## Curriculum vitae Queen Mary University of London logo

**5/5/2025**

#### ***LARS CHITTKA, MSc, PhD, Dr habil, FLS, FRES, FRSB***

#### ***Professor in Sensory and Behavioural Ecology***

# School of Biological and Behavioural Sciences

# Queen Mary, University of London

Mile End Road

# London E1 4NS

**POSITIONS:**

2005-present: Professor in Sensory & Behavioural Ecology, Queen Mary University of London

2008-2012: Scientific Director, Research Centre for Psychology, QMUL

2003-2005: Reader in Behavioural Ecology, Queen Mary University of London

2002-2003: Senior Lecturer, Queen Mary University of London

2000-2002: Senior Lecturer, Würzburg University

1997-2000: Lecturer, Würzburg University

1994-1997: Postdoctoral fellow, SUNY Stony Brook

1994 Postdoctoral fellow, FU Berlin

**HONORARY POSITIONS, AWARDS AND OFFERS:**

2024 – Founders’ Memorial Award, Entomological Society of America, USA

2024 – Distinguished Visitor in Organismal Biology Award, Cornell University, Ithaca, USA

2024 – Vice Principal’s Award for Research Excellence, Queen Mary University of London

2023 – Hilldale Award, University of Wisconsin, Madison, USA

2023 – Pineapple Science Award, Zhejiang Science and Technology Museum, Hangzhou, China

2022 – Election as a Fellow of the AAAS (American Association for the Advancement of Science)

2021 – Election as a member of the Leopoldina, the German National Academy of Sciences

2021 – Election to Sigma Xi, the Scientific Research Honor Society

2017-18 - Fellowship of Institute of Advanced Study (Wissenschaftskolleg) Berlin

2017 – *Media Star* Award, Queen Mary University of London

2017 – Faculty *Research Contribution Award*, Queen Mary University of London

2016 – Faculty member at Interdisciplinary College, Günne, Germany

2015 - Guest Professor, Fujian Agricultural and Forestry University, China

2015 - Faculty *Research Performance Award*, Queen Mary University of London

2014 - Royal Society Wolfson Research Merit Award

2013 - Offer of Full Professorship at Imperial College, London (declined)

2011 - 2022 – Member, Faculty Opinions (formerly Faculty of 1000)

2006 - Lesley Goodman Award, Royal Entomological Society

2001 - Heisenberg Award, German Research Foundation (DFG)

1994-1997: Adjunct Assistant Professor, SUNY Stony Brook

1997 - Guest Professor, University of Oklahoma, Tulsa

**EDUCATION:**

2000 Habilitation in Biology, University of Würzburg

1993 Ph.D. (summa cum laude – 1st class) in Biology at the Free University in Berlin

1991 Diploma (M.S.) of Biology at the Free University of Berlin (1st class)

**PUBLISHED SCIENTIFIC PAPERS, BOOKS AND PAPERS IN THE PRESS**

**2025**

323. **Chittka, L.** (in press) More than attraction: what bees see in flowers. In: Sensoria: Attending to the Wonder and Vitality of Nature (Eds: Bruce Jennings and Gavin Van Horn). Humans & Nature Press

322. Ghisbain, G., **Chittka, L.**, Michez, D. (2025) Bumblebees. *Current Biology*, 35 (6): R206 - R211

321. MaBouDi, H., Richter, J., Guiraud, M., Roper, M., Marshall, J.A.R., **Chittka, L.** (2025). Active vision of bees in a simple pattern discrimination task. *eLife*, 14:e106332.

https://doi.org/10.7554/eLife.106332

320. MaBouDi, H., Roper, M., Guiraud, M., Juusola, M., **Chittka, L.** Marshall, J.A.R. (2025). A neuromorphic model of active vision shows how spatiotemporal encoding in lobula neurons can aid pattern recognition in bees. *eLife*, in press

319. Takalo, J., Kemppainen, J., Haghighi, K.R., Scales, B., McManus, J., Bridges, A., MaBouDi, H., **Chittka, L.** (2025) Theory of morphodynamic information processing: linking sensing to behaviour. *Vision Research*, 227: 108537; <https://doi.org/10.1016/j.visres.2024.108537>

318. Wen, C., Dong, S., Guo, Y., Wang, C., Ding, W., Ge, J., Wen, J., **Chittka, L.** (2025)

Bumblebees prefer shorter over longer strings and connected over disconnected ones in string pulling tasks but prioritize connectivity over spatial proximity when the two are in conflict. *Insect Science*, in press

317. Zhou, D., Dong, S., Ge, J., Wang, C., **Chittka, L.**, Wen, C., Wen, J. (2025) Bumblebees attend to both the properties of the string and the target in string-pulling tasks, but prioritize the features of the string. *Insect Science*, https://doi.org/10.1111/1744-7917.13373

**2024**

316. Alessandroni, N., Altschul, D., Bazhydai, M., Brosnan, S., Byers-Heinlein, K., Call, J., **Chittka, L.**, Elsherif, M., Espinosa, J., Freeman, M., Gjoneska, B., Güntürkün, O., Huber, L., Krasheninnikova, A., Mazza, V., Miller, R., Moreau, D., Nawroth, C., Pronizius, E., Ruiz-Fernández, S., Schwing, R., Šlipogor, V., Visser, I., Vonk, J., Yeager, J., Zettersten, M., Prétôt, L. (2024) Challenges and Promises of Big Team Comparative Cognition. *Nature Human Behaviour*, https://doi.org/10.1038/s41562-024-02081-6

315. Bridges, A.D., Royka, A., Wilson, T., Lockwood, C., Richter, J., Juusola, M., **Chittka, L.** (2024) Bumblebees socially learn behaviour too complex to innovate alone. *Nature* 627: 572-578; <https://doi.org/10.1038/s41586-024-07126-4>

314. Gibbons, M., Pasquini, E., Kowalewska, A., Read, E. Gibson, S., Crump, A., Solvi, C., Versace, E., **Chittka, L.** (2024). Noxious stimulation induces self-protective behavior in bumblebees. *iScience*, 27 (8); <https://doi.org/10.1016/j.isci.2024.110440>.

313. Lu, Y., Zhenwei, Z., Roper, M., **Chittka, L.**, Solvi, C., Peng, F., Zhou, Y. (2024) Bumblebee social learning outcomes depend on their flower-facing behaviour. *Animal Cognition*, 27, 80. https://doi.org/10.1007/s10071-024-01918-x

312. Romero González, J.E., Solvi, C., Peng, F., **Chittka, L.** (2024) Behaviour of honeybees integrated into bumblebee nests and the response of their hosts. *Apidologie*, 55, 50 https://doi.org/10.1007/s13592-024-01086-4

311. Wen, C., Lu, Y., Solvi, C., Wang, C., Wen, X., Dong, S., Wen, J., Peng, F., **Chittka, L.** (2024) Does bumblebee preference of continuous over interrupted strings in string-pulling tasks indicate means-end comprehension? *eLife* 13:RP97018; https://doi.org/10.7554/eLife.97018.3

310. Zhou, Y., Ding, S., Liao, C., Wu., J., **Chittka, L.**, Solvi, C., Peng, C. (2024) Bumblebees' food preferences are jointly shaped by rapid valuation of nectar sugar concentration and viscosity. *Animal Behaviour* 210: 419-427

309. Zhou, Y., MaBouDi, H., Peng, C., Galpayage Dona, H.S., Gutierrez Al-Khudhairy, S., **Chittka, L.**, Solvi, C., Peng, F. (2024) Bumblebees display stimulus-specific persistence behaviour after being trained on delayed reinforcement. *Behavioural Ecology and Sociobiology* 78, https://doi.org/10.1007/s00265-023-03414-7

**2023**

308. Bridges, A., **Chittka, L.** (2023) Escaping anthropocentrism in the study of non-human culture. *Physics of Life Reviews*, https://doi.org/10.1016/j.plrev.2023.01.008

307. Bridges, A.D., MaBouDi, H., Procenko, O., Lockwood, C., Mohammed, Y., Kowalewska, A., Romero González, J.E., Woodgate, J., **Chittka, L.** (2023) Bumblebees acquire alternative puzzle-box solutions via social learning. *PLoS Biology*, 21(3): e3002019. <https://doi.org/10.1371/journal.pbio.3002019>

306. **Chittka, L.** (2023) The doors of animal perception. American Scientist 111: 55-57

305. **Chittka, L.** (2023) The inner lives of insects. Scientific American 329(1): 26-33

This article also appeared in Italian as Chittka, L. (2023) La vita interiore degli insetti. Le

Scienze (Ottobre) 72-79.

304. **Chittka, L.**, Rossi, N. (2023) Bees learn to dance. *Science*, 379: 985-986; DOI: 10.1126/science.adg7317

303. Crump, A., Gibbons, M., Barrett, M., Birch, J., **Chittka, L.** (2023) Is it time for insect researchers to consider their subjects’ welfare? *PLoS Biology* 21(6): e3002138. https://doi.org/10.1371/journal.pbio.3002138

302. Gallo, V., Bridges, A.D., Woodgate, J.L., **Chittka, L.** (2023) Sub-cell features govern the placement of new cells by honeybees during comb construction. *Journal of Comparative Physiology,* DOI: https://doi.org/10.1007/s00359-023-01632-y

301. Iturbe, X., Abella, J., Alcaide, S., Beyne, E., Charles, H.-P., **Chittka, L.**, Dávila, A., Dupret, Y., Erdmann, A., Fontanelli, A., Flich, J., Grosu, R., Carles Hernández, Hochmann, J., Ielmini, D., Isakovic, H., Isusquiza, E., Jackson, D., Kooli, M., Linares-Barranco, B., Laurent, E., Lindwer, M., Masařík, K., Mentens, N., Moreira, O., Noel, J.-P., Posch, C., Priller, P., Prikryl, Z., Rhodes, O., Stefanov, T., Taliercio, M., Ugarte, J., Van der Plas, G., Vianello, E. and Zaykov P. (2023) NimbleAI: Towards neuromorphic sensing - processing 3D-integrated chips. In Proceedings: 26th Int. Conf. Design, Automation and Test in Europe (DATE'23), Antwerp, Belgium, Apr. 17-19, 2023.

