

# ANNA LISA STÖCKL

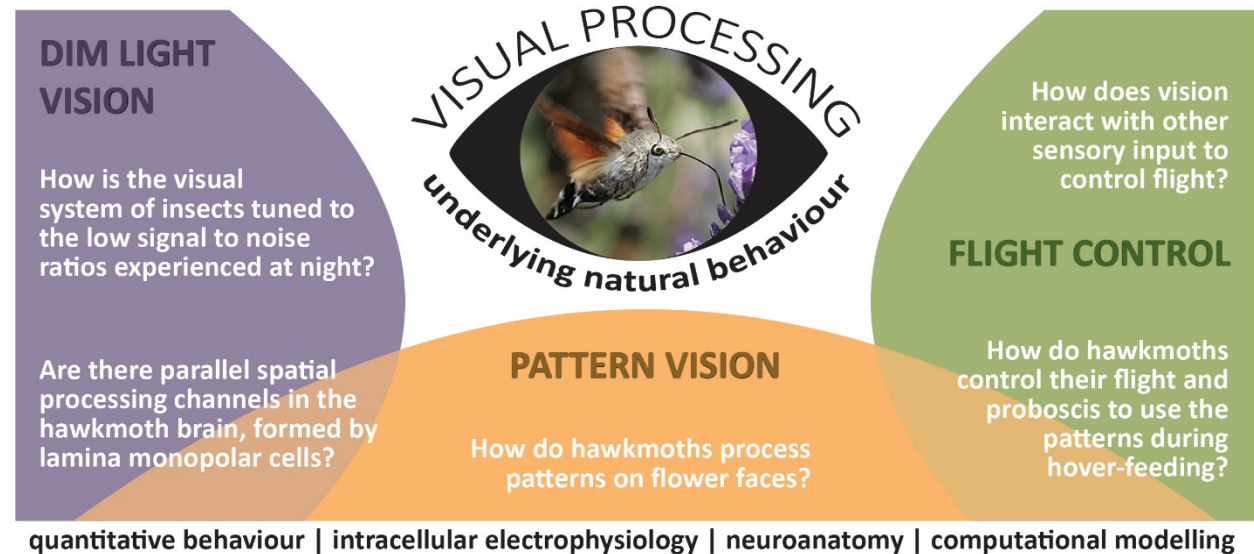
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Würzburg University  
Chair of Behavioral  
Physiology and Sociobiology  
Am Hubland, DE-97074 Würzburg



## EDUCATION

- 5/2012 - 12/2016 **PhD**, Biology Department, Lund University, SWE (degree awarded 21/12/2016 \*)
- 10/2009 – 1/2012 **Master sc. Neuroscience**, Ludwig Maximilian University Munich, GER (grade: 1.0<sup>†</sup>)
- 10/2006 – 5/2009 **Bachelor sc. Biology**, Ruprecht Karl University Heidelberg, GER (grade: 1.1<sup>†</sup>)
- 08/1997-4/2006 **Abitur**, Leininger Gymnasium Grünstadt, GER (grade: 1.0<sup>†</sup>)

## CURRENT & PREVIOUS POSITIONS

- 3/2018 - today **Research fellow**, with Prof. K. Pfeiffer, Würzburg University, GER
- 2/2017-2/2018 **Post-doctoral researcher**, Dr. P. Ala-Laurila, Aalto University, FIN  
*The role of correlated activity in neural coding in the mouse retina*
- 5/2012-1/2017 **PhD student**, Prof. E. Warrant, Vision Group, Lund University, SE  
Thesis title: *Neurons against Noise: neural adaptations for dim light vision in hawkmoths*
- 4/2011 –4/2012 **Master student**, Prof. J. Benda, BCCN, Munich, GER  
Thesis title: *Coding of communication signals in the electrosensory system of weakly electric fish*
- 2/2010 –3/2011 **Research assistant**, Prof. T. Gollisch, MPI Neurobiology, Munich, GER  
*Multi-electrode array recordings of amphibian retinal ganglion cells*
- 6/2009 – 9/2009 **Research student**, Prof. D.-E. Nilsson, Vision Group, Lund University, SE  
*Modelling of the pacemaker interactions of a box jellyfish*
- 2/2009 –5/2009 **Bachelor student**, Prof. J. Wittbrodt, EMBL, Heidelberg, GER  
Thesis title: *Manipulating the proliferation control of Müller glia cells*

