





*(as a member of the LIGO-Virgo Collaboration)*

Special Breakthrough Prize in Fundamental Physics **May 2016**  
*(as a member of the LIGO-Virgo Collaboration)*

Albert Szent-Gyorgyi Award **December 2015**

János Bolyai Research Grant **Sept. 2014 – Aug. 2016**

Pál Erdős Grant for Young Researchers **March - July 2014**

## PROFESSIONAL ACTIVITIES

I am member of the Burst Advisory Board of the LIGO-Virgo Collaboration, which is a forum of delegated LVC members playing active roles in LVC's burst search activities. The board discusses long-term plans and strategies for the Burst Working Group through telecons held on an average of 1/month basis.

I am a referee for the following international scientific journals: *Physical Review D*, *Physical Review Letters*.

I was one of three members of the local organizing committee for the [LSC-Virgo Meeting held in Budapest](#), Hungary between September 19-24, 2009.

I was the co-founder of the [Eötvös Gravity Research Group \(EGRG\)](#) in 2007, which is the local group of the LIGO Scientific Collaboration in Hungary. I led the data analysis efforts of the group between 2007-2011 and I have been leading it again since 2013.

I was the founder of the [Bolyai Intellectual Forum](#) at Bolyai College, Budapest, Hungary, and I was the lead organizer of its weekly discussion panels between 2005-2009.

I was the co-founder and lead organizer of the Astro Pizza Lunch seminar lectures held in English at Eötvös Loránd University between 2007-2011.

## TEACHING EXPERIENCE

### Fall Semester Courses:

Cosmology (Physics MSc/PhD; in English)	<b>2018-</b>
Introduction to Astronomy (Physics+X Teacher BSc)	<b>2013-</b>
Cosmology (Physics MSc/PhD; in Hungarian)	<b>2010-2011, 2013-2018</b>
Introduction to Astrophysics (Physics BSc)	<b>2014-2015</b>

### Spring Semester Courses:

Gravitational-wave Astrophysics (Physics MSc/PhD)	<b>2010-2011, 2013-</b>
Galactic Dynamics (Physics MSc/PhD)	<b>2013-2015</b>

**Seminars (Fall & Spring Semester):**

Unsolved Probl. in Astrophys. (Physics BSc/MSc/PhD) **Spring 2015-**

**Laboratory Practices:**

Experiments in Environmental Phys. (Environ. Sc. BSc) **Spring 2013-**

Applied Methods in Physics (Physics BSc) **Fall 2013**

Nuclear Physics and Radiology (Physics MSc) **Fall 2007**

**Teaching Assistance:**

Theoretical Electrodynamics (Physics BSc) **Spring 2010-2011**

Theoretical Electrodynamics (Physics BSc) **Fall 2007, Fall 2010**

Astrophysics (Physics BSc) **Fall 2008**

Quantum Mechanics (Physics BSc) **Spring 2008**

Theoretical Mechanics (Physics BSc) **Fall 2006**

STUDENTS  
ADVISED  
(EOTVOS U.)

**Bence Becsy (MSc diploma):**

*“Parameter estimations for gravitational-wave transients using minimal assumptions”*

(in Hungarian)

**Spring 2018**

**Bence Becsy (MSc research):**

*“Parameter estimations for gravitational wave transients without associated source models”*

(in Hungarian); Won 1<sup>st</sup> prize on the Conference of Scientific Students' Associations (TDK).

**Fall 2016 – Fall 2017**

**Gergely Dalya (MSc diploma):**

*“Development of a galaxy catalog and its application in identifying host galaxies of electromagnetic and GW transients”* (in Hungarian)

**Spring 2017**

**Daniel Erdei (MSc diploma):**

*“Mapping the local universe with Pan-STARRS and GLADE catalogs”* (in Hungarian)

**Spring 2017**

**Andor Budai (MSc diploma):**

*“Statistical method to test the movement of the gamma-ray burst jets”* (in Hungarian)

**Spring 2017**

**Janos Takatsy (BSc diploma):**

*“Opportunity to test globular cluster models with future detections of gravitational waves from eccentric binary black holes”* (in Hungarian)

**Spring 2017**

**Gergely Dalya & Gabor Galgoczi  
(undergrad research):**

*“Construction of a galaxy catalog and its application in identifying hosts for EM transients of GW transients”*

(in Hungarian); Won 1<sup>st</sup> prize on the Conference of Scientific Students' Associations (TDK) and 2<sup>nd</sup> prize on the XXXIII. National Conference of Scientific Students' Associations (OTDK).