**2022**

300. **Chittka, L.** (2022) The Mind of a Bee. Princeton University Press, Princeton, USA

299. **Chittka, L.** (2022) The mind of the bee - a journey into the alien mind of an insect.

*Wellbeing International*: <https://wellbeingintl.org/the-mind-of-the-bee/>

298. **Chittka, L.** (2022) The intelligent mind of an insect. *Interalia Magazine* (November 2022

issue “Other Minds”)

297. **Chittka, L.** (2022) Bienen – Bewusstsein. *Bienen und Natur*, December 2022, 32-35

296. **Chittka, L.** (2022) The consciousness of bees. *Washington Post* <https://www.washingtonpost.com/outlook/2022/07/29/bee-cognition-insect-intelligence-research/>

295. **Chittka, L.** (2022) “Personality” differences between bees. *Natural History*, 130(9), 17-23

294. Gibbons, M., Crump., A., **Chittka, L.** (2022) Insects may feel pain, says growing evidence

– here’s what this means for animal welfare laws. *The Conversation*.

<https://theconversation.com/insects-may-feel-pain-says-growing-evidence-heres-what-this->

means-for-animal-welfare-laws-195328

293. **Chittka, L.**, Rossi, N. (2022) Social cognition in insects. *Trends in Cognitive Sciences*, 26

(7): 578-592; https://doi.org/10.1016/j.tics.2022.04.001

292. Colgan, T.J., Arce, A.N., Gill, R.J., Ramos Rodrigues, A., Kanteh, A., Duncan, E.J., Li L.,

**Chittka, L.**, Wurm, Y. (2022) Genomic signatures of recent adaptation in a wild bumblebee. *Molecular Biology and Evolution*, 39(2), msab366, <https://doi.org/10.1093/molbev/msab366>

291. Galpayage Dona, H. S., Solvi, C., Kowalewska, A., Mäkelä, K., MaBouDi, H, **Chittka, L.**,

(2022) Do bumble bees play? Animal Behaviour, 194: 239-251;

https://doi.org/10.1016/j.anbehav.2022.08.013

290. Gibbons, M., **Chittka, L.** (2022) A framework for evaluating evidence of pain in animals.

*Animal Sentience*, DOI 10.51291/2377-7478.1767

https://www.wellbeingintlstudiesrepository.org/cgi/viewcontent.cgi?article=1767&context=animsent

289. Gibbons, M., Crump, A., Barrett, M., Sarlak, S., Birch, J., **Chittka, L.** (2022) Can insects

feel pain? A review of the neural and behavioural evidence. *Advances in Insect Physiology*, 63:

155-229

288. Gibbons, M., Sarlak, S., **Chittka, L.** (2022) Descending control of nociception in insects? *Proceedings of the Royal Society London*, Series B, 20220599;

<https://doi.org/10.1098/rspb.2022.0599>

287. Gibbons, M., Versace, E., Crump, A. Baran, B., **Chittka, L.** (2022) Motivational trade-offs and modulation of nociception in bumblebees. *Proc Natl Acad Sci USA*, 119 No. 31 e2205821119 https://doi.org/10.1073/pnas.2205821119

286. Guiraud, M., Roper, M., Wolf, S., Woodgate, J.L, **Chittka, L.** (2022) Discrimination of

edge orientation by bumblebees. *PLoS ONE*, 17(6): e0263198

<https://doi.org/10.1371/journal.pone.0263198>

285. Irwin, L.N., **Chittka, L.**, Jablonka, E., Mallatt, J., (2022) Editorial: Comparative Animal Consciousness. *Frontiers in Systems Neuroscience* . 16:998421.

doi: 10.3389/fnsys.2022.998421

284. Solvi, C., Zhou, Y., Feng, Y., Lu, Y., Roper, M., Sun, L., Reid, R.J., **Chittka, L.**, Barron, A.B., Peng, F. (2022). Bumblebees retrieve only the ordinal ranking of foraging options when comparing memories obtained in distinct settings. *eLife* 11:e78525.

https://doi.org/10.7554/eLife.78525

**2021**

283. Brebner, J.**, Chittka, L.** (2021) Animal Cognition: The self-image of a bumblebee. *Current*

*Biology*, 31, R207–R209. <https://doi.org/10.1016/j.cub.2020.12.027>

282. Brebner, J., Makinson, J., Bates, O., Rossi, N., Lim, K., Pasquaretta, C. Dubois, T.,

Gomez-Moracho, T., Lihoreau, M., **Chittka, L**., Woodgate, J. (2021) Bumblebees strategically

use ground-level linear features in navigation. *Animal Behaviour*, 179: 147-160

doi.org/10.1016/j.anbehav.2021.07.003

281. Gallo, V., **Chittka, L.** (2021) Stigmergy versus behavioral flexibility and planning in

honeybee comb construction. *Proc Natl Acad Sci USA*, 118 (33) e2111310118;

<https://doi.org/10.1073/pnas.2111310118>

280. Li, L., Solvi, C., Zhang, F., Qi, Z., **Chittka, L.**, Zhao, W. (2021). Gut microbiome drives

individual memory variation in bumblebees. *Nature Communications*,

12, 6588. https://doi.org/10.1038/s41467-021-26833-4

279. Nityananda, N., **Chittka, L.** (2021) Reward value is more important than physical saliency during bumblebee visual search for multiple rewarding targets. *Animal Cognition*, 24: 803-814/ DOI: 10.1007/s10071-021-01479-3

278. Woodgate, J.L., Makinson, J.C., Rossi, N., Lim, K.S., Reynolds, A.M., Rawlings, C.J., **Chittka, L.** (2021) Harmonic radar tracking reveals that honeybee drones navigate between multiple aerial leks. *iScience*, DOI: https://doi.org/10.1016/j.isci.2021.102499

**2020**

277. **Chittka, L.** (2020) The secret life of bees as horticulturists? *Science*, 368: 824-825. DOI:

10.1126/science.abc2451

276. Galpayage Dona, S.G., **Chittka, L.** (2020) Charles H. Turner, pioneer in animal cognition.

*Science*, 370: 530-531. DOI: 10.1126/science.abd8754

275. Loukola, O., Gatto, E., Híjar-Islas, A.C., **Chittka, L.** (2020). Selective interspecific information use in the nest choice of solitary bees. *Animal Biology* 70, Issue 1:1-

11. DOI: http://doi.org/10.1163/15707563-20191233

274. MaBouDi, H., Galpayage, Dona, H.S., Gatto, E., Loukola, O.J., Buckley, E., Onoufriou, P.D., Skorupski, P., **Chittka, L.** (2020) Bumblebees use sequential scanning of countable items in visual patterns to solve numerosity tasks. *Integrative and Comparative Biology* 60: 929–942; <https://doi.org/10.1093/icb/icaa025>

273. MaBouDi, H., Solvi, C., **Chittka, L.** (2020) Bumblebees learn a relational rule but switch to a win-stay/lose-switch heuristic after extensive training. *Frontiers in Behavioral Neuroscience* 14(137): DOI: 10.3389/fnbeh.2020.00137

272. Romero Gonzalez, E.R., Solvi, C., **Chittka, L.** (2020) Honeybees adjust colour preferences in response to concurrent social information from conspecifics and heterospecifics. *Animal Behaviour*, 170: 219-228; https://doi.org/10.1016/j.anbehav.2020.10.008

271. Solvi, C., Gutierrez Al-Khudhairy, S. & **Chittka, L.** (2020) Bumblebees display

cross-modal object recognition between visual and tactile senses. *Science*, *367,* 910-912. DOI: <http://doi.org/10.1126/science.aay8064>

**2019**

270. Arnold, S.E.J. & **Chittka, L.** (2019) Flower colour diversity seen through the eyes of

pollinators. A commentary on ‘Floral colour structure in two Australian herbaceous communities: it depends on who is looking’ *Annals of Botany*, 124(2): viii-ix. DOI:http://doi.org/10.1093/aob/mcz107

269. Bayne, T., Brainard, D., Byrne, R.W., **Chittka, L.**, Clayton, N., Heyes, C., Mather, J.,

Ölveczky, B, Shadlen, M., Suddendorf, T., Webb, B. (2019) What is cognition? *Current*

*Biology*, 29(13): R608-R615. DOI: <https://doi.org/10.1016/j.cub.2019.05.044>

268. **Chittka, L.** (2020) Entomological rock music. *Antenna* 44(2):62-63

267. **Chittka, L.**, Giurfa, M., Riffell, J. (2019) Editorial: The Mechanisms of Insect Cognition.

*Frontiers in Psychology*, doi: 10.3389/fpsyg.2019.02751

266. **Chittka, L.** & Wilson, C. (2019) Expanding consciousness. *American Scientist*, 107: 364-

369. DOI: https://doi.org/10.1511/2019.107.6.364

265. Bridges, A., **Chittka, L.** (2019) Conformity and the beginnings of culture in an insect.

*Current Biology*, 29: R150–R172

264. Colgan, T.J., Fletcher, I.K., Arce, A.N., Gill, R.J., Ramos Rodrigues, A., Stolle, E.,

**Chittka, L.**, Wurm, Y. (2019) Caste- and pesticide-specific effects of neonicotinoid pesticide

exposure on gene expression in bumblebees. *Molecular Ecology*: 28:1964–1974

DOI: https://doi.org/10.1111/mec.15047

263. Guan, C., Egertová, M., Perry, C.J., **Chittka, L.**, Chittka, A. (2019) Temporal correlation

of elevated PRMT1 gene expression with mushroom body neurogenesis during bumblebee brain development. *Journal of Insect Physiology,* 116: 57-69;

https://doi.org/10.1016/j.jinsphys.2019.04.011

262. Makinson, J.C., Woodgate, J.L., Reynolds, A., Capaldi, E.A., Perry, C.J., **Chittka, L.** (2019) Harmonic radar tracking reveals random dispersal pattern of bumblebee (*Bombus terrestris*) queens after hibernation. *Scientific Reports*, 9:4651. DOI: https://doi.org/10.1038/s41598-019-40355-6

