CURRICULUM VITAE & TRACK RECORD

Krzysztof Belczynski

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The Polish Academy of Sciences
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EDUCATION:

2001: Ph.D.: "Population Synthesis in Modern Astrophysical Applications"

Copernicus Center, Warsaw: The Polish Academy of Sciences (+ CfA, Harvard)

EMPLOYMENT:

2017–now: professor at Copernicus Center, Warsaw, Poland

2010–2017: associate professor at Warsaw University, Warsaw, Poland

2007–2010: Oppenheimer Fellow at Los Alamos National Laboratory, USA

2004–2007: Tombaugh Fellow at Dept. of Astronomy, New Mexico State University, USA

2001–2004: Lindheimer Fellow at Dept. of Physics and Astronomy, Northwestern University, USA

2000–2001: SAO Predoctoral Fellow at Harvard-Smithsonian Center for Astrophysics, USA

MAJOR RESEARCH INTERESTS:

- Stellar and binary evolution
- Formation of compact objects (black holes, neutron stars, white dwarfs)
- Physics of Gravitational-wave sources (VIRGO/LIGO/KAGRA/ET/LISA)
- Progenitors Gamma-ray bursts (SWIFT/INTEGRAL)
- Populations of Galactic and extragalactic X-ray binaries (CHANDRA/XMM NEWTON)
- Progenitors of Type Ia Supernovae (KECK, HUBBLE, SUBARU)

PUBLICATION STATISTICS:

- number of papers: 250 (first author: 60), high impact papers: 27 (first author: 8)
- citations: 12,000 (the most cited paper: 1,900, the most cited first author paper: 450)
- H index: 55, H1 index: 28 (time from Ph.D.: 16 years)

SCIENCE/PUBLIC OUTREACH:

- science (100+ papers based on): database of astrophysical models (www.syntheticuniverse.org)
- citizen science (15,000+ users): virtual computational astro-center (universeathome.pl)
- media: Nature, National Geographic, Wyborcza, PAP, Mail Online UK, Google News, Buzz Feed

AWARDS, FELLOWSHIPS, GRANTS:

2017:	Polish Physical Society Prize (Virgo/Poland group)
2016:	Gruber Cosmology Prize, USA (LIGO/Virgo team members)
2016:	Special Breakthrough Prize in Physics, USA (LIGO/Virgo Collaboration)
2016:	"Group Science Award" from Warsaw University President
2016:	"Distinguished Visitor Program" from Australian National University (Canberra)
2016:	Nicolaus Copernicus Medal, The Polish Academy of Sciences (Virgo/Poland group)
2014:	Fellow of The American Physical Society (USA)
2014:	"Distinguished Visitor Fellowship" from LIGO/Caltech director (D. Reitze)
2013:	"Excellence in Teaching Award" – Physics Department, Warsaw University
2012:	"Master 2012" – distinguished scholar subsidy, Polish Science Foundation
2011:	"Individual Science Award" from Warsaw University President
2002–2008:	3 Chandra Theory Grants (PI of one), 3 NSF Grants (CoI), USA
1999–2017:	12 Polish Science Foundation Grants (PI of 7)
2001:	Polish Science Foundation Award for Best Polish Young Scientists
1999:	Annual Prize for Outstanding Young Astronomer, The Polish Academy of Sciences
1997/1998:	2 visiting fellowships at CNRS, at Institute d'Astrophysique, Paris, France

MEMBERSHIPS:

- "American Physical Society", 2011-present
- "VIRGO Scientific Collaboration", 2012-2016
- "LIGO Scientific Collaboration", 2002-2007

MAIN COLLABORATIONS:

- Chris Fryer: Los Alamos National Laboratory (USA)
- Dan Holz: University of Chicago (USA)
- Emanuele Berti: University of Mississippi (USA)
- Selma de Mink: University of Amsterdam (Netherlands)
- Tomasz Bulik: Warsaw University (Poland)
- Jean-Pierre Lasota: Institut d'Astrophysique/CNRS (France)
- Georges Meynet: University of Geneva (Switzerland)
- Richard O'Shaughnessy: Rochester Institute of Technology (USA)
- Rosalba Perna: Stony Brook University (USA)

SELECTED PAPERS:

1. "The first gravitational-wave source from the isolated evolution of two stars in the 40-100 solar mass range",
Belczynski, K., Holz, D., Bulik, T., O'Shaughnessy, R., Nature, 534, 512 [**citations: 153**]

2. "A Comprehensive Study of Binary Compact Objects as Gravitational Wave Sources: Evolutionary Channels, Rates, and Physical Properties",
Belczynski, K., Kalogera, V., Bulik, T., 2002, ApJ, 572, 407 [**458**]

3. "TOPICAL REVIEW: Predictions for the rates of compact binary coalescences observable by ground-based gravitational-wave detectors",
The LIGO/VIRGO Collaboration + **Belczynski, K.**: J.Abadie, et al., 2010, CQGra, 27, 3001 [**780**]

4. "Compact Object Modeling with the `StarTrack` Population Synthesis Code",
Belczynski, K., Kalogera, V., Rasio, F., Taam, R., Zezas, A., Bulik, T., Maccarone, T., Ivanova, N., 2008, ApJS, 174, 223 [**306**]

5. "A catalogue of symbiotic stars",
Belczynski, K., Mikolajewska, J., Munari, U., Ivison, R. J., Friedjung, M., 2000, A&AS 146, 407 [**242**]

6. "A Study of Compact Object Mergers as Short Gamma-Ray Burst Progenitors",
Belczynski, K., Perna, R., Bulik, T., Kalogera, V., Ivanova, N., Lamb, D., 2006, ApJ, 648, 1110 [**183**]

7. "Rates and Delay Times of Type Ia Supernovae",
Ruiter, A., **Belczynski, K.**, Fryer, C., 2009, ApJ, 699, 2026 [**182**]

8. "On the Rarity of Double Black Hole Binaries: Consequences for Gravitational Wave Detection",
Belczynski, K., Taam, R., Kalogera, V., Rasio, F., Bulik, T., 2007, ApJ, 662, 504 [**124**]

9. "On The Maximum Mass of Stellar Black Holes",
Belczynski, K., Bulik, T., Fryer, C., Ruiter, A., Valsecchi, F., Vink, J., Hurley, J., 2010, ApJ, 714, 1217 [**227**]

10. "Double Compact Objects. I. The Significance of the Common Envelope on Merger Rates",
Dominik, M., **Belczynski, K.**, Fryer, C., Holz, D., Berti, E., Bulik, T., Mandel, I., O'Shaughnessy, R., 2012, ApJ, 759, 52 [**218**]

11. "Compact Remnant Mass Function: Dependence on the Explosion Mechanism and Metallicity",
Fryer, C., **Belczynski, K.**, Wiktorowicz, G., Dominik, M., Kalogera, V., Holz, D., 2012, ApJ, 749, 91 [**183**]

12. "Formation and evolution of compact binaries in globular clusters - II. Binaries with neutron stars",
Ivanova, N.; Heinke, C., Rasio, F., **Belczynski, K.**, Fregeau, J., 2008, MNRAS, 386, 553 [**142**]

13. "The Effect of Metallicity on the Detection Prospects for Gravitational Waves",
Belczynski, K., Dominik, M., Bulik, T., O'Shaughnessy, R., Fryer, C., Holz, D., 2010, ApJ Lett., 715, L138 [**141**]