

Curriculum Vitae

Olena Riabinina

Contact information

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Education

PhD in Behavioural Neuroscience Oct 2005 – July 2009
CCNR, Department of Informatics, University of Sussex, UK
Thesis title: "Keeping all eyes on track: visually-guided navigation of ants, bees and bumblebees"

Master with Distinction in Applied Physics Sep 2004 – July 2006
National Technical University of Ukraine, Kiev, Ukraine
Thesis title: "Analysis of charge transfer processes in the approximation of ambipolar diffusion"

Bachelor with Distinction in Applied Physics Sep 2000 – June 2004
National Technical University of Ukraine, Kiev, Ukraine

Employment

Assistant Professor in Biosciences Apr 2019 – to date
Department of Biosciences, Durham University, UK
Insect neuroscience and development of genetic tools

Marie Curie Postdoctoral Fellow Apr 2017 – Mar 2019
Faculty of Biology, Medicine and Health, University of Manchester, UK
Research on physiology of olfactory system in *Drosophila* and *Anopheles gambiae*

Post-doctoral research associate Feb 2016 – Mar 2017
MRC London Institute of Medical Sciences, Imperial College London, London, UK
Research on gut signalling and metabolism in *Drosophila* and *Anopheles gambiae*

Post-doctoral research fellow May 2012 – Feb 2016
Department of Neuroscience, The Johns Hopkins University, Baltimore, USA
Research on olfaction and development of genetic tools in *Drosophila* and *Anopheles gambiae*

Post-doctoral research associate June 2009 – Mar 2012
UCL Ear Institute, London, UK
Research on mechanosensation in *Drosophila*

Associate tutor Jan 2009 – Apr 2009
Department of Biology and Environmental Science and Department of Physics,
University of Sussex, UK

Secondary school teacher 2001 – 2005
Physics and Mathematics Lyceum NTUU KPI and Advanced Physics and
Mathematics School 141, Kiev, Ukraine

Publications

* - joint authorship, @ - corresponding author

18. **Riabinina O**@ (2021) Olfactory coding in mosquitos. Cell and Tissue Research, Invited review.
17. Redhai S*, Pilgrim C*, **Riabinina O**, Lopes T, Chanana B, Dahalan F, Yuan M, Wilsch-Brauninger M, Lin W-H, Milona A, Dennison N, Capriotti P, Lawniczak MKN, Knust E, Baines RA, Warnecke T, Windbichler N, Miguel-Aliaga I (Submitted) An intestinal zinc sensor couples micronutrient availability with food intake and developmental growth.
16. Afify A, Betz J, **Riabinina O**, Lahondere C, Potter CJ (2019) Commonly used insect repellents hide human odors from *Anopheles* mosquitoes. Accepted to Current Biology.
15. Langridge KV, Wilke C, **Riabinina O**, Vorobyev M, Hempel de Ibarra N. (Pre-print: <https://www.biorxiv.org/content/early/2018/08/01/381210>) Approach direction prior to landing explains patterns of colour learning.
14. Mansourian S*, Fandino R*@, **Riabinina O**@ (2019) Progress in the use of genetic methods to study insect behaviour outside *Drosophila*. Current Opinion in Insect Science, 36, 45-56. Invited review.
13. **Riabinina O**@, Vernon S, Dickson BJ, Baines RA. (2019) Split-QF system for fine-tuned transgene expression in *Drosophila*. Genetics, 212, 1, 53-63
12. **Riabinina O**, Task D, Marr E, Lin C-C, Alford R, O'Brochta DA, Potter CJ. (2016) Organization of olfactory centers in the malaria mosquito *Anopheles gambiae*. Nature Communications, 7, 13010
11. **Riabinina O**, Potter CJ. (2016) The Q-system: A versatile Expression System for *Drosophila*. Book chapter. In Drosophila: Methods and Protocols (ed: C. Dahmann) Methods in Molecular Biology, Vol. 1478, 53-78.
10. Lin C-C, **Riabinina O**, Potter CJ. (2016) Olfactory behaviors assayed by computer tracking of *Drosophila* in a four-quadrant olfactometer. Journal of Visualized Experiments, 114, e54346
9. **Riabinina O**, Luginbuhl D, Marr E, Liu S, Wu MN, Luo L, Potter CJ. (2015) Improved and expanded Q-system reagents for genetic manipulations. Nature Methods, 12, 219-222
8. Gao XJ, **Riabinina O**, Potter CJ, Clandinin TR, Luo L. (2015) A transcriptional reporter of intracellular Ca²⁺ in *Drosophila*. Nature Neuroscience, 18, 917-925.
7. **Riabinina O**, Hempel de Ibarra N, Philippides AO, Collett TS. (2014) Head movements and the optic flow generated during the learning flights of bumblebees. Journal of Experimental Biology, 217, 2633-42
6. Philippides AO, Hempel de Ibarra N, **Riabinina O**, Collett TS. (2013) Bumblebee calligraphy: the design and control of flight motifs in the learning and return flights of *Bombus terrestris*. Journal of Experimental Biology, 216, 1093-1104
5. Collett TS, Hempel de Ibarra N, **Riabinina O**, Philippides AO. (2013) Coordinating compass-based and nest-based flight directions during bumblebee learning and return flights. Journal of Experimental Biology, 216, 1105-1113
4. **Riabinina O***@, Hempel de Ibarra N*, Howard L, Collett TS@ (2011) Do wood ants learn sequences of visual stimuli? Journal of Experimental Biology, 214, 2739-2748
3. **Riabinina O**, Dai M, Duke T, Albert JT (2011) Active process mediates species-specific tuning of *Drosophila* ears. Current Biology, 21, 658-664
2. Hempel de Ibarra N, Philippides AO, **Riabinina O**, Collett TS (2009) Preferred viewing directions of bumblebees (*Bombus terrestris* L.) when learning and approaching their nest site. Journal of Experimental Biology, 212, 3193-3204
1. **Riabinina O**@, Philippides AO@ (2009) A model of visual detection of angular speed for bees. Journal of Theoretical Biology, 257, 61-72