261. Pasquaretta, C., Jeanson, R., Pansanel, J., Raine, N.E., **Chittka, L.**, Lihoreau, M. (2019) A

spatial network analysis of resource partitioning between bumblebees foraging on artificial

flowers in a flight cage. *Movement Ecology*, 7:4; https://doi.org/10.1186/s40462-019-0150-z

260. Perry, C.J., **Chittka, L.** (2019) How foresight might support the behavioral flexibility of

arthropods. *Current Opinion in Neurobiology*, 54: 171-177. DOI:

<https://doi.org/10.1016/j.conb.2018.10.014>

259. Vasas, V., **Chittka, L.** (2019) Insect-inspired sequential inspection strategy enables an

artificial network of four neurons to estimate numerosity. *iScience*, 11: 85-92. DOI:

<https://doi.org/10.1016/j.isci.2018.12.009>

258. Vasas, V., Peng, F., MaBouDi, H., **Chittka, L.** (2019) Randomly weighted receptor inputs

can explain the large diversity of colour-coding neurons in the bee visual system. *Scientific*

*Reports*, 9: 8330; DOI: 10.1038/s41598-019-44375-0

**2018**

257. Avarguès-Weber, A., Lachlan, R., **Chittka, L.** (2018). Bumble bee social learning can lead

to suboptimal foraging choices. *Animal Behaviour*, 135: 209-214

256. **Chittka, L.** (2018) The past, present and future of the beasts that may have made our brains. A review of Buzz – The Nature and Necessity of Bees by T. Hanson. *Current Biology*, 28(13): R722–R723. DOI: <https://doi.org/10.1016/j.cub.2018.04.091>

255. **Chittka, L.** & Wilson, C. (2018) Bee-brained. *Aeon* (November 27, 2018): https://aeon.co/essays/inside-the-mind-of-a-bee-is-a-hive-of-sensory-activity (with a commentary in Nature)

254. **Chittka, L.** (2018) A bee as pet – a bee psychologist’s perspective. *Antenna* 42(1): 4-5

253. **Chittka, L.** (2018) Intelligente Bienen. *Deutsches Bienenjournal* 26(2): 14-16.

252. Emberton, S., **Chittka, L.**, Cavallaro, A. (2018) Underwater image and video dehazing with pure haze region segmentation. *Computer Vision and Image Understanding*, 168: 145-156; <https://doi.org/10.1016/j.cviu.2017.08.003>

251. Gallo V. & **Chittka L.** (2018) Cognitive aspects of comb-building in the honeybee? *Frontiers in Psychology*, 9:900. DOI: 10.3389/fpsyg.2018.00900.

250. Guiraud M., Roper M. & **Chittka L.** (2018) High-speed videography reveals how honeybees can turn a spatial concept learning task into a simple discrimination task by stereotyped flight movements and sequential inspection of pattern elements. *Frontiers in Psychology*, 9:1347. DOI: 10.3389/fpsyg.2018.01347.

249. Lawson D.A., **Chittka L.**, Whitney H.M. & Rands S.A. (2018) Bumblebees distinguish floral scent patterns, and can transfer these to corresponding visual patterns. *Proceedings of the Royal Society of London B: Biological Sciences*, 285(1880): 20180661:. DOI: 10.1098/rspb.2018.0661.

248. Li, L., Su, S., Perry, C.J., Elphick, M., **Chittka, L.**, Søvik, E. (2018) Large-scale transcriptome changes in the process of long-term visual memory formation in the bumblebee *Bombus terrestris*. *Scientific Reports* 8:534; DOI:10.1038/s41598-017-18836-3

247. Matthews, T., Osorio, D.C., Cavallaro, A., **Chittka, L.** (2018) The importance of spatial visual scene parameters in predicting optimal cone sensitivities in routinely trichromatic frugivorous old-world primates. *Frontiers in Neuroscience*, 12:15.

doi: 10.3389/fncom.2018.00015

246. Nieberding C, van Dyck H, **Chittka, L.** (2018) Adaptive learning in non-social insects: from theory to field work, and back. *Current Opinion in Insect Science*, 27: 75–81; [https://doi.org/10.1016/j.cois.2018.03.008](https://doi.org/10.1016/j.cois.2018.03.008%22%20%5Co%20%22Persistent%20link%20using%20digital%20object%20identifier%22%20%5Ct%20%22_blank)

245. Skorupski, P., MaBouDi, H., Galpayage Dona, S., **Chittka, L.** (2018) Counting Insects.

*Philosophical Transactions of the Royal Society B,* 373: 20160513; DOI:

10.1098/rstb.2016.0513

244. Vasas, V., Brebner, J., **Chittka, L.** (2018) Colour discrimination is not just limited by

photoreceptor noise: a comment on Olsson et al. *Behavioral Ecology*, 29(2): 285–286. DOI:

<https://doi.org/10.1093/beheco/arx157>

243. Wang, M.Y., **Chittka, L.**, Ings, T.C. (2018) Bumblebees express consistent, but flexible, speed accuracy tactics under different levels of predation threat. *Frontiers in Psychology*, doi: 10.3389/fpsyg.2018.01601

242. Woodgate, J., **Chittka, L.** (2018) Central place foraging. In: Encyclopedia of Animal Cognition and Behavior; edited by Jennifer Vonk and Todd K. Shackelford, DOI: 10.1007/978-3-319-47829-6\_881-1

**2017**

241. Baracchi D., Marples A., Jenkins A.J., Leitch A.R., **Chittka L.** (2017) Nicotine in floral

nectar pharmacologically influences bumblebee learning of floral features. *Scientific Reports*, 7:

1951; DOI: 10.1038/s41598-017-01980-1

240. Buatois, A., Pichot, C., Schultheiss, P., Sandoz, J.C., Lazzari, C.R., **Chittka, L.**, Avarguès-

Weber, A., Giurfa, M. (2017) Associative visual learning by tethered bees in a controlled visual environment. *Scientific Reports*, 7: 12903; DOI:10.1038/s41598-017-12631-w

239. **Chittka, L.** (2017) Bee cognition. *Current Biology*, 27(19): R1049-R1053

238. **Chittka, L.**, Skorupski, P. (2017). Active vision: A broader comparative perspective is

needed. *Constructivist Foundations* 13(1): 512-513

237. Emberton, S., **Chittka, L.**, Cavallaro, A. (2017) Underwater image and video dehazing with pure haze region segmentation. *Computer Vision and Image Understanding*, <https://doi.org/10.1016/j.cviu.2017.08.003>

236. Li, L., MaBouDi, H., Egertova, M., Elphick, M.R., **Chittka, L.**, Perry, C.J. (2017) A possible structural correlate of learning performance on a colour discrimination task in the brain of the bumblebee. *Proc Roy Soc Lond B*, 20171323; http://dx.doi.org/10.1098/rspb.2017.1323

235. Loukola, O., Perry, C.J., Coscos, L., **Chittka, L.** (2017) Bumblebees show cognitive

flexibility by improving upon an observed complex behaviour. *Science*, 355: 833–836

234. MaBouDi, H., Shimazaki, H., Giurfa, M., **Chittka, L.** (2017) Olfactory learning without

the mushroom bodies: spiking neural network models of the honeybee lateral antennal lobe tract

reveal its capacities in odour memory tasks of varied complexities. *PLoS Computational*

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Time, Speed and Accuracy. *International Journal of Comparative Psychology* 19, 342-357

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21. **Chittka, L**., Schorn, J., de Souza, J.M., Ventura, D.F., and Camargo, J.M.F. (1997) The nest entrance signal of the Amazonian bees *Partamona pearsoni* - a case where insects design their own flight targets. In: Kipyatkov, V.E. (ed.) Proceedings of the Colloquia on Social Insects, Volume 3-4, pp.107-116

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**1995**

 12. **Chittka, L**. and Geiger, K. (1995) Can honeybees count landmarks? *Animal Behaviour* 49:159-164 *(with commentary in New Scientist)*

 11. **Chittka, L.** and Geiger, K. (1995) Honeybee long-distance orientation in a controlled environment. *Ethology* 99:117-126.

10. **Chittka, L**., Kunze, J., and Geiger, K. (1995) The influences of landmarks on distance estimation of honeybees. *Animal Behaviour* 50:23-31.

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**1993**

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**1992**

4. **Chittka, L.** (1992) The color hexagon: a chromaticity diagram based on photoreceptor excitations as a generalized representation of colour opponency. *Journal of Comparative Physiology A* 170:533-543.

3. **Chittka, L**., Beier, W., Hertel, H., Steinmann, E., and Menzel, R. (1992) Opponent colour coding is a universal strategy to evaluate the photoreceptor inputs in hymenoptera. *Journal of Comparative Physiology A* 170:545-563.

2. **Chittka, L.** and Menzel, R. (1992) The evolutionary adaptation of flower colors and the insect pollinators' color vision systems. *Journal of Comparative Physiology A* 171:171-181.

**1990**

 1. Menzel, R., **Chittka, L.**, Eichmüller, S., Geiger, K., Peitsch, D., and Knoll, P. (1990) Dominance of celestial cues over landmarks disproves map-like orientation in honey bees. *Zeitschrift für Naturforschung* 45c:723-726.

**SELECTED MEDIA COVERAGE**

**2024** Le Monde (France; “Lars Chittka, une vie vouée au bourdon” Aug 31, 2024) https://www.lemonde.fr/sciences/article/2024/08/31/lars-chittka-une-vie-vouee-au-bourdon\_6300402\_1650684.html

**2023** Article in leading German news magazine Der Spiegel: Biologe Lars Chittka: Der Herr der Bienen 24/2/2023 <https://www.spiegel.de/wissenschaft/biologe-lars-chittka-der-herr-der-bienen-a-127e39ad-634c-46cb-bed5-757702f3a314>

 Article about my work in Greenpeace Magazin (Ausgabe 6.23 "Tierintelligenz").; Das große Knobeln.

