

## Elisa Filevich

Junior Group Leader

<http://metamotorlab.filevich.com>

## Bernstein Center for Computational Neuroscience

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### Personal Information

Nationality: Argentinian

Date of Birth: 23.08.1983

Marital status: Married, two children. Parental leaves: 2017, 8 months. 2021, 8 months (part-time).

### Academic Appointments

2017 – now	<b>Junior Group Leader - Funded by "Freigeist" Fellowship</b> Bernstein Center for Computational Neuroscience and Institute of Psychology, Humboldt-Universität zu Berlin, Germany.
2015 – 2017	<b>Scientific employee (Seminar instructor)</b> Faculty of Sports Sciences, Leipzig University, Germany. <b>Guest Researcher</b> Max Planck Institute for Human Development, Berlin, Germany.
2012 – 2015	<b>Postdoctoral fellow. Structural Plasticity group</b> Max Planck Institute, Berlin, Germany Team Leader: Dr. Simone Kühn

### Education and Training

2008 – 2012	<b>PhD. Institute of Cognitive Neuroscience.</b> Intentional inhibition and human voluntary action. University College London. UK Advisor: Prof. Patrick Haggard
2012	<b>Visiting Scholar. Consciousness and Computation Laboratory</b> Columbia University, NY, USA Advisor: Asst. Prof. Hakwan Lau
2005 – 2007	<b>Undergraduate researcher. Laboratory of Molecular and Cellular Biology (LBMC).</b> University of Buenos Aires, Argentina Advisor: Prof. Osvaldo D. Uchitel
2005	<b>Undergraduate researcher. Biochemistry and Molecular Biology.</b> Colorado State University, CO, USA Advisor: Prof. James Bamberg
2001 – 2007	<b>Licenciatura (equivalent to German "Diplom") in Biological Sciences.</b> University of Buenos Aires, Argentina. Final grade: 8.6/10

## Research Profile

I am a cognitive neuroscientist investigating the neural correlates of consciousness. I focus on different aspects of motor awareness and subjective experiences associated with it: the awareness of intentions (volition), the awareness of control (agency) and motor experience (motor metacognition).

## Under Review (Link to pre-prints included where available)

\* Indicates equal contributions

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| <b>2021</b> | <p>Ciston, AB.*, Forster, C.*, Brick, TR., Kühn, S., Verrel, J., <b>Filevich, E.</b> (2021) Limited metacognitive access to one's own facial expressions. <a href="https://www.biorxiv.org/content/10.1101/2021.03.08.434069v1">https://www.biorxiv.org/content/10.1101/2021.03.08.434069v1</a></p> <p>Arbuzova, P., Guo, S., Kurvits, L., Köß, C., Faivre, N., <b>Filevich, E.</b>, Ganos, C. Intact visual and tactile metacognition in adults with Tourette disorder.</p> |
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## Publications in Peer-Reviewed Journals

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| <b>2022</b> | <p>Constant, M., Salomon, R., <b>Filevich, E.</b> (2021) Judgments of agency are affected by sensory noise without recruiting metacognitive processing. <i>eLife. In Press</i></p> <p>Rouy, M. de Gardelle, V., Reyes, G., Sackur, J., Vergnaud, J.C., <b>Filevich, E.*</b>, Faivre, N*. Metacognitive improvement: disentangling adaptive training from experimental confounds. <i>JEP:G. In Press</i></p> <p>Rahnev, D., Balsdon, T., Charles, L., de Gardelle, V., Denison, R. N., Desender, K., ... Zylberberg, A. (2021). Consensus goals for the field of visual metacognition. <i>Perspectives in Psychological Science. In Press</i></p>   |
| <b>2021</b> | <p>Kühn, S., Mascherek, A., <b>Filevich, E.</b>, Lisofsky, N., Becker, M., Butler, O., et al. (in press). Spent time outdoors for your brain: An in-depth longitudinal MRI study. <i>The World Journal of Biological Psychiatry</i>.<br/><a href="http://hdl.handle.net/21.11116/0000-0008-9E7A-E">http://hdl.handle.net/21.11116/0000-0008-9E7A-E</a></p> <p>Arbuzova, P., Peters, C., Roed, L., Koss, C., Maurer, H., Maurer, L. K., Mueller, H., Verrel, J., &amp; <b>Filevich, E.</b> Measuring metacognition of direct and indirect parameters of voluntary movement. <i>Journal of Experimental Psychology: General, In Press</i>. Advance online publication. <a href="https://doi.org/10.1037/xge0000892">https://doi.org/10.1037/xge0000892</a></p> |
| <b>2020</b> | <p><b>Filevich, E.</b>, Koß, C., &amp; Faivre, N. Response-related signals increase confidence but not metacognitive performance. <i>eNeuro</i> 7(3) <i>eneuro.0326-19.2020</i>.</p> <p><b>Filevich, E.</b>, Forlim, C. G., Fehrman, C., Forster, C., Paulus, M., Shing, Y. L., &amp; Kühn, S. (2020). I know that I know nothing: Cortical thickness and functional connectivity underlying meta-ignorance ability in pre-schoolers. <i>Developmental Cognitive Neuroscience</i>, 41, 100738.</p> <p>Rahnev, D., Desender, K., Lee, A.L.F., Adler, W.T., Aguilar-Lleyda, D., Akdoğan, B., ..., Zylberberg, A. (2020) The Confidence Database. <i>Nat Hum Behav.</i> 4, 317–325</p>  |