**Fall 2015 – Summer 2017**

**Bence Becsy (BSc diploma):**

*“Extracting astrophysical information from detections of gravitational-wave bursts”*

(in Hungarian)

**Spring 2016**

**Janos Takatsy (undergrad research):**

*“Testing globular cluster models with gravitational-wave detections of eccentric binary black holes”*

(in Hungarian); Won 3<sup>rd</sup> prize on Conference of Scientific Students' Associations (TDK) and a special prize on the XXXIII. National Conference of Scientific Students' Associations (OTDK).

**Fall 2015 – Summer 2017**

**Bence Becsy (undergrad research):**

*“Dynamical interactions between pulsars and their companions in binary systems”*

(in Hungarian); Won 3<sup>rd</sup> prize on Conference of Scientific Students' Associations (TDK).

**Fall 2014**

**Akos Szolgyen (BSc diploma):**

*“Optimal networks of detectors in gravitational-wave astronomy”* (in Hungarian)

**Spring 2014**

**Zoltan Tajkov (BSc diploma):**

*“The physics of highly eccentric binaries”*  
(in Hungarian) **Spring 2014**

**Balazs Banto (BSc diploma):**  
*“The  $h_{\mu\nu}$ - $h(t)$  transfer function of interferometric gravitational-wave detectors”* (in Hungarian) **Fall 2013**

**Orsolya Kovacs (BSc diploma):**  
*“Multimessenger astronomy using gravitational-wave and X-ray detectors”* (in Hungarian) **Fall 2012**

**Gabor Angler (BSc diploma):**  
*“Analyzing interferometric gravitational-wave detector data in time-frequency space”*  
(in Hungarian) **Spring 2010**

**Daniel Barta (undergrad research):**  
*“Investigations on the propagation and dispersion of gravitational waves within interstellar matter”* (in Hungarian); Won 1st prize on National Conference of Scientific Students' Associations (OTDK). **Spring 2008**

**David Cseh & Jozsef Varga (undergrad research):** *“The ‘old photon’ problem – Calibrating inteferometric gravitational-wave detectors using light pressure”* (in Hungarian); Won 4th prize on National Conference of Scientific Students' Associations (OTDK). **Spring 2008**

## ADDITIONAL SKILLS

Expert level programming in **Matlab** and **C/C++**.  
Basic level programming in **Java**, **R**, and **Netlogo**.

Expert level language skills in **English**.  
Intermediate level language skills in **German**.

I have completed a non-degree program of **Physics Machine Shop Class** training at Columbia University (lathe, milling machine, band saw, drilling machine, sander).

I have completed the following non-degree online courses on [Coursera](#):  
**Statistics** (Princeton University)

**Social Network Analysis** (University of Michigan)

**Astronomy** (Duke University)

**Galaxies and Cosmology** (Caltech)

**CONFERENCE  
PARTICIPATION**

As a member of the LIGO Scientific Collaboration (LSC) since 2007, I attend the regular meetings of the LSC 2 times per year (on average).

*„Extracting astrophysical information from gravitational-wave transient detections”*

Invited talk at the Balaton Summer School in Physics, Siófok, Hungary

**19 July 2017**

*„Optimizations for Future Gravitational-wave Detectors' Sites”*

Talk at the 8<sup>th</sup> Einstein Telescope Symposium, Birmingham, UK

**28 March 2017**

*„A statistical method for detecting gravitational recoils of supermassive black holes in active galactic nuclei”*

Talk at the “New Frontiers in Black Hole Astrophysics” IAU Symposium 324, Ljubljana, Slovenia

**Sept. 2016**

*„Optimization of Future Gravitational-Wave Detector Networks”*

Invited talk at the “The New Detectors for Gravitational-Wave Astronomy” Workshop at KITPC, Beijing China