 Was Insekten alles können – Laborbesuch in London

**2022** Article about my work on insect sentience and intelligence in the journal Newsweek:

<https://www.newsweek.com/do-insects-have-brains-1683193>

Article in the Observer / The Guardian (16/7/22): ‘Bees are really highly intelligent’: the insect IQ tests causing a buzz among scientists: <https://www.theguardian.com/environment/2022/jul/16/bees-are-really-highly-intelligent-the-insect-iq-tests-causing-a-buzz-among-scientists>

**2021** 7-page print article about me and my team's work in Dutch popular scientific journal KIJK about the

intelligence of bees. Published November 2021, entitled: Bijenonderzoeker Lars Chittka: Ik wil dat meer

mensen weten dat bijen een rijk mentaal leven hebben (I wish that more people were aware that bees

have a rich mental life). <https://tijdschriftnu.nl/products/kijk-editie-11-2021>

**2020** Interview on Big Biology podcast “Smarthropods – Cognition in Insects” (37 minutes;

 <https://www.bigbiology.org/podcast>)

Interview in BYU Radio “Constant Wonder: Smart Bees” (aired 30/3/2020; 50 minutes)

 <http://byuradiostage.byu.edu/episode/bd8dc260-e7b0-44ce-a3bb-a7d613d49c55/constant-wonder->

 smart-bees?autoplay=true

**2019** Portrait in BBC Wildlife Magazine “Meet the Scientist” (November 2019 issue; p.28

 [https://www.pressreader.com/uk/bbc-wildlife-magazine/20191024/282664689156186](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.pressreader.com%2Fuk%2Fbbc-wildlife-magazine%2F20191024%2F282664689156186&data=04%7C01%7C%7C19948d45b7b8414f9f4908d87417a909%7C569df091b01340e386eebd9cb9e25814%7C0%7C1%7C637386992251752117%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=rzyZ%2BPXxQNAne5TbzwQik%2B5SoVJdWEFejIhdYP0KCcY%3D&reserved=0))

Reuters Video clip about my music album Strange Flowers: “Sex, death, rock 'n' roll: the life of a bee”

 https://finance.yahoo.com/video/sex-death-rock-n-roll-152856137.html

**2018** TV Interview with Alexander Kluge “Der Geist der Bienen” (dctp, RTL and SRF; 14/02/2018; 24

 minutes); https://www.youtube.com/watch?v=RAr8vd\_EZCw

Portrait in Frankfurter Allgemeine Zeitung “Das geistige Leben der Bienen” 13/6/2018

 Portrait in Tagesspiegel (Berlin) “Maximum im Minihirn” 25/5/2018

**2016** The Guardian – Facebook page 19/10/2016 Video about my team’s bumblebee work “Bees can learn

mad skills: <https://www.facebook.com/theguardian/videos/577812755739825> - viewed 24 Million times

(as of Oct 2020)

**2010** Interview on Mongabay (with Jeremy Hance) “Uncovering the intelligence of insects, an interview with

Lars Chittka” <https://news.mongabay.com/2010/06/uncovering-the-intelligence-of-insects-an-interview->with-lars-chittka/

**RESEARCH GRANTS**

44. Open Philanthropy / Good Ventures Foundation (2024-2026) Addressing key evidence gaps in the science of insect sentience; £760,184

43. Japanese Society for the Promotion of Science – JSPS (2022-2024) Postdoctoral fellowship to Dr Mai Morimoto to work in the Chittka team; £81,000

42. Horizon Europe Framework Programme (2022-2025) NimbleAI - Ultra energy-efficient and secure neuromorphic sensing and processing at the endpoint. Total: €9,999,433; Queen Mary contribution €187,603

41. European Research Council (ERC; 2019-2024) Foundations of Animal Sentience – ASENT (with PI Jonathan Birch at LSE). Total: €1,499,864; Queen Mary Contribution: €14,563

40. Fyssen Foundation (2020-2022) The interface between chemical and spatial use of bumble bee male premating behaviour €60,000

39. Fellowship at the Wissenschaftskolleg / Institute for Advanced Study (2017-2018) Housing allowance plus replacement lectureship: €79,649

38. The Leverhulme Trust: *Artist in Residence: Dr Robert Hudson* 2016-AIR-037 (2017) £13,028

37. EPSRC Program Grant: *Brains on Board: Neuromorphic Control of Flying Robots* EP/P006094/1 (2017-2022, jointly with collaborators in Sussex and Sheffield); total: £4,816,675 Queen Mary contribution: £ 1,085,942

36. ‘Large Award’ by Queen Mary’s Centre for Public Engagement: Observing bees in East London – Pollinator-friendly Gardens (2015-2016) £18,019

35. HFSP Program Grant: RGP0022/2014 - A neural circuit approach to cognition and its limits in microbrains – with Martin Giurfa (U Toulouse) and Jeff Riffell (U Washington) (2014-2018) USD $ 1,050,000 – QMUL contribution $350,000

34. NERC: Behavioural and molecular responses to pesticide exposure in bumblebees – with PI Yannick Wurm, QMUL (2014-2017) £515,549

33. Royal Society Wolfson Research Merit Award (2014-2019) £50,000

32. European Research Council (ERC): SpaceRadarPollinator (339347) Space use by bees– radar tracking of spatial movement patterns of key pollinators (2014-2019) €3,435,922

31. Host for postdoc Dr Sylvain Alem: Could learned mate choice pave the way to speciation in fruit flies?

Fyssen Foundation (2013-2015) €48,000

30. Host for postdoc Dr Stephan Wolf funded by German Research Foundation (DFG): Bumblebee males and queens as a model to understand the mating-foraging trade-off in animals (2013-2015) ca £ 100,000

29. Host for postdoc Dr Vera Vasas funded by Human Frontiers Science Program: Evolving models of visual category learning in bees (2011-2017) £101,880

28. European Commission: Host for postdoc Dr Clint Perry funded by Marie Curie International Incoming Fellowship: Smart foraging: neuronal complexity, cognition and foraging in honey bees (2013-2015) €299,558

27. European Commission: Host for postdoc Dr David Baracchi funded by Marie Curie Intra-European Fellowship: Colony Personality and Pace-of-Life Syndrome in Bumblebees (2013-2015) €221,606

26. Australian Research Council: Pollination in a new climate: Evolutionary simulation of bee and flower interactions for predicting impacts of climate change on pollination (2012-2015; jointly with PI Alan Dorin and Adrian Dyer) $300k AUD

25. CEE (Centre for Ecology and Evolution): Honeybees and honeywasps: stealing information from competitors? (2012-2013) £4,642

24. Host for postdoc Dr Vivek Nityananda funded by *Marie Curie* International Incoming Fellowship: Visual Search in Bumblebees (2011-2013) £ 142,210.

23. Host for postdoc Dr Aurore Avergues-Weber funded by *Fyssen Foundation:* Social learning in pollinators (2011-2012) €50,000

22. Host for postdoc funded by *Human Frontiers Science Program:* The Psychophysics of Attention in Insects (2010-2013) £ 97,780

21. Discipline Bridging Award QMUL/EPSRC/MRC (2009)

Statistical physical analysis of the dynamics of foraging bumblebees (with P.I. R. Klages)

£ 7,000

20. NERC (NE/F523342/1; 2007-2008)

Application of the bumblebee foraging pheromone for commercial greenhouse pollination

£ 98,149.40

19. Wellcome Trust, BBSRC and EPSRC Cognitive Systems Foresight Project (BB/F52765X/1; 2007-2010)

Bees and the travelling salesman problem: how tiny brains solve complex cognitive tasks

£ 372,745.06

18. NERC (2006-2009) NE/D012813/1

Quantifying the dynamics of predator avoidance learning: bumblebees as a model

£ 334,418.11

17. The Leverhulme Trust (2005-2008)

Elucidating the ecological basis of invertebrate colour processing and perception

(with P.I. Beau Lotto at UCL London, and collaborators A. Sillito (UCL) and D. Osorio (U Sussex)

£ 207,426.00

16. NERC (2005-2008)

Dissecting the interaction between pollinator behaviour and a single plant gene controlling floral morphology

(with P.I. Beverley Glover, University of Cambridge)

£ 188,207.23

15. Central Research Fund, University of London (2004)

Intracellular recordings from bee photoreceptors

£ 5,251

14. NERC (2004-2005)

Pollination of the Canary Island “bird flowers” – a new experimental approach to generalist vs. specialist tradeoffs

£ 31,052.04

13. NERC (NER/A/S/2003/00469; 2004-2007)

The evolution of learning – bumblebees as a model

£ 332,520.37

12. British Ecological Society (2003)

The invasion of introduced commercial bumblebees into non-native areas

£ 995

11. Australian Research Council (2003-2006)

Deceptive signals in spiders

(with PI ME Herberstein and K Cheng, Macquarie University, Australia)

£ 86,611

10. NERC (2003-2004)

Island populations as a source for sensory innovation – bumblebee colour vision as a model

£ 29,801

9. The Wellcome Trust (2003-2005)

Empirical vision: investigating the role of experience in shaping colour constancy behaviour

(with PI Beau Lotto, Institute of Ophthalmology, University College, London)

£ 94,425

8. Central Research Fund, University of London (2003)

Visual search in bumblebees

£ 7,000

7. University of Würzburg Travel Fund (2002)

Behaviour of Sardinian bumblebee populations

£ 1,850

6. University of Würzburg Travel Fund (2001)

Measuring floral spectral reflectance in Sardinia

£ 1,800

5. Universitätsbund Würzburg 00-26 (2000)

The evolution of colour preferences in bumblebees

£ 3,400

4. DFG Ch 147/3-1 (2001-2002)

Heisenberg Award

£ 87,000

3. DFG SFB 554 Project B5 (1999-2002)

Memory dynamics and foraging in bumblebees

£ 90,000

2. DFG Ch 147/2-1 (1998-2000)

Flower constancy of bumblebees

£ 40,000

1. DFG Postdoctoral Stipend (1994-1997)

Foraging strategies of bees on flowers

£ 50,400

### EDITORIAL WORK

Member, Editorial Board, *PLoS Biology* (2004-present)

Guest Editor, *PNAS* (2023)

Member, Editorial Board, *Communicative & Integrative Biology* (2008-present)

Guest Editor, Frontiers in Systems Neuroscience, special volume on *Comparative Animal Consciousness* (2021-22)