Awards and funding

Major awards:

Wellcome Seed Award in Science (£99.968)	2019
VILLUM Young Investigator Award (<i>declined</i> , DKK 9.294.645)	2018
Marie Curie Incoming Individual Postdoctoral Fellowship (€183.454)	2017 – 2019
De Bourcier doctoral fellowship (approx. £50.200)	2005 – 2008
Overseas Research Students Awards Scheme funding (approx. £23.220)	2005 – 2008
President of Ukraine undergraduate scholarship	2000, 2001, 2004
Honour Diploma of XXXI International Physics Olympiad for high-school students	2000

Other awards:

Travel grant, The Physiological Society (£319)	2018
Conference travel grant to attend the 2018 ESA, ESC, and ESBC Joint Annual Meeting (\$750)	2018
Departmental funding (Uni Manchester DNEP funds, £3750)	2018
Course bursary, Microelectrode Techniques for Cell Physiology course, Plymouth, UK (£900)	2017
Travel grant, European Chemoreception Research Organisation & Polak Foundation (€500)	2017
Departmental funding, awarded on competitive basis (Uni Manchester DNEP SRF, £1025)	2017
Travel grant, The Physiological Society (£700)	2017
Tier 1 Exceptional Talent/Promise Visa (endorsement by the Royal Society of the UK as an emerging leader in the field of Neuroscience and Genetics)	2017
Conference grant, CSHL Neurobiology of Drosophila meeting (\$100)	2013
Travel grants, Society for Experimental Biology (£135) and UCL graduate school (£250)	2010
Travelling fellowship, Society for Experimental Biology (<i>declined</i> , £2500)	2009
Travel grants, Society for Experimental Biology and Boehringer Ingelheim Fonds (€2000)	2008
MBL financial support (\$3550)	2008
Travel grant, International Brain Research Organisation	2007
Student bursary, AISB	2006

Conference talks and seminars

Invited talk at the ICE, Helsinki, Finland	19 – 24 July 2020
Invited talk at Symposium on Neural mechanisms underlying evolution of insect behavior, Nagoya University, Japan	12 – 13 Nov 2019
Invited talk at an EDRC workshop, Lausanne, Switzerland	5 Sep 2019
Invited seminar, Imperial College London, London, UK	5 July 2019
Invited seminar, Durham University, Durham, UK	7 May 2019
Invited seminar, Swedish University of Agricultural Sciences, Alnarp, Sweden	14 Jan 2019
Invited talk at the ESA, ESC and ESBC Joint Annual Meeting, Vancouver, Canada	11 – 14 Nov 2018
Invited talk at Neuro-evo II, Janelia Research Campus, USA	6 – 9 May 2018
Invited seminar, LSI, University of Exeter, UK	6 Dec 2017
Invited Genetics-Neuroscience departmental seminar, University of Leicester, UK	19 Oct 2017
Invited seminar, University of Bristol, UK	26 Sep 2017
Talk at European Symposium for Insect Taste and Olfaction, Villasimius, Italy	17 – 22 Sept 2017
Invited talk at Molecular Biology Society of Japan meeting, Yokohama, Japan	30 Nov – 2 Dec 2016
Invited seminar, University of Sheffield, UK	23 Oct 2015
Talk at Society for Neuroscience annual meeting, Chicago, USA	17 – 21 Oct 2015
Invited seminar at Johns Hopkins Malaria Research Institute, Baltimore, USA	9 Oct 2015
Invited seminar at CRG, Barcelona, Spain	1 June 2011
Invited seminar at University of Newcastle, The Institute of Neuroscience, UK	27 May 2011
Talk at NeuroFly, Manchester, UK	1 – 5 Sep 2010
Talk at Neuro-Dowo, Konstanz, Germany	5 Sep 2007
Talk at 7 th IBRO World Congress of Neuroscience, Melbourne, Australia	12 – 16 July 2007