- 2019** Karch, J. D., **Filevich, E.**, Wenger, E., Lisofsky, N., Becker, M., Butler, O., ... Kühn, S. (2019). Identifying predictors of within-person variance in MRI-based brain volume estimates. *NeuroImage*, 200, 575–589.
- 2018** Faivre, N., **Filevich, E.**, Solovey, G., Kühn, S., Blanke, O. Behavioural, modeling, and electrophysiological evidence for domain-generalty in human metacognition. *The Journal of Neuroscience*, 0322–17.
- 2017** **Filevich, E.\***, Horn, S. S\*, & Kühn, S. Within-person adaptivity in frugal judgments from memory. *Psychological Research* 83 (3), 613-630
- Filevich E.\***, Lisofsky, N.\*, Becker, M., Butler, O., Lochstet, M., Martensson, J., Wenger, E., Lindenberger, U. and Kühn, S. Day2day: Investigating daily variability of magnetic resonance imaging measures over half a year. *BMC Neuroscience*, 18:65.
- Pannunzi, M., Hindriks, R., Bettinardi, R. G., Wenger, E., Lisofsky, N., Martensson, J., Butler, O., **Filevich, E.**, Becker, M., Lochstet, M., Kühn S., Deco, G. Resting-state fMRI correlations: from link-wise unreliability to whole brain stability. *NeuroImage* 157:250-262
- Filevich, E.**, Becker, M., Wu, YH. & Kühn, S. Seeing double: Exploring the phenomenology of self-reported absence of rivalry in bistable pictures. *Frontiers in Human Neuroscience* 11:301.
- 2015** Lange, K., Kühn, S., **Filevich, E.**, "Just another tool for online studies" (JATOS): An easy solution for setup and management of web servers supporting online studies. *PLoS one*, 10(6).
- Filevich, E.**, Dresler, M., Brick, T. R., & Kühn, S. Metacognitive mechanisms underlying lucid dreaming. *The Journal of Neuroscience*, 35(3), 1082–1088.
- 2013** **Filevich, E.**, Vanneste, P., Brass, M., Fias, W., Haggard, P. Kühn, S. Brain correlates of subjective freedom of choice. *Consciousness and Cognition* 22 (4), 1271-1284
- Filevich, E.**, & Haggard, P. Persistence of internal representations of alternative voluntary actions. *Frontiers in Cognition*, 4: 202.
- Filevich, E.**, Kühn, S., & Haggard, P. There is no free won't: Antecedent brain activity predicts decisions to inhibit. *PLoS one*, 8(2), e53053.
- 2012** **Filevich, E.**, Haggard, P. Grin and bear it! Neural consequences of a voluntary decision to act or inhibit action. *Experimental Brain Research*, 223(3), 341–351.
- Filevich, E.**, Kühn, S., Haggard, P. Negative Motor Phenomena in cortical stimulation: implications for inhibitory control of human action. *Cortex* 48(10), 1251-1261
- Filevich, E.\***, Kühn, S.\*, Haggard, P. Intentional inhibition in human action: The power of "no." *Neuroscience and Biobehavioral Reviews*, 36(4), 1107–1118.

## Book Chapters

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| <b>2014</b> | Chambon, V. <b>Filevich, E.</b> Haggard, P. What is the human sense of agency, and is it metacognitive? In Stephen M. Fleming and Chris Frith (Eds). The cognitive neuroscience of metacognition. Springer  |
| <b>2012</b> | <b>Filevich, E.</b> Haggard, P. Components of voluntary action. In Hallett, M., Lang, A. E., Jankovic, J., Fahn, S., Halligan, P. W., Voon, V., & Cloninger, C. R. (Eds.). Psychogenic Movement Disorders and Other Conversion Disorders. Cambridge University Press. |

## Dissertation

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| <b>2013</b> | <b>Filevich, E.</b> Volition and inhibition: Objective and subjective aspects of human volitional control. Doctoral thesis, UCL (University College London). <a href="https://discovery.ucl.ac.uk/id/eprint/1383056/">https://discovery.ucl.ac.uk/id/eprint/1383056/</a> |
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## Invited Talks