\* Sweden does not award grades for PhD theses, † best: 1.0, fail: 5.0

## AWARDS AND DISTINCTIONS

since 2020	Member of the <b>Junges Kolleg of the Bavarian Academy of Sciences and Humanities</b>
2018	<b>Young Investigator Award</b> , International Society for Neuroethology <b>Best PhD Thesis 2016-2017 Prize</b> , Science Faculty, Lund University <b>Winner iBiology Young Scientist Seminar Series</b>
2017	<b>KlarText! Science Communication Award</b> from the Klaus Tschira Foundation for the best popular scientific presentation of outstanding PhD research in Germany <b>Capranica Prize</b> , awarded by the International Society for Neuroethology to a young investigator for a publication of outstanding significance <b>Young Scientist Award</b> , Society for Experimental Biology
2016	<b>Heiligenberg Award</b> , International Society for Neuroethology
2014	<b>Winner of the Famelab-Germany national final</b> (German branch of the international Famelab competition for science communication)
2012	<b>Winner Neurovision Film Contest</b> (greatest informational value), Munich, GER
2011	selected participant at the <b>61. Lindau Nobel Laureate Meeting</b>
2009-2012	Scholarship holder of the <b>Max Weber Stiftung</b> , Member of the <b>Elitenetzwerk Bayern</b>
2008-2012	Scholarship holder of the <b>Studienstiftung des Deutschen Volkes</b>
2008	Several awards at the <b>iGEM</b> (international genetically engineered machines) <b>competition</b> with the Heidelberg University team

## FUNDING

2020-2023	<b>Bavarian Academy of Sciences and Humanities</b> research stipend	36 000
2019-2022	<b>Deutsche Forschungsgemeinschaft</b> „Sachbeihilfe“ research grant	238 000
2019	<b>Bayrische Forschungsallianz</b> international cooperation grant	3900
2018 - 2020	<b>VolkswagenStiftung Das Experiment!</b> research grant	99 900
2018	<b>PostDoc Plus</b> research grant, Graduate School of Life Sciences Würzburg	4000
2018	<b>ICN Congress Travel Award</b> (declined) & <b>Young Investigator Award</b>	1400
2016	<b>Lars Hierta Memorial Foundation</b> travel grant	2000
	<b>Royal Swedish Academy of Sciences</b> travel grant	2000
2015	<b>Royal Physiographic Society of Lund</b> travel grant	1300
2008 - 2012	<b>Student scholarship</b> from <b>Studienstiftung des Deutschen Volkes</b>	45 000
		EUR

## PROFESSIONAL RESPONSIBILITIES

**Peer Reviewer for:** Journal of Experimental Biology, PLOS Computational Biology, Frontiers in Behavioral Neuroscience, Biology Letters, Journal of Comparative Physiology A

2020	<b>Co-Organiser of the Lepidopteran Satellite Symposium</b> at the International Congress of Neuroethology 2020 in Lisbon – postponed to 2021
2020	<b>Reviewer for the KlarText! Science Communication Award</b>
2019	<b>Reviewer for the iBiology Young Scientist Seminar Series</b>
2018	<b>Member of the Scientific Advisory Committee</b> for the International Conference on Invertebrate Vision 2019 in Bäckaskog
2016	<b>Co-Organizer</b> of the Lund University-wide 3 Minute Thesis competition.
2015-2016	<b>Main organizer</b> of the Biology in Lund Annual PhD student Meeting (BLAM)
2014-2016	<b>PhD student representative</b> in the Research Education Boards of the Department of Biology and Science Faculty at Lund University