**April 2015**

*„Optimal Network Configurations for Future Gravitational-Wave Detectors”*

Talk at the 10th Amaldi Conference on Gravitational Waves Warsaw, Poland

**July 2013**

*„A Tool for Finding Optimal Networks of Future Gravitational-wave Detectors”*

Talk at the Beijing Gravitational Waves Workshop Beijing, China

**June 2013**

*„Search for long gravitational-wave transients from gamma-ray bursts during LIGO S5 and S6 runs”*

Poster; Gravitational-wave Physics & Astronomy Workshop Milwaukee, USA

**January 2011**

*„Searching for narrowband gravitational-wave signals with the IM Pipeline”*

Talk at the „From Planets to Galaxies” Workshop  
Budapest, Hungary

**July 2010**

*„A spectrum comparison tool for LIGO PEM channel data”*

Poster at the LSC-Virgo Meeting  
Arcadia, USA

**March 2010**

*„An X-ray source catalog for joint LIGO-Virgo-Swift observations”*

Poster at the LSC-Virgo Meeting  
Arcadia, USA

**March 2010**

*„An Infrasound Monitoring Device for the LIGO PEM System”*

Poster at the LSC-Virgo Meeting  
Arcadia, USA

**March 2010**

*„A 2D Cross-correlational Veto Method for Incoherent Gravitational Wave Data Analysis Pipelines”*

Poster at the LSC-Virgo Meeting  
Arcadia, USA

**March 2010**

*„Compact binary waveform recovery from the cross-correlated data of two detectors by matched filtering with spinning templates”*

Poster; 14th Gravitational Wave Data Analysis Workshop  
Rome, Italy

**January 2010**

*„Time-frequency methods for long duration burst searches”*

Talk at the LSC-Virgo Meeting  
Budapest, Hungary

**September 2009**

*„Searching for poorly modeled signals with limited duration in gravitational wave detector data”*

Talk at the 5th Workshop of Young Researchers in  
Astronomy and Astrophysics  
Budapest, Hungary

**September 2009**

*„Einstein’s Symphony – the Gravitational Waves”*



- Talk at the Balaton Summer School in Physics  
Balatongyörök, Hungary **July 2009**
- „Recovering spinning waveforms with spinning templates”*  
Poster at the 8th Edoardo Amaldi Conference  
New York, USA **June 2009**
- „Overview on the student research activity of the Eötvös Gravity Research Group”*  
Talk at the 3rd VESF School on Gravitational Waves  
Cascina, Italy **May 2008**
- „Einstein szimfóniája – a gravitációs hullámok”*  
Talk at the Bolyai Conference  
Budapest, Hungary **April 2008**
- „Nem-newtoni gravitációs perturbációk dinamikai mérése interferometrikus gravitációshullám-detektorokkal”*  
Talk at the Annual Meeting of Hungarian Physicists  
Eger, Hungary **August 2007**
- „New Astrophysics and Search Techniques in Gravitational-Wave Observation”*  
Talk at Astroparticle Physics: Current Issues  
Budapest, Hungary **June 2007**
- „Search Method for Quasi-Monochromatic Gravitational Wave Signals in Time-Frequency Space”*  
Poster; 11th Gravitational Wave Data Analysis Workshop  
Potsdam, Germany **December 2006**
- „Yukawa-típusú Gravitációs Perturbációk Dinamikai Mérése Interferometrikus Gravitációshullám-detektorok Segítségével”*  
Talk at the Theoretical Physics Summer School  
Gyöngyöstarján, Hungary **August 2006**
- „Yukawa-like Potential Tests Using Dynamic Gravity Gradients in Interferometric Gravitational Wave Detectors”*  
Talk at the 11th Marcell Grossmann Meeting  
Berlin, Germany **July 2006**

