

## Anita Białuńska, PhD

Assistant Professor

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### EDUCATION

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#### Postdoctoral Training

Department of Rehabilitation Sciences (Dr. Anthony P. Salvatore and Dr. Bess Sirmon-Taylor), University of Texas at El Paso, USA  
NIDILRR, ARRT grant, Program no. 90AR5016-03-00, CFDA No. 93.433

Feb 2017 –  
Aug 2018

#### Postgraduate Studies Problems of Psychotherapy

Jagiellonian University, Collegium Medicum (Prof. Jerzy Aleksandrowicz)  
Cracow, Poland

2016

#### PhD in Experimental Psychology with honors

University of Warsaw, Poland (Dr. Simone Dalla Bella – International Laboratory for Brain, Music and Sound Research BRAMS and Dept. of Psychology, University of Montreal)  
Dissertation Title: *Factors affecting the precision of sensorimotor synchronization*

2016

#### MSc in Psychology with honors

Kazimierz Wielki University, Bydgoszcz, Poland (Dr. Piotr Jaśkowski (1957–2011))  
Thesis Title: *The disjunctive reaction primed by the degraded stimulus*

2004

### MEMBERSHIP

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American Physiological Society

American Congress of Rehabilitation Medicine

Polish Psychiatric Association, Scientific Section

### AWARDS

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The special award of the Council of the Faculty of Psychology  
at the University of Warsaw for the doctoral dissertation  
*Factors affecting the precision of sensorimotor synchronization*

2016

## WORK EXPERIENCE

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Assistant Professor Department of Rehabilitation Sciences University of Texas at El Paso, USA	<b>Sept 2018 -</b>
Postdoctoral Research Fellow Department of Rehabilitation Sciences University of Texas at El Paso, USA	<b>Feb 2017 – Aug 2018</b>
Assistant Professor Department of Cognitive Psychology University of Finance and Management, Warsaw, Poland	<b>Mar 2016 – Jan 2017</b>
Guest Lecturer National Defense Academy, Poland	<b>2015 - 2016</b>
Lecturer Department of Cognitive Science Nicolaus Copernicus University, Torun, Poland	<b>2010 - 2011</b>
Co-PI and PI (in 2011) Polish partner in European Commission project ITN-Lateralized Attention Networks, FP7-PEOPLE	<b>2008 - 2012</b>
Managing Editor of the <i>Advances in Cognitive Psychology</i>	<b>2005 - 2011</b>
Research Assistant and Lecturer, The Psychophysiology Laboratory and The Music Performance and Brain Laboratory Department of Cognitive Psychology University of Finance and Management in Warsaw	<b>2004 - 2016</b>

## TEACHING EXPERIENCE

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Department of Rehabilitation Sciences, University of Texas at El Paso, USA <ul style="list-style-type: none"><li>• Ethics - seminar</li><li>• Concussion/mTBI Management - seminar</li></ul>	<b>2017 - 2018</b>
Graduate School, Center of Excellence National Defense Academy, Warsaw, Poland <ul style="list-style-type: none"><li>• Communication and Motor Control</li><li>• Social Cognition</li><li>• Attitudes</li><li>• Social influence, persuasion, psychomanipulations</li></ul>	<b>2015 - 2016</b>

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Department of the Cognitive Science , Faculty of Philosophy  
Nicolaus Copernicus University, Torun, Poland

2010 – 2011

- Fundamentals of Neuroscience - seminar

Department of Cognitive Psychology  
University of Finance and Management, Warsaw, Poland

2004 - 2016

- Cognitive Psychology – lecture and seminar
- Experimental Psychology – seminar
- Research Methods – seminar
- Methods of Neurorehabilitation – lecture and seminar
- Statistics - seminar
- Neuroscience in Psychotherapy - seminar
- Clinical Neuropsychology – lecture and seminar
- Psychometry - seminar
- History of Psychology – lecture

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## GRANTS

National Institute of Health U01  
PI – Dr. Thompson Sarkodie-Gyan,  
Co-PIs – Dr. Anita Bialunska, Dr. Alvaro Gurovich, Dr. Bess Sirmon-Taylor,  
Dr. Michelle Gutierrez

Submitted  
Sep 13, 2018

National Science Foundation, CogNeuro  
Bilingual and Bicultural Benefits for Auditory Processing  
PI – Dr. Anita Bialunska, co-PI – Dr. Bess Sirmon-Taylor

Submitted  
Aug 13, 2018

J. Edward and M.C. Helen Stern Foundation  
PI – Dr. Thompson Sarkodie-Gyan,  
coPIs – Dr. Anita Bialunska, Dr. Alvaro Gurovich, Dr. Bess Sirmon-Taylor,  
Dr. Michelle Gutierrez