## TEACHING

**Würzburg University**

- 2020 Co-organiser of the **Lecture and Seminar series** *Experimental Sociobiology* (Master), converted to eLearning
- 2019 - today **Seminar and Lecture** *Integrative Verhaltensbiologie I* (Bachelor)
- 2018 - today **Lectures** *Humanbiologie* (Lehramt)  
**Practical Course** *Integrative Verhaltensbiologie II* (Bachelor)  
**Lecture and Seminar** *Experimental Sociobiology* (Master)

**At Lund University**

- 2015-2019 Section: *popular science communication* in the preparatory course for Bachelor students
- 2016 **Lectures** in Neurobiology (*Resting Membrane & Action Potential, Neural Coding*)
- 2012-2016 **Course Assistant** for Laboratories in Neurobiology and Sensory Biology,
- 2014-2016 Zoology and Pharmacology at Lund University

**Summer Academies: Morality in Philosophy and Neuroscience**

- 7/2013 **Instructor** for Start Sommer Campus (1-week course)
- 6/2011 **Instructor** for Deutsche Schülerakademie (2-week course)

## SUPERVISION &amp; MENTORING

**Würzburg University**

- 2020-2023 **PhD student:** R. Bigge (spatial information processing in the hawkmoth lamina)
- 2020 **project assistant:** C. Drerup (*proboscis control during pattern probing in hawkmoths*)
- 2019 **master student:** R. Grittner (*allometric scaling of hawkmoths spatial*)  
**bachelor student:** A. Hahn (*spatial acuity of hawkmoth proboscis probing*)
- 2018 **biology education thesis** (Zulassungsarbeit): A. Böhm (*rearing hawkmoths at school*)

**Aalto University, Ala-Laurila Laboratory**

- 2017 - **PhD student** co-supervision & member of thesis advisory committee: N. Martyniuk (*four-cell patch-clamp recordings in the mouse retina*)
- 2017-2018 **master student** co-supervision: S. Narayanan (*4-electrode patch-clamp methodology*)

**Lund University, Vision Group**

- 2016 **master student** co-supervision: A. Dahake (*behavioural experiments on hawkmoths*)
- 2015-2016 **project student:** K. Kihlström (*3D neuron reconstructions & behavioural experiments*)

## SELECTED PUBLICATIONS

Publications: **15**Citations: **184**First Author: **13**h-index (i10): **8 (7)**

**Stöckl, A., O'Carroll, D.C., Warrant, E.J.** (2020) Hawkmoth lamina monopolar cells act as dynamic spatial filters to optimise vision at different light levels. *Science Advances*. 6: eaaz8645

**Stöckl, A., Grittner, R., Pfeiffer, K.** (2019) The role of lateral optic flow cues in hawkmoth flight control. *J Exp Biol*. 10.1242/jeb.199406

Dahake\*, A., **Stöckl\***, A., Sane, S. P. & Kelber, A. (2018) The roles of vision and antennal mechanoreception in hawkmoth flight control. *eLife* 7:e37606 (**\*equal contribution**)

**Stöckl, A., Smolka J., O'Carroll D., Warrant E.** (2017) Resolving the Trade-off Between Visual Sensitivity and Spatial Acuity—Lessons from Hawkmoths. *Int Comp Biol*. 10.1093/icb/icx058

**Stöckl, A., O'Carroll D., Warrant E.** (2017) Higher-order neural processing tunes motion neurons to visual ecology in three species of hawkmoths. *Proc R Soc London B*. 284:20170880

**Stöckl, A., Kihlström, K., Chandler, G.S., Sponberg, S.** (2017) Comparative system identification of flower tracking performance in three hawkmoth species reveals adaptations for dim light vision. *Phil Trans B*. 372: 20160078.

**Stöckl, A., O'Carroll D., Warrant E.** (2016) Neural summation in the hawkmoth visual system boosts contrast sensitivity and information rate in dim light. *Curr Biol*. 26: 821–826

**Stöckl, A., Ribi W., Warrant E.** (2016) Adaptations for nocturnal and diurnal vision in the hawkmoth

lamina. *J Comp Neurol.* 524: 160–175

**Stöckl, A.**, Heinze S., Charalabidis A., el Jundi, B., Warrant E., Kelber A. (2015) Differential investment in visual and olfactory brain areas predicts behavioural performance in hawkmoths. *Sci Reports.* 6: 26041

**Stöckl A.**, Sinz F., Grewe J., Benda J. (2014) Parallel encoding of communication signals in the weakly electric fish *Eigenmannia virescens*. *J Neurophysiol.* 112(9): 2076-2091.

