



Eötvös Loránd University      Spring 2013 – Summer 2014  
Assistant Lecturer

Columbia University      Fall 2011 – Spring 2013  
Postdoctoral Research Scientist

Eötvös Loránd University      Spring 2010 – Fall 2011  
Assistant Lecturer

## EDUCATION

Eötvös Loránd University      Fall 2006 – Spring 2012  
Ph.D. in astrophysics

Eötvös Loránd University      Fall 2001 – Spring 2006  
B.Sc. and M.Sc. in physics

## TRAINING PROGRAMS

Visiting scientist at the LIGO Hanford and Livingston sites      **May 2012**

Visiting scientist at the LIGO Hanford site      **January 2012**

Trained expert in the [LVC LUMIN program](#)      **August 2010**

Visiting scientist at Columbia University      **July 2010**

Science monitoring expert at the LIGO Livingston site      **June 2010**

Science monitoring expert at the LIGO Livingston site      **September 2009**

Visiting student at Columbia University      **January-March 2007**

Visiting student at Columbia University      **June-August 2006**

Visiting student at California Institute of Technology      **June-July 2004**

## AWARDS & GRANTS (since PhD)

Grant for Young Researchers in Higher Education,  
New National Excellence Program (ÚNKP)  
*(granted by the Hungarian Ministry of Human Capacities)*      **September 2017**

Royal Astronomical Society  
Group Achievement Award ‘A’  
*(as a member of the LIGO-Virgo Collaboration)*      **June 2017**

Princess of Asturias Award for  
Technical and Scientific Research  
*(as a member of the LIGO-Virgo Collaboration)*      **June 2017**

Academic Youth Award  
*(granted by the Hungarian Academy of Sciences)*      **January 2017**

2016 Gruber Foundation Cosmology Prize (as a member of the LIGO-Virgo Collaboration)	<b>May 2016</b>
Special Breakthrough Prize in Fundamental Physics (as a member of the LIGO-Virgo Collaboration)	<b>May 2016</b>
Albert Szent-Gyorgyi Award	<b>December 2015</b>
János Bolyai Research Grant	<b>September 2014 - August 2016</b>
Pál Erdős Grant for Young Researchers	<b>March - July 2014</b>

## 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:

Introduction to Astronomy (Physics+X Teacher BSc)	<b>2013-</b>
Cosmology (Physics MSc/PhD)	<b>2010-2011, 2013-</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.)

**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**

*„Gravitációshullám-kutatás az ELTE LIGO tagcsoportjában”*

Mafihe TDK Hét, Eötvös Loránd Univ.

Budapest, Hungary

**13 Nov. 2017**

*„GW170817: Egy többsatornás 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"*

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 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

**15 Nov. 2016**

Invited outreach talk at the Öveges József  
National Physics Competition  
Tata, Hungary

**12 Nov. 2016**

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

**October 2007**

## SCIENCE METRICS

Number of publications:	<b>140</b>
Number of refereed publications:	<b>125</b>
Total sum of impact factors:	<b>802.572</b>
Number of citations (source: <a href="#">MTMT</a> ):	<b>10 520</b>
Number of independent citations (source: <a href="#">MTMT</a> ):	<b>4055</b>
H-index from all citations (source: <a href="#">MTMT</a> ):	<b>46</b>
H-index from independent citations (source: <a href="#">MTMT</a> ):	<b>25</b>

## PUBLICATIONS

### 1. Refereed publications:

- [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: 5.533\*
- [12] Szölgény, Á., Dálya, 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: 3.119\*
- [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: 40.137\*

[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: 5.522\*

[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: 5.533\*

[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

[3] Evans, P. A., ... **Raffai, P.**, et al. (+814 authors); “Swift Follow-up Observations of Candidate Gravitational-wave Transient Events”, The Astrophysical Journal Supplement, Vol. 203, Issue 2, p. 14, 2012. Impact factor: 16.238

[2] Abadie, J., ... **Raffai, P.**, et al. (+813 authors); “Implementation and testing of the first prompt search for gravitational wave transients with electromagnetic counterparts”, Astronomy & Astrophysics, Vol. 539, p. A124, 2012. Impact factor: 5.084

[1] Abbott, B. P., ... **Raffai, P.**, et al. (+664 authors); „Search for gravitational-wave bursts associated with gamma-ray bursts using data from LIGO Science Run 5 and Virgo Science Run 1”, The Astrophysical Journal, Vol. 715, p. 1438, 2010. Impact factor: 7.436

## **3. As member of the LIGO Scientific Collaboration (member since Fall 2007):**



[104] Abbott, B. P., ... **Raffai, P.**, et al. (+1098 authors); "GW170817: Observation of Gravitational Waves from a Binary Neutron Star Inspiral", Physical Review Letters, Vol. 119, Issue 16, id. 161101, 2017. Impact factor: 8.462\*

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