Submitted  
Aug, 2018

Research Postdoctoral Fellow in **Advanced Rehabilitation Research Training** (ARRT) grant  
in Traumatic Brain Injury, the National Institute on Disability and Rehabilitation Research  
(NIDRR) Department of Health and Human Services  
PI – Dr. Anthony P. Salvatore, Dr. Bess Sirmon-Taylor

Feb 2017 –  
Aug 2018

Marie Curie Initial Training Network (ITN) Grant from the European Union (7th  
Framework Programme) **Europe, BRain and MUSic. New perspectives in stimulating  
cognitive and sensory processes** (EBRAMUS)  
Coordinators - Dr. Emmanuel Bigand, Dr. Simone Dalla Bella

2009 – 2013

Marie Curie Initial Training Network (ITN) Grant from the European Union 7th Framework Programme <b>Lateralized Attention Networks</b> (LAN) Coordinators - Prof. Niels Birbaumer, Dr. Michal Lavidor PI of Polish partner – Dr. Piotr Jaśkowski (1957–2011)/Dr. Anita Białuńska/Dr. Rob van der Lubbe	<b>2008 – 2012</b>
Polish Ministry of Science and Higher Education, H01F 007 29 <b>The role of masking in the motor reaction priming</b> PI - Dr. Piotr Jaśkowski (1957–2011)	<b>2006 – 2007</b>
Polish Ministry of Science and Higher Education <b>Synchronized coordination in the activity of group members</b> PI – Dr. Peter Keller	<b>2005 - 2008</b>

## OTHER PROJECTS

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| • The nature of the deficits manifest by athletes with concussion in the multimodal tasks. The Auditory Brainstem Responses study – with Dr. Patricia Lara and Dr. Bess Sirmon-Taylor (Dept. of Rehab. Sciences, University of Texas at El Paso)              | <b>from Sep 2017</b> |
| • Role of the rhythm perception and performance skills in evoking altered states of consciousness (ASC) – with Dr. Simone Dalla Bella (University of Montreal & International Laboratory for Brain, Music, and Sound Research BRAMS, Montreal, Canada)        | <b>from Oct 2016</b> |
| • Neuropsychological testing of sensorimotor synchronization processes for neurorehabilitation of adults with Autism Spectrum Disorder – with Dr. Simone Dalla Bella                                                                                          | <b>2010 – 2011</b>   |
| • The effect of the previous foreperiod on current preparation as reflected in speed, force and preparation-related brain potentials - with Dr. Rob van der Lubbe (Dept. of Cognitive Psychology and Ergonomics, University of Twente, Enschede, Netherlands) | <b>2009 – 2010</b>   |
| • Implicit sequence learning - with Dr. Elger Abragamse                                                                                                                                                                                                       | <b>2010</b>          |
| • Study of the time entrainment in exceptionally talented children in playing the drums –with Dr. Simone Dalla Bella                                                                                                                                          | <b>2008 – 2009</b>   |
| • The interference between working memory and spatial-numerical association – with Dr. Piotr Jaśkowski (1957–2011)                                                                                                                                            | <b>2008 – 2009</b>   |
| • The effect of music's temporal structure on the fostering tight coupling between drums sound and movement – with Prof. Simone Dalla Bella                                                                                                                   | <b>2007 – 2011</b>   |
| • Lateralization of the orienting and executive attention. EEG study – with Dr. Piotr Jaśkowski (1957–2011)                                                                                                                                                   | <b>2007 - 2009</b>   |

## PUBLICATIONS

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### PEER-REVIEWED FULL-LENGTH JOURNAL ARTICLES

#### published and accepted

- **Białyńska A**, Salvatore AP (2017). The auditory comprehension changes over time after sport-related concussion can indicate multisensory processing dysfunctions. *Brain and Behavior*, **7**(12), e0087.
- **Białyńska A**, Dalla Bella S (2017). Music and speech distractors disrupt sensorimotor synchronization: Effects of musical expertise. *Experimental Brain Research*, **235**, 3619-3630. doi 10.1007/s00221-017-5080-7
- Dalla Bella S, **Białyńska A**, Sowiński J (2013). Why movement is captured by music, less by speech. Role of Temporal Regularity. *PLOS One*, **8**(8).
- **Białyńska A**, Dalla Bella S, Jaśkowski P (2011). Increasing stimulus intensity reduces reaction time, but does not affect sensorimotor synchronization. *Psychological Research*, **1**, 43-53.
- Jaśkowski P, **Białyńska A**, Tomanek M, Verleger R (2008). Mask- and distractor-triggered inhibitory processes in the priming of motor responses: An EEG study. *Psychophysiology*, **45**, 70-85.

#### submitted or under revision

- **Białyńska A**, Salvatore AP (submitted). A case study: Multisensory information processing take more time to recover after concussion than just visual or verbal memory. *Neuropsychology*.
- **Białyńska A**, Szumska I, van der Lubbe R (submitted). Motor and attentional priming effects in metacontrast, go-nogo paradigm reflected in responses timing, correctness and brain activity. *Consciousness and Cognition*.