SEMINARS  
& OUTREACH  
TALKS

- "Ki volt az ősrobbanás-elmélet 'atyja'?"*  
Budapest Science Meetup  
Budapest, Hungary **13 Dec. 2018**
- "Az Univerzum zenéje:  
Csillagászat gravitációs hullámokkal"*  
ELTE Feszt, Trefort Kert  
Budapest, Hungary **12 Oct. 2018**
- "Hullámvadászat itthon és a nagyvilágban"*  
Tóth Árpád Gimnázium, Debrecen **13 Dec. 2018**  
Városmajori Gimnázium, Budapest **5 Dec. 2018**  
Deák Téri Evangélikus Gimnázium, Budapest **4 Dec. 2018**  
Káposztásmegyeri Waldorf Gimnázium, Budapest **7 Nov. 2018**  
Berzsenyi Dániel Gimnázium, Budapest **13 June 2018**  
Fazekas Mihály Gimnázium, Budapest **12 June 2018**  
ELTE Trefort Ágoston Gyakorló Gimnázium, Budapest **11 June 2018**  
Seminar talk for participants of the Sandor Mikola  
National Physics Competition  
Pécs, Hungary **8 May 2018**
- "Gravitációshullám-kutatás az ELTE LIGO  
tagsoportjában"*  
Mafihe TDK Hét, Eötvös Loránd Univ.  
Budapest, Hungary **13 Nov. 2017**
- "GW170817: Egy többcsatornás észlelés  
magyar hozzájárulásokkal"*  
Meeting of the Variable Stars Group, MTA CSFK CSI  
Budapest, Hungary **11 Nov. 2017**
- "Kozmikus aranybánya: Gravitációshullám-  
és fényjelek egy ütköző neutroncsillag-párból"*  
Invited talk at the "Egy kis esti fizika" lecture series  
Pécs, Hungary **8 May 2018**
- "A Fizika Mindenkié" event, Eötvös University  
Budapest, Hungary **21 April 2018**  
Budapest Science Meetup  
Budapest, Hungary **9 Nov. 2017**

*"Az emberiség új érzékszervei a világegyetemre:  
A gravitációshullám-detektorok"*

Physicist Seminar, ELTE Bolyai College  
Budapest, Hungary

**8 Nov. 2017**

KöMaL Ifjúsági Ankét, Eötvös Loránd Univ.  
Budapest, Hungary

**31 Oct. 2017**

*"Vadászat gravitációs hullámokra - itthon, az  
Újvilágban, és egy magyar gyarmaton"*

Invited talk at the "Pécsi Szenior Akadémia"  
lecture series, University of Pécs  
Pécs, Hungary

**25 Oct. 2017**

*„Az emberiség új érzékszervei a világegyetemre:  
A gravitációshullám-detektorok”*

Short talk about the 2017 Nobel Prize in Physics  
„From Atoms to Stars” lecture series, Eötvös Loránd Univ.  
Budapest, Hungary

**12 Oct. 2017**

*„Csillagászat gravitációs hullámokkal”*

Invited talk at the XXIII. Bolyai Conference,  
ELTE Bolyai College, Budapest, Hungary

**15 April 2018**

Invited outreach talk at the Fazekas+ Festival,  
Fazekas Mihály Gimnázium  
Budapest, Hungary

**13 March 2018**

Invited outreach talk at the “József Attila  
Szabadegyetem” lecture series, Kossuth Klub  
Budapest, Hungary

**6 March 2018**

Invited outreach talk in the annual „Researcher’s  
Night” program series, Jászberény Library  
Jászberény, Hungary

**29 Sept. 2017**

Invited outreach talk in the „From Atoms to Stars”  
lecture series, Eötvös Loránd University  
Budapest, Hungary

**6 April 2017**

*„Új ablak a világegyetemre:  
csillagászat gravitációs hullámokkal”*

Invited outreach talk in the „Modern physics made plain”  
lecture series, Eötvös Loránd University  
Budapest, Hungary

