

DIAR ABDLKARIM

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I am a postdoctoral research scientist at the University of Birmingham (UK) currently working on non-invasive brain-computer interface (BCI) systems for decoding naturalistic human movements within an ARIA-funded program. I use my skills in neural engineering, real-time signal processing, expertise in motion capture and neurophysiology to generate scientific results from first principles.

ACADEMIA

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| 2025–present | ARIA-funded postdoctoral fellow in non-invasive BCI and naturalistic actions, University of Birmingham, UK. |
| 2022–2025 | EPSRC-funded postdoctoral fellow, University of Birmingham, UK. |

EDUCATION

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| 2016–2022 | EPSRC-funded PhD in computational neuroscience with a focus on sensory-motor control and neuroplasticity through immersive virtual-reality training, University of Birmingham, UK. |
| 2013–2014 | MSc in Computational Neuroscience and Cognitive Robotics (CNCR), with distinction, University of Birmingham, UK. |
| 2009–2012 | BSc in Neuroscience; final-year project on neuronal information processing in the brain, University of Manchester, UK. |

ENTREPRENEURSHIP AND EMPLOYMENT

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| Jun 2024–present | Co-Founder and Director, Motion Dynamics Ltd (Company No. 15797570), www.motiondynamics.ai
I have recently embarked on a journey with the School of Sports, Exercise and Rehabilitation and the School of Computer Science at the University of Birmingham to create a mobile phone-based sports analytics tool combining computer vision with domain knowledge for creating engaging performance feedback. We are currently applying for funding through the Innovate UK scheme, following some success through internal funding and support from the University. |
| Jun 2021–Jun 2022 | Research Scientist, Meta (formerly Facebook) Reality Labs
My role involved addressing future directions in research design for novel experimental application using wrist-based haptic feedback. I worked on creating complex immersive virtual simulations to test user performance and behaviour with the presence of real-time haptic stimulation. |
| Jun 2019–Dec 2019 | Research Intern, Meta (formerly Facebook) Reality Labs
I had the opportunity to develop a series of scientific experiments on human embodiment and perception related to novel hand-tracking technologies for understanding user behaviour in a natural context. |

FUNDING

Nov 2024–2025	Innovate UK iCure Explore & Exploit Grant recipient for technology transfer (£50K). I am one of 16 candidates UK-wide to be accepted on the iCure programme. My role as an entrepreneurial lead is to build relationships with industry and prepare to create a spinout company in support of the university's business and industry engagement strategy.
Apr 2024–2025	Google collaborative grant recipient (£15K) to help develop and test new text-entry techniques in extended reality (XR). My work also led to an accepted paper for the CHI conference 2025.
Sep 2022–present	Co-applicant on the accelerator for Adaptive Touch Testing System (£5K, BBSRC IAA). I developed a mobile, accessible plug-and-play touch-testing system to automate and speed up clinical peripheral-neuropathy assessments in the hand and fingers.

ACADEMIC EXPERIENCE

2025–present	Motion Capture Crash Course: I created and led a multi-day, hands-on programme for graduates and academics, covering motion-capture setup, processing, and analysis for research, rehabilitation, and HCI. The inaugural cohort trained 60+ participants, spurring interdisciplinary collaboration at the University of Birmingham.
2022–present	XR Crash Course for Scientists: I developed and lead a new hands-on, intensive, one-week crash course for graduates and academics (90+ successful graduates to date) to gain practical knowledge about immersive extended-reality development for scientific studies, University of Birmingham, UK.
2022–present	BhamXR: I helped set up a collaborative cross-college community interested in working on extended-reality applications for research, University of Birmingham, UK.
2018–present	Supervision: I directly supervised 20+ undergraduate Psychology and CS students, 14+ CNCR, Psychology and CS MSc students, and 2 PhD students on various XR- and mobile-related projects, University of Birmingham, UK.

REFERENCES

Prof. Katja Kornysheva — Professor in CHBH on ARIA grant and mentor
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Prof. Massimiliano Di Luca — PI on ARME project
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Prof. Chris Miall — PhD Supervisor
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