Guest Editor, *Frontiers in Psychology*, special volume on *The Frontiers of Insect Cognition* (2018)

Guest Editor, Current Opinion in Insect Science, special volume on

*Molecular and neural mechanisms underpinning adaptive behaviour in insects* (2016)

Associate Editor, *Proc Royal Soc Lond B* (2010-2012)

Member, Editorial Board, *Uludag Bee Journal* (2002; 2006-2014)

Member, Editorial Board, *Psyche* (2007-2010)

Member, Editorial Board, *Entomologia generalis* (2006-2009)

Member, Editorial Board, *Arthropod-Plant Interactions* (2006-2015)

Member, Advisory Board, *Quarterly Review of Biology* (2004-2010)

**FUNDING AGENCY PANEL MEMBERSHIP**

* **Romanian National Research Council** (CNCS, Biology & Ecology panel member LS5.7) *2024*
* **Research Council of Finland** (Ecology and Evolutionary Biology), Panel member, *2024*
* **Fundação para a Ciência e a Tecnologia, I. P. (FCT, Portugal)**

*Evaluation of the R&D Units Multiannual Funding Program (Biological Sciences, Biodiversity and Ecosystems Panel) 2024*

 *Biological Sciences Panel, 2023*

* **MSCA (Marie Skłodowska-Curie Actions)** Postdoctoral Fellowships Evaluator, *2022*
* **Monitor of the H2020 project**: 773921 - "PoshBee", *2022*
* **Bulgarian National Science Fund BNSF**

*Panel Chair* (VIHREN Call – ERC style grants)*, 2019*

*Panel Member* (VIHREN Call – ERC style grants)*, 2021*

*Evaluator of research projects submitted for Implementation of Investment BG-RRP-*

 *2.004 - "Establishment of a network of research universities in Bulgaria" 2022*

* **European Research Council** (ERC)

 *Synergy Grants, external panel member, 2020*

*Synergy Grants, panel member SyG3A, 2019*

*Consolidator Grants, Shadow panel chairman LS8, 2012, 2014*

 *Consolidator Grants, Panel chairman LS8, 2011, 2013*

*Starting Grants, Panel member (deputy chairman in 2010) LS8, 2007-2010*

* **Royal Society Research Grants**, Panel member, Board H 2008-2011

**EXTERNAL EXAMINING etc**

* PhD Thesis, University of Sussex, UK (2018)
* PhD Thesis, Royal Veterinary College, London, UK (2015)
* Evaluation of nomination to the Australian Academy of Sciences (2015)
* PhD Thesis, University of Groningen, The Netherlands (2015)
* PhD Thesis, University of Bristol, UK (2015)
* External Evaluation of nomination for Gottfried Wilhelm Leibniz Prize (most prestigious award of the German Research Foundation – DFG; 2015)
* PhD Thesis, Martin-Luther University Halle – Wittenberg (2014)
* PhD Thesis, Royal Holloway University of London (2014)
* REF (Research Excellence Framework) ‘dry run’ for Anglia Ruskin University (2013)
* PhD Thesis, RMIT University, Melbourne, Australia (2013)
* Agence d'Evaluation de la Recherche et des établissements d'Enseignement Supérieur (AERES) – Evaluation of LEEC (Laboratory of Comparative Experimental Ethology, University of Paris - 13) (2013)
* MSc Thesis, University of Sussex, UK (2012)
* PhD Thesis, University of Bristol, UK (2010)
* PhD Thesis, Université de Neuchâtel, Switzerland (2009)
* PhD Thesis, University of Toulouse, France (2009)
* 2005-2008 External examiner for Physiology/Behaviour/Ecology undergraduate courses; University of Sussex, UK
* PhD Thesis, University of Bern, Switzerland (2008)
* PhD Thesis, University of Lausanne, Switzerland (2008)
* PhD Thesis, University of Toulouse, France (2007)
* Habilitation Dissertation, University of Tours, France (2007)
* Ph.D. thesis, David Booth, University of Sussex, UK (2004)
* Ph.D. thesis, Roselle Chapman, UC London, UK (2004)
* MSc thesis, Christine Harbig, Würzburg University, Germany (2003)
* Ph.D. thesis, Andreas Keller, Würzburg University, Germany (2002)
* Ph.D. thesis, Adrian Geoffrey Dyer, Monash University, Australia (2000)

**FEEDBACK ON PROMOTIONS AND RECRUITMENTS AT OTHER INSTITUTIONS**

* 2025 Evaluation of Promotion to Full Professor, University of Botswana, Botswana
* 2024 Evaluation of Promotion to Associate Professor, Princeton University, USA
* 2024 Evaluation of Promotion to Associate Professor, University of Rochester, USA
* 2024 Evaluation of Promotion to Full Professor, University of Vienna, Austria
* 2022 Evaluation of Promotion to Senior Lecturer, University of Sussex, UK
* 2021 Evaluation of Promotion to Full Professor, Haifa University, Israel
* 2021 Evaluation of Promotion to Associate Professor, Pennsylvania State University, USA
* 2020 Evaluation of Promotion to Full Professor, Tel Aviv University, Israel
* 2020 Evaluation of Promotion to Associate Professor, University of Trento, Italy
* 2020 Evaluation of Promotion to Reader, NCBI, Tata Institute Bangalore, India
* 2019 Evaluation of Promotion to Full Professor, University of Sussex, UK
* 2018 Evaluation of Promotion to Associate Professor, University of Missouri, St. Louis, US
* 2018 Evaluation of Promotion to Full Professor, University of Sussex, UK
* 2017 Evaluation of Promotion to Associate Professor, Rockefeller University, US
* 2017 Evaluation of Promotion to Full Professor, Ben Gurion University, Israel
* 2016 Evaluation of Promotion to Full Professor, University of Michigan, Ann Arbor
* 2016 Evaluation of Promotion to Full Professor, University of Wisconsin, Madison
* 2015 Performance Evaluation for Smithsonian Tropical Institute, Panama
* 2015 Evaluation of promotion to Full Professor, University of Arizona, Tucson, USA
* 2015 Evaluation of promotion to Associate Professor, Trinity College Dublin, Ireland
* 2015 Evaluation of retention offer, University College, Cork, Ireland
* 2014 Evaluation of promotion to Full Professor, University of Texas, Austin, USA
* 2014 Evaluation of promotion to Full Professor, University of Cincinnati, USA
* 2014 Evaluation of promotion of Researcher from Band E to F (Rothamsted Research, UK)
* 2013 Evaluation of promotion to Full Professor, RHUL, UK
* 2013 Evaluation of promotion to Professor Haver, University of Haifa, Israel
* 2012 Evaluation of promotion to Full Professor, Hebrew University of Jerusalem, Israel
* 2012 Evaluation of promotion to Full Professor, University of St Andrews, UK
* 2012 Evaluation of promotion to Full Professor, McMaster University, Canada
* 2011 Evaluation of promotion to Full Professor, University of California, Irvine
* 2011 Evaluation of recruitment at Assoc. Prof. level, Okinawa Institute of Science and Technology (OIST), Japan
* 2011 Evaluation of promotion to Assoc. Prof., University of Michigan, Ann Arbor, USA
* 2011 Evaluation of promotion to Reader, RHUL, UK
* 2011 Recruitment to Assistant Professor, University of Queensland, Australia
* 2010 Recruitment to Assistant Professor, NCBS, Bangalore, India
* 2009 Evaluation of promotion to Full Professor, University of California, San Diego
* 2009 Evaluation of promotion to Assoc. Prof., University of Texas, Austin, USA
* 2009 Evaluation of promotion to Full Prof., Australian Natl. University, Canberra
* 2008 Evaluation of promotion to Professor, UCL, UK
* 2007 Evaluation of promotion to IM Level 3, BBSRC Rothamsted, UK
* 2007 Evaluation of promotion to Reader, Imperial College, UK
* 2007 Recruitment at Senior Lecturer Level, Ben Gurion University of the Negev, Israel
* 2006 Evaluation of promotion to Associate Professor, McMaster University, Canada
* 2005 Evaluation of promotion to Associate Professor, University of California, San Diego
* 2004 Evaluation of promotion to Full Professor, University of Arizona, Tucson
* 2004 Evaluation of promotion to Senior Lecturer, University of Jerusalem, Israel
* 2000 Recruitment to Assistant Professor, University of Texas, Austin, USA

**PROFESSIONAL SOCIETY MEMBERSHIPS**

# [American Association for the Advancement of Science (AAAS; elected fellow since 2022)](https://www.aaas.org/)

# Entomological Society of America (ESA; since 2022)

# German National Academy of Sciences (Leopoldina; elected member since 2021)

# Royal Society of Biology (I am an elected Fellow – FRSB – since 2009)

* The Linnean Society of London (I am an elected Fellow – FLS – since 2004)
* The Royal Entomological Society (I am an elected Fellow – FRES – since 2004)

# ASAB (Association for the Study of Animal Behaviour)

# Colour Group, Britain

* Associate, BBS (Behavioral and Brain Sciences)
* IUSSI (International Union for the Study of Social Insects), Britain

