

# Bartłomiej KroczeK

*Data Scientist. PhD Student.*

Krakow CogSciLab | Interational PhD programme in Cognitive Neuroscience.

## Currently

Working on my PhD dissertation: **Does attention in perceptual tasks change over time?**

## Specialized in

Statistical Analysis. Eye Tracking. Time series analysis in application to neuroscience.

## Research interests

Cognitive Neuroscience. Psychophysics. Visual Attention. Decision Making.

## Education

**PhD in Cognitive Neuroscience, Jagiellonian University, Kraków, Poland.** Oct 2019 - now

**MS in Computer Science (Modeling, Cognition and Control), Jagiellonian University, Kraków, Poland.** 2015 - 2019

**BSc in Computer Science (Modeling, Cognition and Control), Jagiellonian University, Kraków, Poland.** 2011 - 2015

## Grants

Founded by National Science Centre grant awarded to prof. A. Chuderski "Visual working memory mechanisms" (OPUS9). Position: Data Scientist 2016 - now

Funded by National Science Centre grant to prof. A. Chuderski: The role of binding mechanism and integration of relational structures in the process of abstract thinking and reasoning: psychometric, behavioral, oculographic and spectroscopic studies. Position: Data Scientist 2014 - now

EEG study. Founded by National Science Centre grant awarded to dr. M. Senderecka: "Influence of emotions on perception, response inhibition, and error monitoring: ERP analysis (2016-2019). Position: Research Assistant 2016 - 2018

Funded by National Science Centre grant awarded to prof. A. Chuderski: Chasing the homunculus of self-control: Mechanisms of goal selection and application (2011-2016). Position: Research Assistant 2013 - 2016

Founded by National Science Centre grant awarded to dr. M. Senderecka "Electrophysiological correlations of the reaction inhibition process. The research in the signal STOP task paradigm". Position: Research Assistant 2013 - 2014

## Publications

### Journals

**Uncovering the course of analogical mapping using eye tracking** KroczeK, B, Ciechanowska, I, & Chuderski, A, *Cognition* 2022

**Socially induced negative emotions elicit neural activity in the mentalizing network in a subsequent inhibitory task** Senderecka, M, Matyjek, M, KroczeK, B, & Ociepka, M, *Neuroscience* 2021

<b>Why People Err on Multiple-choice Analogical Reasoning Tests?</b> KroczeK, B & Chuderski, A, Conference Paper: Annual Meeting of the Cognitive Science Society	2021
<b>Socially induced negative affective knowledge modulates early face perception but not gaze cueing of attention</b> Matyjek, M, KroczeK, B, & Senderecka, M, <i>Psychophysiology</i>	2021
<b>Galton and Spearman revisited: Can single general discrimination ability drive performance on diverse sensorimotor tasks and explain intelligence?</b> Jastrzębski, J, KroczeK, B, & Chuderski, A <i>Journal of Experimental Psychology: General</i>	2020
<b>Metacognitive experience on Raven's matrices versus insight problems</b> Chuderski, A, Jastrzębski, J, KroczeK, B, Kucwaj, H, and OciePKa, M <i>Metacognition and Learning</i>	2020
<b>Delta-gamma coupling as a potential neurophysiological mechanism of fluid intelligences</b> Gałol, A, Magnuski, M, KroczeK, B, Kałamała, P, OciePKa, M, Santarnecchi, E, and Chuderski, A <i>Intelligence</i>	2018
<b>Post-Error Brain Activity Correlates with Incidental Memory for Negative Words</b> Senderecka, M, OciePKa, M, Matyjek, M, and KroczeK, B <i>Frontiers in Human Neuroscience</i>	2018
<b>Short-Duration Affective States Induced by Emotional Words Improve Response Inhibition: An Event-Related Potential Study</b> Senderecka, M, OciePKa, M, Matyjek, M, and KroczeK, B <i>Neuroergonomics</i>	2018
<b>ERP correlates of the conflict level in the multi-response Stroop tasks</b> Chuderski, A, Senderecka, M, Kałamała, Pa, KroczeK, B, and OciePKa, M <i>Brain research</i>	2016
<b>No Spearman's Law of Diminishing Returns for the working memory and intelligence relationships</b> KroczeK, B, OciePKa, M, and Chuderski, A <i>Polish Psychological Bulletin</i>	2016

## Occupation

<b>CogSciLab</b> , Jagiellonian University, Kraków, Poland. Research Assistant Data Scientist	2013 - now
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