**17 Nov. 2016**

Invited outreach talk at ELTE KCSSK’s Kultúr7 event

Budapest, Hungary	<b>15 Nov. 2016</b>
Invited outreach talk at the Öveges József National Physics Competition Tata, Hungary	<b>12 Nov. 2016</b>
Invited talk at the “Egy kis esti fizika” lecture series Pécs, Hungary	<b>9 Nov. 2016</b>
Invited outreach talk at Leówey Klára Secondary School Pécs, Hungary	<b>9 Nov. 2016</b>
Invited outreach talk at the Hungarian Office for Mining and Geology Budapest, Hungary	<b>18 Oct. 2016</b>
Invited outreach talk at Pazmany Peter Catholic University Faculty of Information Technology and Bionics Budapest, Hungary	<b>28 Sept. 2016</b>
Invited outreach talk at the 5th Eötvös Summer School Budapest, Hungary	<b>26 July 2016</b>
Invited outreach talk at Számalk Training Center Budapest, Hungary	<b>16 June 2016</b>
<i>„Hosszú tranziensek keresése és többcsatornás csillagászat gravitációshullám-detektorokkal – az ELTE részvétele a LIGO projektben”</i>	
Seminar talk at the Hungarian Academy of Sciences Budapest, Hungary	<b>5 May 2016</b>
<i>„Új ablak a világegyetemre: csillagászat gravitációshullám-detektorokkal”</i>	
Invited outreach talk at the XXVI. Schwartz Memorial Physics Competition Oradea, Romania	<b>15 Oct. 2016</b>
“Jeges Tea” Event organized by the Association of Hungarian Physics Students Pécs, Hungary	<b>3 May 2016</b>
Seminar talk for participants of the Sandor Mikola National Physics Competition Pécs, Hungary	<b>3 May 2016</b>
Karoly Simonyi Conference, Budapest University of Technology and Economics Budapest, Hungary	<b>20 April 2016</b>

- „A világegyetem zenéje: csillagászat gravitációs hullámokkal”  
 “A Fizika Mindenkié” Event  
 Budapest, Hungary **15 April 2016**
- Seminar talk for teachers at the Leo Szilard  
 National Physics Competition  
 Paks, Hungary **9 April 2016**
- „A New Window to the Universe: Gravitational Waves”  
 Milestone Institute Budapest  
 Budapest, Hungary **31 March 2016**
- „Új ablak a világegyetemre: gravitációs hullámok”  
 Budapest Science Meetup  
 Budapest, Hungary **10 March 2016**
- „Hogyan építsünk időgépet?”  
 Researcher’s Night Event  
 Budapest, Hungary **25 September 2015**
- „A New Window to the Universe: Gravitational Waves”  
 Balaton Summer School in Physics  
 Balatonalmádi, Hungary **24 July 2015**
- „Gravitációshullám-asztrófizika:  
 Úton egy új tudományterület felé”  
 ELTE Hungarian Summer Univ. in the Carpathian Basin  
 Budapest, Hungary **9 July 2015**
- „The Science of Interstellar”  
 Screening and public lecture in Hungarian on the movie  
*Interstellar* organized by *Premier MoziMagazin* magazine.  
 Budapest, Hungary **22 January 2015**
- „Hogyan építsünk időgépet?”  
 “Tanulni érdemes!” event for primary school students, TVT  
 Pécs, Hungary **28 Nov. 2014**
- „Kozmikus dallam a múltból – Hogyan fedezte fel a  
 BICEP2 gravitációs hullámok nyomát?”  
 Budapest Science Meetup  
 Budapest, Hungary **10 April 2014**

*„Gravitációshullám-asztrófizika: útban egy új tudományterület születése felé”*

Wigner Seminar Series, Budapest Univ. of Technology  
Budapest, Hungary

**13 March 2014**

*„Gravitációshullám-asztrófizika: lépések egy új tudományterület felé”*

Ortvay Seminar Series, Eötvös University  
Budapest, Hungary

**24 February 2014**

*„A gravitációshullám-asztrófizika alapjai”*

“Gravitációs Hullám Nap” event, Eötvös University  
Budapest, Hungary

**23 July 2013**

*„Magyar részvétel a LIGO Kollaborációban”*

“Gravitációs Hullám Nap” event, Eötvös University  
Budapest, Hungary

**23 July 2013**

*„Magyar részvétel a LIGO-projektben: Budapest-Szeged-Debrecen”*

National Conference of Scientific Students’  
Associations Workshop (TDK Hétvége), Eötvös  
University  
Budapest, Hungary