POSTDOCTORAL FELLOWS

* Dr. Zhe Chen (2024-present)
* Dr. Gaoying Gu (2024-present)
* Dr. Olga Dyakova (2024-present)
* Dr. Sarah Skeels (2024-present)
* Dr. Priscila Teixeira Tunes (2024-2025)
* Dr. Mai Morimoto (2022-2024; now postdoc, Imperial College, London)
* Dr. Jouni Takalo (2022-2023, now postdoc, University of Sheffield)
* Dr. Natacha Rossi (2019-2022, now postdoc, University of Sussex)
* Dr. Hadi Maboudi (2015-2018; now postdoc, University of Sheffield)
* Dr. Zhu Xing-Fu (2015-2016; now Professor, Xishuangbanna Tropical Botanical Garden (XTBG), Chinese Academy of Sciences)
* Dr. Olli Loukola (2015-2017; now Assistant Professor, University of Oulu)
* Dr. Joseph Woodgate (2014-2022; now postdoc, University of Sheffield)
* Dr. James Makinson (2014-2019; now Hawkesbury Institute for the Environment, Western Sydney University)
* Dr. Cwyn Solvi (2014-2021, now Professor, Southern Medical University, China)
* Dr. Vera Vasas (2013-2019, now postdoc, University of Sussex)
* Dr. Sylvain Alem (2013-2016; Research Project Manager at the Government Office for Science, UK)
* Dr. David Baracchi (2013-2015; now Professor, University of Florence (Firenze), Italy)
* Dr. Stephan Wolf (2013-2015; now secondary school teacher, Halle, Germany)
* Dr. Aurore Avergues-Weber (2011-2012; now CRNS fellow, University of Toulouse)
* Dr. Vivek Nityananda (2010-2013; now postdoctoral fellow, Newcastle, UK)
* Dr. Mathieu Lihoreau (2009-2010; now CNRS fellow, Toulouse, France)
* Dr. Mathieu Molet (2007-2008; now Lecturer at the University of Paris)
* Dr. Tom Ings (2006-2009; now Senior Lecturer, Anglia Ruskin University, Cambridge, UK))
* Dr. Thomas Doering (2005-2009; now Full Professor, University of Bonn, Germany)
* Dr. Heather Whitney (2006-2009, co-supervised with Prof Beverley Glover, Cambridge); now Senior Research Fellow, University of Bristol
* Dr. Louise Cranmer (2005)
* Dr. Nigel E. Raine (2004-2009; now Professor and Rebanks Family Chair in Pollinator Conservation, University of Guelph, Canada)
* Dr. Adrian G. Dyer (2002; 2006; now QEII Research Fellow at Monash University, and Associate Professor at RMIT University, Australia)
* Dr. Johannes Spaethe (2002;now Privatdozent / Senior Lecturer, University of Wuerzburg)

PHD STUDENTS

* Jasmin Richter (2024-present)
* Maxime Janbon (2023-present)
* Chao Wen (visiting PhD student 2021-2022)
* Oluwaseun Sunday (visiting PhD student 2021-2022)
* Yonghe Zhou (2020-2024; now postdoc, Southern Medical University, China)
* Matilda Gibbons (2019-2023, now postdoc, University of Pennsylvania, USA)
* Vince Gallo (2017-2022, now professional beekeeper)
* Joanna Brebner (2017-2021, now postdoctoral fellow, University of Sheffield)
* Samadi Galpayage Dona (2017-2022, now postdoctoral fellow, University of Trento, Italy)
* Alice Bridges (2017-2022, now postdoctoral fellow, University of Sheffield)
* José Eric Romero González (2015-2019; now postdoctoral fellow, Southern Medical University, China)
* Marie Guiraud (2015-2019, now postdoctoral fellow,Macquarie University, Australia)
* Cui Guan (2014-2018; now postdoctoral fellow, Aston University, UK)
* Li Li (2013-2017; now Associate Professor, Jiangnan University, China)
* Tristan Matthews (2013-2017; co-supervised with A. Cavallaro; now data specialist, Springer Nature, UK)
* Simon Emberton (2012-2016; co-supervised with A. Cavallaro; now Senior Lecturer, University of the West of England, Bristol)
* Mark Roper (2012-2016, now Drone Development Lab, Ben Thorns Ltd, Colchester, UK)
* Fei Peng (2012-2016; now Full Professor, Southern Medical University, China)
* Erika Dawson (2010-2014; now postdoc, Sorbonne, Paris, France)
* Kathryn Hunt (2009-2013; now civil service)
* Friedrich Lenz (2009-2013; co-supervised with Dr Rainer Klages)
* Mu-Yun Wang (2009-2013; now postdoc, University of Tokyo)
* Samia Faruq (2008-2012; co-supervised with Prof Peter McOwan)
* Helene Muller (2007-2011; school teacher, London, UK)
* Ralph Stelzer (2006-2010)
* Sarah Arnold (2006-2010; now Senior Lecturer, Greenwich University)
* Ellouise Leadbeater (2004-2007; now Professor, Royal Holloway University of London)
* Tom Ings (2003-2006; now Senior Lecturer, Anglia Ruskin University, Cambridge)
* Nehal Saleh (2003-2006; President of Explore Science, Langley BC, Canada)
* Anna Dornhaus (1999-2002; now Full Professor, University of Arizona, Tucson)
* Johannes Spaethe (1998-2001; now Associate Professor (Privatdozent, University of Würzburg)

**MSc STUDENTS**

* Macy Guerri-Garrett (2024)
* Vidhi Ganpat Jain (2024)
* Vrushali Milind Dhotre (2024)
* Navin Ramnani (2024)
* Ella Brasher (2024)
* Ikaros Savva (2022)
* Stephan Balancy (2022)
* Elisa Pasquini (2021, Erasmus student)
* Yuyi Lu (2020-2021)
* Jennifer Law (2020)
* Dorothy Dunne (2020)
* Charlotte Lockwood (2020)
* Yuval Omer (2020)
* Kaarle Mäkelä (2020, Erasmus student)
* Amanda Royka (2019)
* Tara Wilson (2019-2020)
* Olga Procenko (2018)
* Jacqueline Bond (2018)
* Ana Cecilia Islas (2018)
* Hiruni Samadi Galpayage Dona (2016)
* Alice Marples (2015)
* Martina Zoli (2013, Erasmus student)
* Erika Dawson (2010)
* Ralph Stelzer (2005)
* Annette Schmidt (2002)
* Petra Frauenstein (2002)
* Juliette Schikora (2001)
* Kristina Stüber (2001)
* Anja Hickelsberger (2000)
* Steffen Schürkens (2000)
* Aphilnna Dornhaus (1999)

**Sabbatical Visitors Hosted**

* Prof Tamar Keasar (University of Haifa, Israel; 2021)
* Prof Franceso Nazzi (University of Udine, Italy; 2019)
* Prof Blandina Viana (Universidade Federal da Bahia, Brazil; 2018-2019)
* Prof Angelo Bisazza (University of Padova, Italy; 2017)
* Prof Elizabeth Capaldi (Bucknell College, USA; 2016- 2017)
* Prof Caroline Nieberding (Université Catholique de Louvain, Belgium; 2016)
* Prof Gidi Ne’eman (University of Haifa, Israel; 2011-2012)

**NAMED LECTURES**

2025 B.F. Skinner Lecture, Association for Behavior Analysis International (ABAI) Annual

 Convention, Washington, USA

 Distinguished Speaker, Max Planck Institute for Biological Intelligence, Martinsried, Germany

 Presenter of the 47th Annual Keynote Lectureship, AChemS (Association for Chemoreception

 Sciences), Bonita Springs, Florida, USA

2024 Perry Gilbert Lecture, Cornell University, Ithaca, NY, USA

Gatsby Lecture, COSYNE Conference, Lisbon, Portugal

Taylor Memorial Lecture, Yale University (Psychology Department), New Haven, USA

Alexander Lecture, University of Massachusetts - Amherst, USA

Leibniz Lecture, Leibniz Institute of Neurobiology (LIN), Magdeburg, Germany

2023 Hilldale and John T. Emlen Lecture, University of Wisconsin – Madison, USA

Von Frisch Lecture at the 50th Nobel Prize Anniversary in Ethology Colloquium (Vienna,

Austria)

2022 George Knights Memorial Lecture BBKA Spring Convention, Harper Adams University, UK

2021 Distinguished Speaker Lecture, Science of Intelligence, TU Berlin, Germany

2020 Tinbergen Lecture, ASAB Winter Meeting, London, UK

 Baerends Lecture, Netherlands Society for Behavioural Biology, Netherlands

2019 Whitehead Lecture, Goldsmiths, University of London, UK

 NEUReka! Seminar, King’s College, London, UK

2017 Heller Lecture, Hebrew University of Jerusalem, Israel

2016 Tupper Lecture, Smithsonian Tropical Institute, Panama City, Panama

2015 John Emlen Lectureship, University of Wisconsin, Madison, USA

2015 Celebrity Lecture, CIE and the International Year of Light, Manchester, UK

2011 Welcome Day Speaker, University of Trento, Italy

2009Charles Darwin Lecture (200th Anniversary), University of Glasgow

2008 Verrall Lecture at the Royal Entomological Society (Imperial College, London)

2006 Distinguished Biologist Lecture, University of Arizona, Tucson, USA

**SYMPOSIA ORGANISED**

2022 XXVI International Congress of Entomology, Helsinki, Finland (Scientific organizing team for

Section Ecology, Behaviour and Evolution)

2016 Behaviour Symposium at EurBee Conference, Cluj Napoca, Romania

2014 Neural Circuits Underpinning Insect Cognition: Queen Mary University of London

2007 IBRA International Conference (Finland); Symposium on non-Apis bees

2006 Eurbee Conference, Prague, Symposia on bee learning and physiology (co-hosted with M. Giurfa)

2005 IUSSI Winter meeting at Queen Mary, University of London

2004 CEE workshop on “The evolution of visual signals and receivers”, UCL, London, UK

2001 Plant-Insect Interactions, IUSSI Berlin, Germany

1999 Behavioral dimensions of pollinator service, International Botanical Congress, St. Louis, USA

**INVITED SYMPOSIUM PRESENTATIONS**

2025 Bioland Imkertagung (Beekeepers’ Congress), Bad Boll, Germany (plenary lecture, online)

 Ulster Beekeepers Association annual conference (Antrim, UK, 2 lectures)

2024 European IUSSI Congress 2024, Lausanne, Switzerland (plenary lecture)

 NeuroFly Biennial European Drosophila Neurobiology Conference (plenary lecture)

New York Declaration of Consciousness Meeting, NYU, New York, USA

 Copernicus Festival, Krakow, Poland (plenary lecture)

 BrainBar (“Europe’s largest annual future festival”); Budapest, Hungary

 Oxford Literature Festival, UK

Schirach-Imker-Convent, Bautzen, Germany

 West Sussex Beekeepers Association Convention, Pulborough, UK

 Chester County Beekeepers Association Annual Virtual Conference, USA

 Stadtbienen Berlin 10-year anniversary conference, Berlin, Germany

 Decentring the Human Lecture Series, Queen Mary University of London, UK

Fachtagung für Imker 2024, Laendliches Fortbildungsinstitut Kaernten, Villach, Austria

