidelberg, Germany
- AUGUST 2017 LIGO-Virgo Collaboration Meeting, CERN, Geneva, Switzerland
Poster: GWsky towards O3: tiling, source localisations and visibility
- MARCH 2017 LIGO-Virgo Collaboration Meeting, Pasadena, United States
- NOVEMBER 2016 2nd ASTERICS VO School, Strasbourg, France
- AUGUST 2016 LIGO-Virgo Collaboration Meeting, Glasgow, United Kingdom
Presentation: Improved matching for future galaxy catalogs
- MAY 2016 Euro-VO Meeting, Strasbourg, France
Presentation: GLADE and its astrophysical applications
- MARCH 2016 LIGO-Virgo Collaboration Meeting, Pasadena, United States
Presentation: GLADE: An extended list of galaxies for GW searches in the advanced detector era
- OCTOBER 2015 High-Precision Studies of RR Lyrae Stars, Visegrád, Hungary
As a member of the **Local Organizing Committee (LOC)**
- SEPTEMBER 2015 LIGO-Virgo Collaboration Meeting, Budapest, Hungary
Presentation: An extended list of galaxies for GW searches in the Advanced Detector era
Poster: Temporal Optimization of Advanced GW Detector Network Operations
- AUGUST 2015 International Conference of Physics Students, Zagreb, Croatia
Presentation: Discovery of (Sub)Stellar Companions Around Pulsating Stars
- NOVEMBER 2014 **Presentation** at the Hungarian Academy of Sciences (InnoDiákok Fóruma)
- AUGUST 2014 COSPAR Scientific Assembly, Moscow, Russia
- DECEMBER 2013 International Francqui Symposium, Brussels, Belgium

JUNE 2012 Kepler Asteroseismic Science Consortium Fifth Workshop, Balatonalmádi, Hungary
MARCH 2011 International Particle Physics Masterclass, Budapest

COMPETITIONS

MARCH 2019 SCIndikátor Science Communication Competition: *qualifying to the final*
APRIL 2018 FameLab Science Communication Competition: *qualifying to the final*
MAY 2017 NYIFFF National Team Competition of Experimental Physics: *1st*
APRIL 2017 National Scientific Research Competition, Debrecen
Extragalactic Astrophysics section: *2nd*
DECEMBER 2016 University Scientific Research Competition, Astronomy section: *1st*
DECEMBER 2016 Ortway Rudolf International Physics Competition: *honourable mention & special prize*
SEPTEMBER 2016 NYIFFF National Team Competition of Experimental Physics: *2nd*
DECEMBER 2015 Ortway Rudolf International Physics Competition: *honourable mention*
SEPTEMBER 2015 NYIFFF National Team Competition of Experimental Physics: *2nd*
MAY 2015 PLANCKS International Physics Team Competition,
Leiden, The Netherlands: *special prize*
APRIL 2015 National Scientific Research Competition, Kolozsvár
Astrophysics section: *2nd*
DECEMBER 2014 University Scientific Research Competition, Solid state physics section: *2nd*
DECEMBER 2014 University Scientific Research Competition, Astronomy section: *1st*
MAY 2014 NYIFFF National Team Competition of Experimental Physics: *3rd*
MAY 2013 NYIFFF National Team Competition of Experimental Physics: *2nd*
AUGUST 2012 6th International Olympiad on Astronomy and Astrophysics
Rio de Janeiro, Brasil: *Bronze medal*
APRIL 2012 Kulin György National Astronomical Competition: *1st*
MARCH 2012 Explore the High-Energy Universe Competition of ESA: *2nd*
AUGUST 2011 5th International Olympiad on Astronomy and Astrophysics
Katowice, Poland: *Honorable mention*
FEBRUARY 2011 Szilárd Leó National Nuclear Physics Competition: *3rd*

LANGUAGES

HUNGARIAN: Mother tongue
ENGLISH: Proficient user: IELTS 8.0, CEFR C1 language exam
GERMAN: Intermediate level: CEFR B1 language exam

COMPUTER SKILLS

Word processing: L^AT_EX, Open Office, Microsoft Word
Operating systems: Unix/Linux, MS Windows
Scientific programs: MATLAB, Octave, Gnuplot, Period04, IRAF
Programming in: Python, C, shell scripting, awk/gawk
Hardware design: VHDL
Other: SQL, Stellarium, Inkscape

Github: <https://github.com/dalyagergely>

TEACHING

- Teaching **Chapters in Astrophysics** for Physics BSc students at Eötvös Loránd University, Spring 2021
- Teaching **Big Questions of the Universe** for students from Corvinus University and Eötvös Loránd University, Autumn 2020
- Teaching **Vector Calculus** practical course for Physics BSc students at Eötvös Loránd

University, Autumn 2018

- Teaching **Astronomical Observational Practices 3** for Physics and Earth Sciences BSc students at Eötvös Loránd University, Autumn 2016, 2017
- Teaching **Astronomical Observational Practices 4** for Physics and Earth Sciences BSc students at Eötvös Loránd University, Spring 2016, 2017
- **1st Global e-Competition on Astronomy and Astrophysics**, 2020, online: **team leader** of the Hungarian team
- **13th International Olympiad on Astronomy and Astrophysics**, 2019, Keszthely, Hungary: **team leader** of the Hungarian team
- **11th International Olympiad on Astronomy and Astrophysics**, 2017, Phuket, Thailand: **observer** of the Hungarian team
- **Preparing teacher** of the Hungarian team for the International Olympiad on Astronomy and Astrophysics since 2013
- Organizer and teacher at the **astrophysical study group** at Könyves Kálmán Gimnázium and at Eötvös Loránd University for high school students since 2014
- **Team leader** of the Hungarian team at the 1st Hungarian-Croatian-Slovenian Astronomical Olympiad in 2015 (Veránka, Hungary)
- **Team leader** of the Hungarian team at the 2nd Hungarian-Croatian-Slovenian Astronomical Olympiad in 2016 (Avber, Slovenia)
- **Team leader** of the Hungarian team at the 3rd International Workshop on Astronomy and Astrophysics in 2018 (Zánka, Hungary)
- **Team leader** of the Hungarian team at the 5th Hungarian-Croatian-Slovenian Astronomical Olympiad in 2019 (Avber, Slovenia)
- Teaching **Big Questions of the Universe** for talented high school students at Milestone Institute, Autumn 2016, Summer 2017, 2018
- Teaching **Astrophysics** for talented high school students at Milestone Institute, Summer 2019, 2020, 2021

INTERESTS AND ACTIVITIES

- Climbing, mountaineering:
 - Base level rock climber exam (May 2015, Excelsior Alpine Club)
 - Winter Alpine mountaineering course (February 2018, Excelsior Alpine Club)
 - Some noteworthy summits I have climbed include Mount Ararat in Turkey (5137 m), Kazbek in Georgia (5054 m) and Mont Blanc in France/Italy (4810 m).
- History of central Europe and Hungary in the past century
- Programming
- Travelling
- Homebrewing