

### CONTACT

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### OUTLINE

I currently work as an assistant professor at Eotvos University, Budapest. Since 2007, I have been a member of the [LIGO Scientific Collaboration \(LSC\)](#), which is a worldwide community of scientists working in various fields of gravitational-wave physics.

My research interests include gravitational-wave astrophysics, multi-messenger astronomy, compact objects, gamma-ray bursts, and various aspects of signal and image processing.

My professional skills range from scientific theory and computer programming to machine shop practice and building electronics.

I have learned teamwork and scientific management skills by leading the data analysis efforts of the [LSC group at Eotvos University](#), Hungary, since 2007.

I have been demonstrating my active commitment to scientific outreach by giving public lectures, popularizing science through media appearances, and mentoring students at many academic levels.

I am an amateur cartoon-, stencil-, and photo artist. My works of art have been shown at Hungarian and international exhibitions. In 2010, I won [first prize](#) in the most prestigious billboard art competition in Hungary.

I have watched every [TED talk](#) since May 2011. I regularly do volunteer work at the children's house of the [Saint Francis Foundation](#) in Deva, Transylvania.

**WORK  
EXPERIENCE**

Eötvös Loránd University                      Summer 2014 – Present  
Assistant Professor

MTA-ELTE EIRSA Lendület                      Sum. 2013 – Sum. 2017  
Astrophysics Research Group                      Research Scientist

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)**

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

Princess of Asturias Award for Technical and Scientific Research (as a member of the LIGO-Virgo Collaboration)	<b>June 2017</b>
Academic Youth Award (granted by the Hungarian Academy of Sciences)	<b>January 2017</b>
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

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

Introduction to Astrophysics (Physics BSc) **2014-2015**

**Spring Semester Courses:**

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

**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**

*„Csillagászat gravitációs hullámokkal”*

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 Leőwey 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 többcsatornás 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 Hétvége)  
Pécs, Hungary

**October 2007**

**SCIENCE  
METRICS**

Number of publications:	<b>132</b>
Number of refereed publications:	<b>117</b>
Total sum of impact factors:	<b>719.798</b>

Number of citations (source: <a href="#">MTMT</a> ):	<b>9689</b>
Number of independent citations (source: <a href="#">MTMT</a> ):	<b>4583</b>
H-index from all citations (source: <a href="#">MTMT</a> ):	<b>43</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] Szölgvény, 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:

[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):

[98] Martynov, D.V., ... **Raffai, P.**, et al. (+201 authors); "Quantum correlation measurements in interferometric gravitational-wave detectors", *Physical Review A*, Vol. 95, Issue 4, id. 043831, 2017. Impact factor: 2.925\*

[97] Abbott, B. P., ... **Raffai, P.**, et al. (+954 authors); "Search for intermediate mass black hole binaries in the first observing run of Advanced LIGO", *Physical Review D*, Vol. 96, Issue 2, id. 022001, 2017. Impact factor: 4.568\*

[96] Abbott, B. P., ... **Raffai, P.**, et al. (+954 authors); "Search for gravitational waves from Scorpius X-1 in the first Advanced LIGO observing run with a hidden Markov model", *Physical Review D*, Vol. 95, Issue 12, id. 122003, 2017. Impact factor: 4.568\*

[95] Abbott, B. P., ... **Raffai, P.**, et al. (+954 authors); "GW170104: Observation of a 50-Solar-Mass Binary Black Hole Coalescence at Redshift 0.2", *Physical Review Letters*, Vol. 118, Issue 22, id. 221101, 2017. Impact factor: 8.462\*

[94] Abbott, B. P., ... **Raffai, P.**, et al. (+954 authors); "Search for continuous gravitational waves from neutron stars in globular cluster NGC 6544", *Physical Review D*, Vol. 95, Issue 8, id. 082005, 2017. Impact factor: 4.568\*

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