2023 New Mexico Beekeepers Association Virtual Winter Conference, USA

 Derbyshire Beekeepers’ Association Pre-Season Annual Conference, UK

 Insects as Mini-Livestock / Animal Welfare Research Network (UK; online lecture)

 Middlesex Beekeepers’ Day / Enfield and District Beekeepers’ Association, London, UK

 Gloucestershire Beekeepers’ Association Spring Lecture Day, Cirencester, UK

 Individualisation Symposium, University of Bielefeld, Germany (online)

 Pari Center – Incredible Minds Lecture Series (online)

 Animal Consciousness Conference, Dharamshala, India

Universities Federation for Animal Welfare (UFAW) conference; Keynote lecture (online)

EPRI Pollinator Power Party, USA and global (online)

Science Foo Camp, San Francisco, USA

Jahreskonferenz der AG für wesensgemaesse Bienenhaltung AGNI, Switzerland

3rd AsiaEvo Conference, Singapore (online)

2022  Annual Meeting of the Deutsche Zoologische Gesellschaft (DZG - Keynote lecture), Bonn,

 Germany

 BBKA Spring Convention, Harper Adams University, UK (2 lectures)

  IEEE International Conference on Development and Learning (ICDL), London UK (Keynote

 lecture)

 Brain Awareness Week - University of Silesia and Jagiellonian University, Katowice, Poland

 (main lecture - online)

 Comparative Neurobiology of Higher Cognitive Functions workshop, Erice, Italy

 Leopoldina (German National Academy of Sciences) Induction Ceremony, main evening

 lecture (Halle, Germany)

 Summer School on Consciousness and Metacognition, Paris, France

 York Festival of Ideas, UK (online)

 Scottish Beekeepers’ Annual Convention, Kinross, UK (2 lectures)

 Weimarer Bienen-Symposium

 Sheffield Beekeeper Association

 Entomological Society of America (Symposium on Insect Welfare in Farmed, Wild, and

 Research Contexts) Vancouver, Canada

 Neurobiology of Changing Ecosystems - The Kavli Foundation, Los Angeles, USA

 Biological Basis of Behavior International Course, UNAM Morelia (online), Mexico

 Saskatchewan Beekeepers Annual General Meeting (online; keynote lecture), Canada

 Presidential Symposium, International Congress of Neuroethology, Lisbon, Portugal

2021 Interspecies Conversation Conference (online), symposium chaired by musician Peter Gabriel

 Invertebrate Animal Sentience Webinar conference (online)

2020 Society for Integrative and Comparative Biology, Austin, Texas, USA

2019 EUREKA Symposium, University of Würzburg, Germany

 Animal Consciousness Symposium, ISHPSSB, Oslo, Norway

 CogEvo 2019, Workshop on Cognition and Evolution, Rovereto, Italy

 Annual Meeting of the Ethologische Gesellschaft, Hannover, Germany (opening plenary

 lecture)

2018 The Other Minds Problem conference, Montreal, Canada

 Varieties of Mind Conference, Cambridge, UK

 Symposium to commemorate the 10th anniversary of the Psychology Dept at QMUL,

 London,UK

 Cognition symposium, HHMI Janelia Farm, USA

 Berliner Bienenkonferenz, French Embassy, Berlin, Germany

2017 Royal Society ‘Origins of numerical abilities’ London, UK

 BOMBUSS Conference, Logan, Utah, USA (plenary speaker)

 Origins of Consciousness, London School of Economics, UK

 Rational Animals, Van Leer Institute, Jerusalem, Israel

 The Thinking Animal, University of Lund, Sweden

 Entomological Networks: Ecology, Behaviour and Evolution, Newcastle, UK (plenary speaker)

 IUSSI Conference, York, UK (plenary speaker)

2016 The role of sensory ecology and cognition in social decisions Workshop, Arolla, Switzerland

 Plenary lecture: Behaviour Adaptations Conference, Toulouse, France

 HFSP Symposium, Aspet, France

 Interdisciplinary College, Günne, Germany

 Plenary Lecture: Annual Meeting of the Ethological Society, University of Goettingen,

 Germany

2015 Annual Sideer Graduate Symposium, Ben Gurion University, Israel

 (Opening lecture, plenary evening lecture, and workshop)

 BVI Young Researchers Colloquium, keynote lecture, Bristol, UK

 Convergent Minds Conference, University of Boston, USA

 Microbrain Conference, University of Washington, Seattle, USA

 IDEEV, Gif-sur-Yvette (annual conference, plenary evening lecture), France

 Organisation for Computational Neuroscience, Prague, Czech Republic

2014 President’s Symposium, Animal Behavior Society, Princeton, USA

 Janelia Farm Insect Learning and Memory Conference, USA

 Colour Group (GB) Awards Meeting, London, UK

2013 IUSSI French section, Paris – Villetaneuse, France (plenary speaker)

 ESCON Experts Meeting (Distributed Cognition), Lisbon, Portugal

 ‘Intelligent Sensing’ Summer School, London, UK

 Symposium of the International Max Planck Research School, Seewiesen (keynote speaker)

 BBSRC Animal Welfare Workshop, Birmingham, UK

2012 Centre for Behaviour and Evolution Annual Conference, Newcastle (plenary speaker)

 14th International Behavioral Ecology Congress, Lund, Sweden (plenary speaker)

 Royal Society discussion meeting; The Future of Comparative Cognition, London, UK

 Eurbee Conference, Halle Germany (plenary speaker)

2011International Symposium on Communication in Social Insects (Taipei, Taiwan)

 Physical Cognition and Problem Solving, Birmingham, UK

 Gordon Research Conference (Neuroethology), Stone Hill College, USA

2010 IUSSI, Copenhagen (Keynote speaker)

 Evolution of Cognition symposium, Ann Arbor, Michigan, USA

 Social cognition symposium, Birkbeck, London

2009 Biology of Decision Making, Bordeaux, France

 Insect Learning and Memory, Roscoff, France

2008 Royal Entomological Society Pollination Meeting (Harpenden UK)

Gatsby Symposium, Simpler Cognitive Systems (London, UK)

Benelux Congress of Zoology, Liège, Belgium (Keynote speaker)

Evolutionary Ecology of Plant-Animal Interactions (Palma de Mallorca, Spain)

Royal Entomological Society (Rothamsted; Keynote speaker)

2007 Colour Design & Engineering (Linnean Soc and IMechE, London)

Visual Processing in Insects (HHMI Janelia Farm Research Campus, USA)

Royal Entomological Society (Newcastle, UK)

2006 Eurbee Conference, Prague (invited talks at 2 symposia, one as plenary speaker)

FENS (Forum for European Neuroscience, Vienna, Austria)

London Evolutionary Research Network (Plenary Speaker)

Animal Behaviour Society Winter Meeting (Keynote Lecture)

2004 Royal Entomological Society, Pollination Meeting, London

Island Biogeography Conference, Aarhus, Denmark

International Conference of the Society of Population Biology, Tsukuba, Japan (Keynote

 lecture)

2003 Evolvability and Interaction Symposium, London, UK (Keynote lecture)

Meeting of the Netherlands Society of Behavioural Biology (Keynote lecture)

Symposium on Conservation and biology of bumble bees; Zoological Society of London

Symposium on Colour Vision, College of Ophthalmology, London

Central Association of Beekeepers, Spring Conference, Imperial College, London

2002 European Meeting of IBRA, Cardiff, UK

2001 Symposium on Colour Vision, College of Ophthalmology, London

1999 Symposium on Sensory Ecology, Austrian Academy of Sciences

1998 Göttingen Neurobiology Conference, Symposium on Sensory Ecology

1996 Symposium: Rules of Spatial Memory Organisation, Berlin-Brandenburg Academy of Sciences.

Meetings of the Society for the Study of Evolution, St. Louis, Missouri, USA

1995 International Congress of Neuroethology (Cambridge, UK)

1993 Sprengel Symposium (Berlin-Spandau, Germany)

1992 Symposium on the perception of ultraviolet light at the Annual meeting of the American Society

of Zoologists (Vancouver, Canada).

**OTHER INVITED SEMINARS**

2025 University of Warwick, UK

EntoLIVE Webinar (Biological Recording Company, online seminar)

 Winchester Beekeepers’ Association, Itchen Abbas, UK

 Long Beach Beekeepers’ Association, California, USA (online presentation)

2024 Opening Speech at *Nature the Artist* “The Colony” Exhibition, Kings Cross, London, UK

 Francis Crick Institute, London, UK

 CIMEC Center for Mind / Brain Sciences, Trento, Italy (online)

 Interdisciplinary Forum on Mind-Brain Forefronts, Fudan University and Chinese Academy of

 Science, China (plenary lecture, online)

 Westerham Beekeepers Association, Kent, UK

 Cuautitlán Faculty of Higher Studies of the UNAM, 50th anniversary celebration, Mexico

 Bishops Stortfood Beekeepers, UK

 West Suffolk Beekeepers’ Association, Bury St. Edmunds, UK

 Inn on Boltwood, public lecture, Amherst, Massachusetts, USA

 Arizona State University, course on “Writing about science for a general audience” USA (online)

 Katholische Erwachsenenbildung Main-Taunus, Germany (online)

 Deutsches Krebsforschungszentrum, Heidelberger Life Science Lab, Germany (online)

 Maine State Beekeepers Association, USA (online)

2023 UNAM Morelia, Mexico

 UNAM Juriquilla/Queretaro, Mexico

 Department of Life Sciences, Imperial College, London, UK

 Dunwoody Beekeepers, Georgia, USA (online)

 London Beekeepers’ Association (LBKA), UK (online)

 University of Wageningen, Netherlands

 Belhaven University, Jackson, Mississippi, USA (online)

 Central Maryland Beekeepers Association, USA (online)

 Free the Bees, Switzerland / international (online)

 Nottinghamshire Beekeepers’ Association (NBKA, online)