## INVITED SPEAKER

- 2020 Symposium Speaker, Neuroethology Satellite Meeting, DZG, Jena, GER
- 2019 Symposium Speaker, Society for Experimental Biology Annual Meeting, Seville, SP  
Sokendai University, Hayama, Japan, invited by Dr. Kentaro Arikawa
- 2018 European Neuroscience Institute Göttingen, invited by Dr. Marion Silies  
Workshop Speaker, Bernstein Conference for Computational Neuroscience, Berlin  
Young Investigator Symposium, International Congress for Neuroethology, Brisbane, AU
- 2017 Young Scientist Award Session, Society for Experimental Biology Meeting, Goteborg, SWE  
Society for Integrative and Comparative Biology, New Orleans, USA, Spatial Vision Symposium
- 2015 Insect Vision Conference, Janelia Research Campus, Ashburn, USA
- 2016 Helsinki University, FIN, invited by Dr. Ala-Laurila
- 2015 Case Western University, Cleveland, USA, invited by Prof. Mark Willis
- 2014 Cornell University, USA, invited by Dr. Goyret
- 2012 International Congress for Neuroethology, Electric Fish Satellite, College Park, USA

## OUTREACH ACTIVITIES

### Workshops

- 2021 **Instructor and organiser** joint with Jens-Steffen Scherer : *Science communication* for the Bernstein Network Computational Neuroscience - postponed to 2021
- 2015-2019 **Instructor and organiser:** *How to prepare a 3 Minute popular scientific presentation*, for the biology department, the BLAM PhD student conference, the law faculty and the 3 Minute Thesis competition at Lund University

### Presentations

- since 2015 **Judge for the MINT-EC SchoolSlam**, GER
- 2020 17. Wiesbadener **Science Slam**, Wiesbaden, GER
- 2019 **Science Slam** at Würzburg University, GER
- 2018 12. Frankfurter **Science Slam** of the “Physikalischen Vereins”, Frankfurt, GER  
<https://www.youtube.com/watch?v=G52d7nc9Mis&t=7s>  
Presentation at STIFT **Teacher Conference**, Erfurt, GER
- 2017 Article for **KlarText Magazin: DIE ZEIT Mit guter Sicht gut durch die Nacht (german)** <https://www.youtube.com/watch?v=LogH7NSUU5g&t=106s>  
**Finalist at Skolar Award science pitching competition**, Slush, Helsinki, FI  
<https://www.youtube.com/watch?v=UA330Fck5QQ>
- 2016 **TED-Ed Videos**  
*Why the insect brain is so incredible* [www.ed.ted.com/lessons/why-the-insect-brain-is-so-incredible-anna-stockl](http://www.ed.ted.com/lessons/why-the-insect-brain-is-so-incredible-anna-stockl)  
*How do animals see in the dark* [www.ed.ted.com/lessons/how-do-animals-see-in-the-dark-anna-stockl](http://www.ed.ted.com/lessons/how-do-animals-see-in-the-dark-anna-stockl)
- 2015 **Hall of Famelab**, Natural History Museum, London, GBR.
- 2014 Presentation at **Famelab Hamburg, Famelab National Final**, Bielefeld, GER  
<https://www.youtube.com/watch?v=qTDFwfudiQ>  
and **Famelab International**, Cheltenham Science Festival, UK  
**Echoes of Famelab**, Prague Science Festival, CZE
- 2013 **Science Slam at Public Event**, Bernstein Conference, Tübingen, GER
- 2012 Presentations at **Famelab Munich** and **Famelab National Final**, Bielefeld, GER  
<https://www.youtube.com/watch?v=Uu6BNwJQJQc>
- 2009 Article in **Spektrum der Wissenschaft E.colizenz zum Töten (german)**