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| <b>2021</b> | <p><b>Perception &amp; Action Seminar Series. Cognitive, Linguistic, and Psychological Sciences department at Brown University.</b> (Online) How (much) do we know about the way we move our bodies?: Motor metacognition and its relationship to other metacognitive domains</p> <p><b>Perceptual Confidence and Uncertainty workshop, Paris</b> (Online). Are judgments of agency metacognitive?</p> <p><b>Consciousness Club, FIL.</b> (Online Seminar) Motor Metacognition and agency. Talk recording available at <a href="http://metacoglab.org/consciousness-club-events/2021/1/27/elisa-filevich">http://metacoglab.org/consciousness-club-events/2021/1/27/elisa-filevich</a></p> |
| <b>2020</b> | <p><b>Copenhagen Cognition, Intention, and Action Group, University of Copenhagen.</b> (Online Workshop) Motor metacognition and agency</p> <p><b>LPC Lab Seminar, Aix-Marseille Université.</b> Motor Metacognition: How much does our brain know about the way it moves the body?</p> <p><b>Rahnev lab, Georgia Tech, School of Psychology.</b> (Online) Motor metacognition: How does our brain know how our body moves?</p>  |
| <b>2019</b> | <p><b>Workshop on Metacognition. Laboratoire de Psychologie et NeuroCognition (LPNC), Grenoble, France.</b> Motor metacognition: How does our brain know how our body moves?</p> <p><b>Freie Universität Berlin - CCNB Seminar Series. Germany.</b> Relationships between domains of metacognitive monitoring</p>  |
| <b>2018</b> | <b>Department of Experimental Psychology (Zangwill Club), Cambridge University, UK.</b> Metacognition of internally generated processes  |

2017	<b>Geneva University (Brain and Cognition Seminar), Switzerland.</b> Metacognition of internally generated processes
	<b>Experimental Psychology Society (EPS) Meeting, Belfast, UK.</b> Domain-generalty in perceptual metacognition
2014	<b>Department of Psychology, Lund University, Sweden.</b> What we can learn from introspection

#### Presentations in Conferences (first author only)

2020	<b>Argentine Society for Neuroscience Research (SAN),</b> Argentina. Symposium - Open Neuroscience: new approaches for new tools. "Just Another Tool for Online Studies": An open-source tool to conduct cognitive science experiments online.
2019	<b>Association for the Scientific Study of Consciousness (ASSC23),</b> London, Canada. Metacognitive access to high- and low-level aspects of motor control. (Plenary Symposium)
2018	<b>Association for the Scientific Study of Consciousness (ASSC22),</b> Cracow, Poland. The brain basis of meta-ignorance in pre-schoolers
2017	<b>Association for the Scientific Study of Consciousness (ASSC21),</b> Beijing, China. Metacognition of movement: the case of facial expressions.
2014	<b>Association for the Scientific Study of Consciousness (ASSC19),</b> Brisbane, Australia. Lucid dreaming, introspection and awareness of mind-wandering: behavioural and brain bases
	<b>Organization for Human Brain Mapping (OHBM),</b> Hamburg, Germany. Faces and houses perceived simultaneously in monocular rivalry images: fMRI evidence
2012	<b>Society for Neuroscience (SfN),</b> New Orleans, USA. There is no free won't: antecedent brain activity predicts decisions to inhibit
	<b>Association for the Scientific Study of Consciousness (ASSC16),</b> Brighton, UK. Brain correlates of subjective freedom of choice
2007	<b>Argentine Society for Neuroscience Research (SAN),</b> Argentina. Coupling of the Type-L Voltage Dependent Calcium Channel to membrane endocytosis in the mouse neuromuscular junction. ("Estudio del acoplamiento del canal de calcio dependiente de voltaje de tipo L a la endocitosis de membrana en la unión neuromuscular de ratón.")

## Workshops Led

<b>2020</b>	<b>Running experiments online.</b> 2.5 hours, Berlin School of Mind and Brain and Bernstein Center for Computational Neuroscience.
<b>2019</b>	<b>Running web-based experiments in consciousness research.</b> 3 hours, Association for the Scientific Study (ASSC23), London, Canada.
<b>2018</b>	<b>Running experiments online with JATOS.</b> 2.5 hours, MRC-Cognition and Brain Unit, Cambridge University, UK.
<b>2016</b>	<b>Running experiments online with JATOS.</b> 5 hours, Graduate School for Mind and Brain, Humboldt-Universität zu Berlin, Germany