 University College London (UCL) CDB Seminar, London, UK

 University of Lund, Sweden

 University of Toulouse, France

 Sorbonne University / Paris Nord, Paris, France

Backyard Beekeepers, Connecticut, USA

University of Arizona (Tucson), Cognitive Science Seminar Series (online), USA

Harvard University, Quantitative Ethology Seminar (online), USA

University College London, Social Neuroscience lecture series, London, UK

Insect Welfare Research Society (online), USA and international

Interspecies Internet Lecture Series (online), UK and international

Volkshochschulen Deutschland, Wissensreihe vhs.wissen live (online), Germany

RSPCA Lay Members Forum, London, UK

2022 Instituto de Investigaciones Biomedicas, UNAM, Mexico City, Mexico

 King’s College, London, UK

 BeeCraft lecture (jointly with Somerset Beekeepers), UK (online)

 CINVESTAV, Departamento de Fisiologia, Biofisica y Neurociencias, Mexico City, Mexico

 Israel Institute of Advanced Study, Jerusalem, Israel

 Cambridge Beekeepers’ Association, UK (online)

 University of Cincinnati, USA

 Arboreal Apiculture Salon, USA and international (online)

 Massachusetts Bee Club, USA (online)

 UC Santa Barbara (GRT Study Group) USA (online)

 Spirit of the Senses Salon, Phoenix, AZ, USA (online)

 Barts Cancer Institute, London, UK

 Hastings and Rother Beekeepers winter meeting, UK (online)

 North London Beekeeper’s winter meeting, UK (online)

 Hampstead Scientific Society, London, UK

2021 Royal Philosophical Society of Glasgow, UK (online)

 University of Cambridge, UK

 University of Groningen, Netherlands (online)

 Champalimaud Centre for the Unknown, Portugal, Lisbon

2020 Somerset Beekeepers Association, UK

 University of Bedforshire, UK (online)

2019 Science Society at Magdalene College, Cambridge, UK

2018 UNAM-Institute of Ecology-Mexico City, Mexico

 Wissenschaftskolleg zu Berlin / Institute of Advanced Study, Germany

 University of Cork, Ireland

 University of Reading, UK

 University of St Andrews, UK

 Friedrich-Loeffler-Institut, Celle, Germany

2017 University of Oxford, UK

 Wissenschaftskolleg zu Berlin / Institute of Advanced Study, Germany

 University of Sussex, UK

 London School of Economics, UK

 University of Haifa – Oranim, Israel

 Barts Cancer Institute, London, UK

 Canterbury Beekeepers, Canterbury, UK

2016 Smithsonian Tropical Institute, Panama City, Panama

 University of Cambridge, UK

 University of Bristol, UK

2015 University College London (cross-departmental Vision@UCL seminar series), UK

 Brunel University, London, UK

 University of Leeds, UK

2014 Royal Holloway University of London, UK

 University College, London, UK

 Rothamsted Research, Harpenden, UK

 Champalimaud Centre, Lisbon (‘Nano Course’ – 3h Lecture for PhD students)

 Champalimaud Centre, Lisbon (‘SeminAR’ – Public Lecture)

Champalimaud Centre, Lisbon (Research talk)

2013 University of Würzburg, Germany

 University of Düsseldorf, Germany

 University of Edinburgh, UK

 Imperial College, London, UK

2012 University of Sussex, UK

 Keele University, UK

 Universität Zürich, Switzerland

2011 National Tsing Hua University, Taiwan

 University of Toulouse, France

 University of Lausanne, Switzerland

 Imperial College, London, UK

2010 University of Freiburg, Germany

 University of Lyon, France

 Royal London Hospital, UK

2009 University of Vienna, Austria

 University of St. Andrews, UK

 University of Copenhagen, Denmark

 William Harvey Research Institute, London

2008 Central Association of Beekeepers, London

 University of Manchester, UK

 University of Lausanne, Switzerland

 University of Bern, Switzerland

 Trinity College, Dublin, Ireland

 Institute of Biology, London, UK

2007 Bromley Beekeepers, London, UK

National Science & Engineering Week (Queen Mary, UK)

National Science & Engineering Week (London Zoo, UK)

University of Tours, France

2006 University of Frankfurt, Germany

 Imperial College Silwood Park, London, UK

 University of Würzburg, Germany

2005 University of Oxford, UK

 University of Bremen, Germany

 Free University of Berlin, Germany

2004 Royal Holloway College (Dept. of Psychology), London, UK

University of Northampton, UK

 University of Newcastle, UK

2003 IACR Rothamsted, Harpenden, UK

University of Cambridge, UK

 University of Bristol, UK

 City University, London, UK

 University of Sheffield, UK

 University of Toulouse, France

 University of Toronto, Canada

 University of Tsukuba, Japan

 University of Yokohama, Japan

2002 Universität Hamburg, Germany

2001 University of Sussex, UK

 Konrad-Lorenz Institute for Comparative Behavioral Research, Vienna, Austria

 Queen Mary and Westfield College, London, UK

 University College, London, UK

2000 University of Vienna, Austria

 Universität Göttingen, Germany

 Naturwissenschaftlicher Verein, Würzburg, Germany

1999 Universität Bonn, Germany

1998 University of Erlangen, Germany

ETH Zürich, Switzerland

Free University of Berlin

1997 University of Tulsa, Oklahoma, USA

Washington DC, National Zoo, USA

QM College, University of London, UK

1996 Universität Würzburg, Germany

QM College, University of London, UK

University of Bristol, UK

University of Cambridge, UK

University of Oxford, UK

Yale University, USA

1994 University of Maryland, Baltimore, USA

University of Massachussetts, Boston, USA

University of California, Santa Barbara, USA

1993 New York University, USA

Universität Freiburg, Germany

Universität Regensburg, Germany

1991 Universität Bonn, Germany

University of Sao Paulo, Brazil

**TEACHING EXPERIENCE**

At Queen Mary, University of London

2002 – present Module Organiser for 1st year *Evolution* and 3rd year *Behavioural Ecology*

Lectures & Practicals in *Evolution* (1st year)

 Tutorials in *Essential Skills for Biologists* (1st year)

 Lectures & Practicals in *Decoding DNA* (2nd year)

 Lectures & Practicals in *Animal Physiology* (2nd year)

 Lectures & Practicals in *Genes & Bioinformatics* (2nd year)

 Lectures & Practicals in *The Invertebrates* (2nd year)

 Lectures in *Evolutionary Genetics* (2nd year)

 Tutorials in *Integrative Studies in Biology* (2nd and 3rd year)

 Lectures & Practicals in *Behavioural Ecology* (3rd year)

 Lectures in *Neuroscience* (3rd year)

 Lectures and Practicals in *Comparative Psychology* (2nd year)

**At Würzburg University**

1997 – 2002 Lectures in Animal Physiology for undergraduates (3rd year)

 Lectures in Animal Behaviour (2nd year psychology students)

 Tutorials in Arthropod Behaviour (4th and 5th year)

 Tutorials in Bee Biology (4th and 5th year)

 Practicals in Physiology, Neurobiology and Behavioral ecology (2nd, 3rd and 4th year)

1997 Workshop: Frontiers in Biology - University of Tulsa, Oklahoma

**At the Free University of Berlin:**

1991 - 1993 Foraging strategies of insects on plants (4th year)

Insect orientation (4th year)

BASIC programming (3rd year)

**EXTERNAL REFEREE FOR JOURNALS AND PUBLISHERS**

American Naturalist; Animal Behaviour; Animal Cognition; Annales de la Société Entomologique de France; Annals of Botany; Apidologie; Behavioral & Brain Sciences; Behavioral Ecology; Behavioral Ecology and Sociobiology; Biological Cybernetics; Biotropica; Biology Letters; Botanica Acta; Brain, Behaviour and Evolution; Canadian Entomologist; Current Biology; Ecography; Ecology; Ecology Letters; Ecological Entomology; Ecological Monographs; Entomologia Experimentalis et Applicata; Entomologia generalis; Ethology; Ethology, Ecology & Evolution; Heredity; Insectes Sociaux; International Journal of Comparative Psychology; International Journal of Psychology and Psychoanalysis; Israel Journal of Plant Sciences; Journal of Biosciences; Journal of Comparative Physiology; Journal of Experimental Biology; Journal of Insect Behavior; Journal of Insect Physiology; Journal of Pollination Ecology; Journal of Theoretical Biology; Myrmecological News; Nature; Nature Communications; Naturwissenschaften; Oecologia; Oikos; Oxford University Press; Perspectives in Plant Ecology, Evolution and Systematics; Physiological Entomology; Physiology & Behavior; Planta; Plant Biology; Plant Systematics and Evolution; PLoS Biology; PLoS One, Proceedings of the National Academy of Sciences; Proceedings of the Royal Society; Psyche; Psychological Science; Quarterly Review of Biology; Science; Trends in Ecology and Evolution; Vision Research

**EXTERNAL REFEREE FOR FUNDING AGENCIES**

Agence Nationale de Recherche (ANR), France

Alfred P. Sloan Foundation, USA

Biotechnology & Biological Sciences Research Council (BBSRC), UK

Binational Agricultural Research and Development Fund, United States – Israel

Binational Science Foundation, United States – Israel

British Ecological Society

Deutscher Akademischer Austauschdienst (DAAD, Germany)

Deutsche Forschungsgemeinschaft (DFG, Germany)

European Research Council (ERC, Belgium)

Fonds zur Förderung der wissenschaftlichen Forschung (FWF, Vienna, Austria)

Human Frontiers Science Program

Israel Science Foundation

Leverhulme Trust (UK)

MacArthur Fellows Program (USA)

National Science Foundation (NSF) USA

Nature and Environment Research Council (NERC), UK

Science Foundation Ireland

The Academy of Sciences for the Developing World (TWAS), Italy

CONSULTING REPORTS

* For **Nutopia Limited** / National Geographic Channel (2020), Filming bee larval development
* for **Ginegar Smart Cover Solutions** (2017), Effects of optical properties of greenhouse covers on bee foraging
* for **BASF** (2005), on effects of UV-protective covering for commercial greenhouses, and effects on crop pollination
* for **Central Networks** **/ E.ON** (2004) on the colour scheme of outdoors work wear, to avoid insect attacks
* for **Koppert Biological Systems** (2004), on methods to improve greenhouse pollination of tomato plants by bumblebees