#### in preparation

- **Białyńska A**, van der Lubbe R (in preparation). Sequential effects of foreperiod with visual warning stimuli. Analysis of speed, force and preparation-related brain potentials. *Journal of Psychophysiology*.
- **Białyńska A**, Dalla Bella S (in preparation). Role of the rhythm perception and performance skills in the altering of consciousness. What have we known? Review. *Frontiers in Psychology*.
- **Białyńska A**, Sirmon-Taylor B (in preparation). Improvement of the performance timing in the speech comprehension task after sport-related concussion is linked to visual-motor speed. *Brain Injury*.

### PEER-REVIEWED ABSTRACTS/PROCEEDINGS OF CONFERENCE PRESENTATIONS

- **Białyńska A**, Salvatore AP. (2018). Improvement in auditory comprehension reaction time following a sport-related Trauma is linked to visual processing abilities and visual-motor speed. *Journal of Head Trauma Rehabilitation*, **33**(3), e67-e118.

- **Bialunska A**, Salvatore AP. (2017). Multimodal tasks can cause more difficulty compared to simple tasks in concussed athletes indicating a dysfunction of the sensorimotor integration mechanisms. *Program No. 394.03. 2017 Neuroscience Meeting Planner. Washington, DC: Society for Neuroscience, 2017.*
- **Bialunska A**, Salvatore AP (2017). What's going on with auditory comprehension after sport-related concussion? *Archives of Physical Medicine and Rehabilitation, 98(10), e22.*
- **Białyńska A** Dalla Bella S (2007). Music disrupts pressure force more than speech during sensorimotor synchronization. *Proceedings of the Meeting of the Society for Music Perception and Cognition (SMPC), 86.*
- **Białyńska A**, Dalla Bella S (2007). Movement is more strongly attracted to music than to speech. *Supplement of the Journal of Cognitive Neuroscience, 150-151.*
- Dalla Bella S, **Białyńska A**, Sowiński J (2006). Captured by music, less by speech. *Proceedings of the 9th International Conference on Music Perception and Cognition, 235.*
- **Białyńska A**, Jaśkowski P, Dalla Bella S (2006). Changing the pacing stimulus intensity does not affect sensorimotor synchronization. *Proceedings of the 9th International Conference on Music Perception and Cognition, 426-427.*
- **Białyńska A**, Jaśkowski P, Dalla Bella S (2005). Effect of stimulus intensity on sensorimotor synchronization. *Proceedings of the XXXIInd Scientific Congress of the Polish Psychological Association, 147.*

## BOOKS

Białyńska, A. (2016). Czynniki wpływające na precyzję synchronizacji sensomotorycznej. [Factors affecting the precision of sensorimotor synchronization.] Doctoral Dissertation, Faculty of Psychology, University of Warsaw.

## CONFERENCE PRESENTATION

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- **Bialunska A**. *Enforcement of standards in TBI*. Oral presentation, the 2<sup>nd</sup> International Symposium on TBI and PTSD in Warsaw, June 19-21, 2018, Warsaw, Poland.
- **Bialunska A**. *Neurodegenerative disorders after TBI*. Oral presentation, the 2<sup>nd</sup> International Symposium on TBI and PTSD in Warsaw, June 19-21, 2018, Warsaw, Poland.
- **Bialunska A**. *What we know about mTBI?* Oral presentation, the 2<sup>nd</sup> International Symposium on TBI and PTSD in Warsaw, June 19-21, 2018, Warsaw, Poland.
- **Bialunska A**, Sirmon-Taylor B. *Deficits of timing in auditory comprehension task after a concussion reveal problems with sensorimotor integration*. Accepted oral presentation, the 4th Federal Interagency Conference on TBI (FICTBI) TBI across the Life Span: research to practice, June 11-13, 2018, Washington, DC.