Teaching experience

Lecturer in Excitable Cells course for 1st year students, University of Manchester, UK	March 2018
Invited speaker (lecture and lab session), University of Ioannina, Greece	08 May 2017
Associate Fellowship of the Higher Education Academy, UK	Oct 2016
Associate tutor, Physics Labs and Neurosci and Behaviour courses, University of Sussex, UK	Jan – Mar 2009
Teaching assistant, Introduction to Matlab, University of Sussex, UK	2008/2009
Organiser of Physics Courses, Physics and Mathematics Lyceum, Kiev, Ukraine	2004/2005
Teacher of Physics, Advanced Physics and Mathematics School 141, Kiev, Ukraine	2001 – 2003
Private tutor, Physics, Mathematics, Computer Sciences, Kiev, Ukraine	1999 – 2005

Mentoring experience

MBiol Master projects of Oliver Beaven and Abbi Farley, Durham University, UK	Oct 2019 – May 2020
Training and supervision of Paolo Capriotti, research technician at IC, London, UK	Sep 2016 – Feb 2017
Summer project of Sze Lui, Biochemistry undergraduate at IC, London, UK	June – Aug 2016
Summer project of Anna Clements, Neuroscience undergraduate at JHU, USA	May – Aug 2014
Lab rotation of Ramanujan Srinath, Neuroscience PhD student at JHU, USA	Mar – May 2014
Lab rotation of Darya Task, Neuroscience PhD student at JHU, USA	Feb – Apr 2014
Master project of Elinor Willis, Audiological Science MSc student at UCL, UK	Mar – Sep 2011
Summer work experience of Lee Steinberg, high-school student working at UCL, UK	Jun – Aug 2010
Summer project of Mingjie Dai, undergraduate student from the University of Cambridge working at the UCL, UK	Jun – Aug 2009

Public outreach and professional activities

Academic Editor: <i>PLOS ONE</i>	2018 – to date
Reviewer: <i>Animal Behaviour</i> , <i>eLife</i> , <i>Neuron</i> , <i>PNAS</i> , <i>J of Neurosci Methods</i> , <i>iScience</i> , <i>JEB</i> , <i>Open Biology</i>	2011 – to date
Co-chair of the workshop “Engineering non-melanogaster drosophilids and other insects”, EDRC, Lausanne, Switzerland	5-8 Sept 2019
Co-chair of the “Techniques and Technology” session at the 60th Annual Drosophila Research Conference, Dallas, TX, USA	27-31 Mar 2019
Demonstrator at European Researcher’s Night public event, Manchester Museum, UK	28 Sept 2018
Organiser of a symposium "Chemosensory Processing in Insect Disease Vectors", ECRO 2018, Würzburg, Germany	5-8 Sept 2018
Demonstrator at the British Science Week event for local schools, University of Manchester, UK	14-16 Mar 2018
Demonstrator at the Science Spectacular event, Manchester Museum, UK	21 Oct 2017
Organiser and demonstrator of a "research station" at the European Researcher's night, Manchester Museum, UK	29 Sept 2017
Demonstrator at the Science Fair for local primary schools and Body Experience Exhibition (British Science Week), University of Manchester, UK	15 – 18 Mar 2017
Guest speaker at the undergraduate course on English for Academic and Scientific purposes, University of Ioannina, Greece	4 Nov 2016
Participated in the design of experiments and test trials for the “Brainy Tongue: the Sensory Logic of the Gastronomic Brain” workshop, San Sebastian, Spain	Oct 2016
Contributor to the <i>Wellcome Image Collection</i> and <i>Wikipedia</i>	2016
Organiser of Reading and Journal clubs, JHU, USA	2013 – 2014
Organiser of the Work In Progress talks, UCL Ear Institute, London, UK	Aug 2010 – Mar 2012
Demonstrator at the Royal Society Summer Science Exhibition, presentation “How do insects find their way home?”, Southbank Centre, London, UK	1–2 July 2010