**4 May 2013**

*„Optimal Networks of Future Gravitational-Wave Telescopes”*

Astronomy Seminar, Columbia University  
New York, USA

**12 October 2012**

*„LIGO participation in Hungary: The Budapest-Szeged-Debrecen Collaboration”*

KöMaL Ankét, Eötvös University  
Budapest, Hungary

**7 November 2010**

*„LIGO participation in Hungary: The Budapest-Szeged-Debrecen Collaboration”*

ASPERA Hungarian National Day, NKTH Office  
Budapest, Hungary

**15 October 2010**

„Tudományos Műszakfelügyelet a LIGO livingstoni állomásán”

Seminar talk, Eötvös University  
Budapest, Hungary

**December 2009**

„Gravitációs hullám kitörések keresése idő-frekvencia térben”

Bolyai Physics Seminar, Bolyai College  
Budapest, Hungary

**September 2009**

„Time-frequency methods in gravitational wave burst searches”

Astro Pizza Lunch, Eötvös University  
Budapest, Hungary

**September 2009**

„Search techniques for narrow-band burst signals in gravitational wave detector data”

Seminar talk, KFKI-RMKI  
Budapest, Hungary

**April 2009**

„Einstein szimfóniája: a gravitációs hullámok”

Invited talk at the “Egy kis esti fizika” lecture series  
Pécs, Hungary

**January 2009**

„Gravitációs hullámok”

Bolyai Physics Seminar, Bolyai College  
Budapest, Hungary

**October 2007**

„Gravitációs Hullámok”

Invited talk at the National Conference of Scientific Students’  
Associations Workshop (TDK Hétfége)  
Pécs, Hungary

**October 2007**

## SCIENCE METRICS

Number of publications:	<b>167</b>
Number of refereed publications:	<b>146</b>
Total sum of impact factors:	<b>936.472</b>
Number of citations (source: <a href="#">MTMT</a> ):	<b>20 986</b>
Number of independent citations (source: <a href="#">MTMT</a> ):	<b>11 717</b>
H-index from all citations (source: <a href="#">MTMT</a> ):	<b>62</b>
H-index from independent citations (source: <a href="#">MTMT</a> ):	<b>38</b>

## PUBLICATIONS

### 1. Refereed publications:

[16] Dályá, G., Galgóczi, G., Dobos, L., Frei, Z., Heng, I. S., Macas, R., Messenger, C., **Raffai, P.**, and de Souza, R. S.; “GLADE: A Galaxy Catalogue for Multi-Messenger Searches in the Advanced Gravitational-Wave Detector Era”, Monthly Notices of the Royal Astronomical Society, 2018. Impact factor: 5.194\* [+VizieR Online Data Catalog: GLADE v2.3 catalog (Dalya+, 2018), VII/281.]

[15] Gondán, L., Kocsis, B., **Raffai, P.**, and Frei, Z.; “Eccentric Black Hole Gravitational-wave Capture Sources in Galactic Nuclei: Distribution of Binary Parameters”, The Astrophysical Journal, Vol. 860, Issue 1, aid. 5, 2018. Impact factor: 5.551\*

[14] Gondán, L., Kocsis, B., **Raffai, P.**, and Frei, Z.; “Accuracy of Estimating Highly Eccentric Binary Black Hole Parameters with Gravitational-wave Detections”, The Astrophysical Journal, Vol. 855, Issue 1, aid. 34, 2018. Impact factor: 5.551\*

[13] Bécsy, B., **Raffai, P.**, Cornish, N. J., et al. (+6 authors); “Parameter Estimation for Gravitational-wave Bursts with the BayesWave Pipeline”, The Astrophysical Journal, Vol. 839, Number 1, 2017. Impact factor: 5.551

[12] Szölgvény, Á., Dályá, G., Gondán, L., and **Raffai, P.**; “Target-based optimization of advanced gravitational-wave detector network operations”, Classical and Quantum Gravity, Vol. 34, p. 7, 2017. Impact factor: 3.283

[11] **Raffai, P.**, Haiman, Z., and Frei, Z.; “A statistical method to search for recoiling supermassive black holes in active galactic nuclei”, Monthly Notices of the Royal Astronomical Society, Vol. 455, p. 484, 2016. Impact factor: 4.961

[10] Hu, Y., **Raffai, P.**, Gondán, L., et al. (+5 authors); „Global Optimization for Future Gravitational Wave Detectors' Sites”, Classical and Quantum Gravity, Vol. 32, p. 105010, 2015. Impact factor: 2.837