## Teaching

<b>2019</b>	<b>Seminar series: Neural Bases of Metacognition.</b> MSc, Berlin School of Mind and Brain. Humboldt-Universität zu Berlin. Course size: 9 students. Mean overall student rating: 5.11 (Minimum: 1 - Maximum: 6).
<b>2018 – now</b>	<b>Contribution to lecture series. Neural bases of metacognition.</b> MSc course “Models of Neural Systems”, Bernstein Center for Computational Neuroscience. Course size: ca. 30 students. Latest mean overall student rating: 1.8 (Minimum: 5 - Maximum: 1).  <b>Contribution to lecture series (“Ringvorlesung”). Neural bases of metacognition.</b> BSc, Institute for Psychology, Humboldt-Universität zu Berlin.
<b>2015 – 2016</b>	<b>Seminar Instructor, Sport Psychology.</b> Leipzig University, Germany.
<b>2010</b>	<b>Laboratory demonstrator, First year Psychology.</b> University College London, UK.

## Student Supervision

<b>2017 – now</b>	<b>Supervision of PhD projects.</b> Total to date (ongoing): 3
<b>2018 – now</b>	<b>Secondary supervision of PhD projects.</b> Total to date (ongoing): 5
<b>2019 – now</b>	<b>Supervision of MSc theses projects.</b> Total to date: 3
<b>2018 – now</b>	<b>Supervision of 8-week rotation projects.</b> Total to date: 9
<b>2010 – 2011</b>	<b>Informal supervision of 3-months projects for an MSc in Neuroscience course.</b> Total: 3

## Ad-hoc Reviewing

<b>2011 – now</b>	<b>Scientific Journals</b> Behavior Research Methods; Brain; Brain and Neuroscience Advances; Cognition; Consciousness & Cognition; Cortex; eLife; Experimental Brain Research; Frontiers in Consciousness Research; Journal of Neurophysiology; Journal of Neuroscience; Neuroimage; Neuropsychologia; Neuroscience and Biobehavioural Reviews; Neuroscience of Consciousness; PLoS one; Proceedings of the National Academy of Sciences (PNAS); Psychology of Consciousness: Theory, Research, and Practice; Psychonomic Bulletin and Review; npj Science of Learning; Scientific Reports; Social Cognitive and Affective Neuroscience (SCAN).
<b>2019 – now</b>	<b>Funding agencies</b> Wellcome Trust, UK National Science Center Poland (NCN) Klaus-Tschira Boost fund - German Scholars Organization
<b>2019 – now</b>	<b>Member of PhD Thesis Committee</b> Total to date: 3

## Other Contributions

<b>2019 – now</b>	<b>Team leader in the <i>Neural Architecture of Consciousness</i> consortium. Metacognition Working Group.</b> Approximately 15 active members ( <a href="https://neuralarchcon.org/">https://neuralarchcon.org/</a> ).
<b>2019</b>	<b>Member of Scientific Committee – Association for the Scientific Study of Consciousness (ASSC)</b>
<b>2017 – now</b>	<b>Member of ProFiL Network.</b> Professional network, training and coaching for women in natural and social sciences working in universities in Berlin.
<b>2014 – now</b>	<b>Software development.</b> Active development of an open-source software tool to run experiments online. <a href="http://www.jatos.org">www.jatos.org</a>

## Additional Professional Training

<b>2018</b>	<b>Workshop series from Wissenschaftsmanagement (ZWM): “Professionals in Science”.</b> Included Communication and Conflict Management; Conducting Interviews; Research Project Management; Leadership.
<b>2018</b>	<b>Workshop series from the ProFiL program (TU Berlin).</b> Included Career Planning; Faculty Hiring Procedures in Germany and Abroad; Leadership; Academic Self-management; Writing Grant Applications.

## Public Engagement

2015	<b>The Long Night of the Sciences.</b> Berlin, Germany ("Lange Nacht der Wissenschaften") – Science outreach event.
2007	<b>The Basement of Perception</b> - Cognitive science outreach event. Museum of Natural History, Buenos Aires, Argentina.

## Awards, Fellowships, and Research Grants

2018	<b>Research Training Group (RTG).</b> Deutsche Forschungsgemeinschaft (DFG) RTG 2386 "Extrospection". Role: Principal Investigator. Total funding for the cluster of ten Principal Investigators: over 1,530,000 €
2016	<b>Freigeist Fellowship.</b> VolkswagenStiftung, Germany. Grant number 91620, 5 years, 919,800 €
2008	<b>Four-year PhD Studentship in Neuroscience.</b> Wellcome Trust, UK. Grant number 086123/Z/08/Z, 4 years, over 120,000 GBP
2008	<b>Overseas Research Scholarships (ORS).</b> Higher Education Funding Council for England (HEFCE). Funding to cover the difference between Overseas and UK/EU tuition fees.
2006	<b>Undergraduate scholarship.</b> ("Beca estímulo") University of Buenos Aires, Argentina.

## Languages

German	B2 (approximate level)
English	Fluent
Spanish	Native