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- **Bialunska A**, Salvatore AP. *Improvement in auditory comprehension reaction time following a sport-related concussion is linked to visual processing abilities and visual-motor speed*. Oral presentation, the NABIS Brain Injury across the Age Spectrum: Improving Outcomes for Children and Adults Conference, March 14-17, 2018, Houston, TX.
  - **Bialunska A**, Salvatore AP. *Multimodal tasks can cause more difficulty compared to simple tasks in concussed athletes indicating a dysfunction of the sensorimotor integration mechanisms*. Poster, Annual Meeting of the Society for Neuroscience 'Neuroscience 2017', November 11 – 15, 2017, Washington, DC.
  - **Bialunska A**, Salvatore AP. *NIDILRR. What's going on with auditory comprehension after sport-related concussion?* Oral presentation, Young Investigators Symposium, 94<sup>th</sup> Annual Conference American Congress of Rehabilitation Medicine, Progress In Rehabilitation Research, October 23-28, 2017, Atlanta, GA.
  - **Białuńska A**, Dalla Bella S, Sowiński J. *Why movement is captured by music, less by speech?* Oral presentation, the 40th Poznań Linguistic Meeting, September 2-5, 2009, Gniezno, Poland.
  - **Białuńska A**, Dalla Bella S. *Music disrupts pressure force more than speech during sensorimotor synchronization*. Oral presentation, international meeting of the Society for Music Perception and Cognition (SMPC), July 30-August 3, 2007, Montreal, Canada.
  - **Białuńska A**, Dalla Bella S. *Movement is more strongly attracted to music than to speech*. Poster, 14<sup>th</sup> Annual Meeting of the Cognitive Neuroscience Society, May 5-8, 2007, New York, USA.
  - Dalla Bella S, **Białuńska A**, Sowiński J (2006). *Captured by music, less by speech*. Oral presentation, 9th International Conference on Music Perception and Cognition, August 22-26<sup>th</sup>, 2006, Bolonia, Italy.
  - **Białuńska A**, Dalla Bella S, Jaśkowski P (2006). *Changing stimulus intensity does not affect sensorimotor synchronization*. Poster, 9th International Conference on Music Perception and Cognition, August 22-26<sup>th</sup>, Bolonia, Italy.
  - **Białuńska A**, Jaśkowski P, Dalla Bella S. *Stimulus intensity effect on sensorimotor synchronization*. Poster, XXXII Scientific Congress of the Polish Psychological Association", September 22-25, 2005, Cracow, Poland.

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## WORKSHOPS AND SPECIAL COURSES

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### **2<sup>nd</sup> International Symposium on TBI and PTSD in Warsaw,**

**2018**

Tracie Kaip PsyD, Dr. Willis Clem Maples, David LeMay, M.D., Kevin Lacz, PA-C, Rachel Dzieran, CEO, Navy SEALs Fund  
Warsaw, Poland

### **Brain Injury across the Age Spectrum: Improving Outcomes for Children, Adolescents, Adults and the Elderly (NABIS 14<sup>th</sup> Annual Conference on Brain Injury),**

**2018**

Dr. Jonathan Silver, Dr. Christopher Giza, Dr. Ramon Diaz-Arrastia, Dr. Steven Flanagan, Dr. Juliet Haarbauer-Krupa, Dr. Stuart A. Yablon, Dr. Jennifer Vasterling  
Houston, TX, USA

<b>Workshop on Interprofessional Health Education</b> College of Health Sciences, School of Nurses, School of Pharmacy University of Texas at El Paso	<b>2018</b>
<b>Progress in Rehabilitation Research. Translation to Clinical Practice.</b> (American Congress of Rehabilitation Medicine 94th Annual Conference), Dr. Douglas Katz, Dr. Pamela Roberts, Dr. Maurizio Corbetta, Dr. Gary R. Ulicny, Dr. Ann McKee Atlanta, GA, USA	<b>2017</b>
<b>3rd ITN-LAN-Training Course 7PF, EU- Marie Curie Training Network</b> Prof. Niels Birbaumer, Prof. Eric Sieroff, Prof. Vincent Walsh, Prof. Michal Lavidor, Prof. Eran Zaidel, Prof. Anat Barnea <u>Clinical neuropsychology training: imaging techniques and paradigms</u> Fondazione Santa Lucia. Prof. Luigi Pizzamiglio, Università di Roma "La Sapienza" Rome, Italy	<b>2010</b>
<b>Summer Training Course ITN-LAN 7FP, EU - Marie Curie Training Network</b> EEG analysis, Eyetracker, programming in Presentation and Matlab Rozlogi, Poland	<b>2010</b>
<b>SPM workshop</b> Dr. Marek Binder <u>fMRI data analysis</u> , Warsaw, Poland	<b>2010</b>
European Science Foundation (ESF) Prof. Simone Dalla Bella, Dr. Barbara Tillmann and Prof. Emmanuel Bigan <u>Exploratory Workshop Music and the brain: New perspectives for stimulating cognitive and sensory processes</u> Gdańsk, Poland	<b>2009</b>
<b>Introductory course of Matlab programming</b> MSc Maciej Jaśkowski, Warsaw, Poland	<b>2009</b>
<u>Neuroimaging of human brain function and structure – fMRI workshop</u> <b>Warsaw School of Social Science and Humanities</b> <b>Nencki Institute of Experimental Biology</b> Warsaw, Poland	<b>2008</b>
<b>EEG recording and analysis workshop</b> Prof. Piotr Jaśkowski (1957–2011) <u>EEG analysis with BrainVision Analyzer. Programming in Presentation</u> Wierzbą, Poland	<b>2008</b>