[9] **Raffai, P.**, Gondán, L., Heng, I. S., et al. (+4 authors); „Optimal networks of future gravitational-wave telescopes”, Classical and Quantum Gravity, Vol. 30, p. 155004, 2013. Impact factor: 3.103

[8] Murphy, D., Tse, M., **Raffai, P.**, et al. (+6 authors); „Detecting long-duration narrow-band gravitational wave transients associated with soft gamma repeater quasiperiodic oscillations”, Physical Review D, Vol. 87, Issue 10, p. 103008, 2013. Impact factor: 4.864

[7] Baret, B., Bartos, ... **Raffai, P.**, et al. (+23 authors); „Multimessenger science reach and analysis method for common sources of gravitational waves and high-energy neutrinos”, Physical Review D, Vol. 35, Issue 10, p. 103004, 2012. Impact factor: 4.691



[6] **Raffai, P.**, Szeifert, G., Matone, L., et al. (+5 authors); „Opportunity to Test non-Newtonian Gravity Using Interferometric Sensors with Dynamic Gravity Field Generators”, *Physical Review D*, Vol. 84, Issue 8, p. 082002, 2011. Impact factor: 4.558

[5] Baret, B., Bartos, I., ... **Raffai, P.**, et al. (+16 authors); „Bounding the time delay between high-energy neutrinos and gravitational-wave transients from gamma-ray bursts”, *Astroparticle Physics*, Vol. 35, Issue 1, p. 1-7, 2011. Impact factor: 3.216

[4] Thrane, E., Kandhasamy, S., ... **Raffai, P.**, et al. (+10 authors); „Long gravitational-wave transients and associated detection strategies for a network of terrestrial interferometers”, *Physical Review D*, Vol. 83, Issue 8, p. 083004, 2011. Impact factor: 4.558

[3] **Raffai, P.**, Frei, Z., Márka, Z., et al. (+1 author); „How to find long narrow-band gravitational wave transients with unknown frequency evolution?”, *Classical and Quantum Gravity*, Vol. 24, p. S457-S468, 2007. Impact factor: 2.846

[2] Takamori, A., **Raffai, P.**, Márka, S., et al. (+9 authors); „Inverted Pendulum as Low Frequency Pre-Isolation for Advanced Gravitational Wave Detectors”, *Nuclear Instruments & Methods in Physics Research A*, Vol. 582, Issue 2, p. 683-692, 2007. Impact factor: 1.019

[1] Matone, L., **Raffai, P.**, Márka, S., et al. (+5 authors); „Benefits of Artificially Generated Gravity Gradients for Interferometric Gravitational Wave Detectors”, *Classical and Quantum Gravity*, Vol. 24, p. 2217-2229, 2007. Impact factor: 2.846

## **2. LSC publications I made notable contributions to:**

[8] Abbott, B. P., ... **Raffai, P.**, et al. (+1312 authors); “A gravitational-wave standard siren measurement of the Hubble constant”, *Nature*, doi:10.1038/nature24471, 2017. Impact factor: 41.577

[7] Abbott, B. P., ... **Raffai, P.**, et al. (+3619 authors); “Multi-messenger Observations of a Binary Neutron Star Merger”, *The Astrophysical Journal Letters*, Vol. 848, aid. L12, 2017. Impact factor: 6.634

[6] Abbott, B. P., ... **Raffai, P.**, et al. (+934 authors); “Search for Gravitational Waves Associated with Gamma-Ray Bursts During the First Advanced LIGO Observing Run and Implications for the Origin of GRB 150906B”, *The Astrophysical Journal*, Vol. 841, Number 2, 2017. Impact factor: 5.551

[5] Abbott, B. P., ... **Raffai, P.**, et al. (+934 authors); “All-sky search for long-duration gravitational wave transients with initial LIGO”, *Physical Review D*, Vol. 93, Issue 4, id. 042005, 2016. Impact factor: 4.568

[4] Aasi, J., ... **Raffai, P.**, et al. (+875 authors); "Search for long-lived gravitational-wave transients coincident with long gamma-ray bursts", *Physical Review D*, Vol. 88, Issue 12, p. 122004, 2013. Impact factor: 4.864

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