



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE: 4450

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at Dipartimento di Scienze Agrarie e Ambientali - Produzione, Territorio, Agroenergia

Scientist- in - charge: Prof. Giorgio Provolo

Lisette Leliveld

## CURRICULUM VITAE

### PERSONAL INFORMATION

Surname	Leliveld
Name	Lisette Maria Charlotte
Date of birth	17/03/1981

### PRESENT OCCUPATION

Appointment	Structure
None	-

### EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Biology (Propaedeutic diploma)*	Utrecht University (the Netherlands)	2000
Specialization	-		
PhD	Zoology	University of Veterinary Medicine Hannover (Germany)	2009
Master	Biology	Utrecht University	2005
Degree of medical specialization	-		
Degree of European specialization	-		
Other	Animal experimentation certificate (focus: pigs)	Berliner Kompaktkurse (Germany)	2018

\*At the time when I studied, the university system did not have a separate Bachelor and Master phase, but rather one complete study that was finished with a degree equivalent to Master. A Propaedeutic diploma was awarded after the first year of study.



## REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
09/07/2018	International society for applied ethology (ISAE)	Celle (West Central Europe)

## FOREIGN LANGUAGES

Languages	level of knowledge
Dutch	native
English	fluent
German	fluent
Italian	intermediate
French	intermediate

## AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2016	<b>Research funding:</b> European Commission's 7 <sup>th</sup> Framework Programme (ANIHWA ERA-Net). Duration: 3 years. Covered costs (German part): 130.793,77 €  I was a co-applicant for the project: SOUNDWEL (ID: 70) - Toward a tool for farmers to evaluate welfare states of pigs: measuring vocal indicators of emotions.
2014	<b>Research funding:</b> Deutsche Forschungsgemeinschaft (DFG). Duration: 2 years (extended to 4.5 years because of maternity leave). Covered costs: 125.879 €  I was a first applicant for the project: Functional lateralization in domestic pigs ( <i>Sus scrofa</i> ): Interactions with emotions and personality.
2004	<b>Research funding:</b> Lucie Burgers Foundation (1.250 €), The FONA Foundation for Research on Nature Conservation (300 €), KF Hein Foundation (1.000 €), Utrecht University (500 €). Duration: 7,5 Months. Covered Costs (total): 3.050 €.  I was a first applicant for the project: The timing of savannah burning and its influence on the grazing strategy of large grazers in Benoué National Park, Cameroon.

## TRAINING OR RESEARCH ACTIVITY

01/06/2012 05/09/2019	- <b>Post-Doctoral Research.</b> Leibniz Institute for Farm Animal Biology (FBN), Dummerstorf, Germany, Institute for Behavioural Physiology.
01/09/2011 30/04/2012	- <b>Post-Doctoral Research.</b> Teagasc - Agriculture and Food Development Authority, Ireland, Pig Development Department, Animal & Grassland Research & Innovation Centre.





08/05/2010 04/08/2010	- <b>Field assistance.</b> University of Veterinary Medicine Hannover, Germany, Institute of Zoology (Ankarafantsika National Park, Madagascar). Self-funded.
01/11/2009 30/04/2010	- <b>Post-Doctoral Research.</b> University of Veterinary Medicine Hannover, Germany, Institute of Zoology, Research Group Behaviour and Evolution.
01/10/2006 31/10/2009	- <b>PhD project.</b> University of Veterinary Medicine Hannover, Germany, Institute of Zoology, Research Group Behaviour and Evolution. Funded by the Marie Curie 6 <sup>th</sup> Framework Programme for Early Stage Research.

## PROJECT ACTIVITY

Year	Project
2016-now	SOUNDWEL (ID: 70) - Toward a tool for farmers to evaluate welfare states of pigs: measuring vocal indicators of emotions. Duration: ongoing. Funding: European Commission's 7 <sup>th</sup> Framework Programme (ANIHWA ERA-Net). Roles: co-applicant/ postdoctoral researcher
2014-2019	Functional lateralization in domestic pigs ( <i>Sus scrofa</i> ): Interactions with emotions and personality. Duration: 4.5 years (prolonged). Funding: Deutsche Forschungsgemeinschaft (DFG). Roles: first applicant/ coordinator/ postdoctoral researcher
2011-2012	Effect of low phosphorus diets on aspects of welfare and health of slaughter pigs and breeding sows. Duration: 8 months. Funding: Department of Agriculture, Food and the Marine, Ireland. Roles: postdoctoral researcher/ coordinator
2011-2012	Assessment of a solid-liquid separation system for pig manure and the influence of pig diet on composition of solid and liquid fractions. Duration: 8 months. Funding: Department of Agriculture, Food and the Marine, Ireland. Roles: postdoctoral researcher/ coordinator
2006-2009	Asymmetries in hand use and the perception of communication sounds in early primates ( <i>Microcebus spp.</i> ): effects of sex and experience. Duration: 3 years (PhD project, concluded with thesis) Funding: Marie Curie 6 <sup>th</sup> Framework Programme for Early Stage Research. Role: PhD student
2004-2005	The timing of savannah burning and its influence on the grazing strategy of large grazers in Benoué National Park, Cameroon. Duration: 7.5 months (Master project, concluded with thesis). Funding: Institute of Environmental Sciences Leiden, Netherlands, Lucie Burgers Foundation, The FONA Foundation for Research on Nature Conservation, KF Hein Foundation, Utrecht University. Role: master student
2004	The effect of an acute stressor on the spatial learning and memory in pigs. Duration: 4.5 months (Master project, concluded with thesis). Funding: Wageningen University and Research Centre, Netherlands. Role: master student
2003-2004	Implementation of the EU nature conservation policy in the (eastern European) new member states. Duration: 4.5 months (master project, concluded with thesis). Funding: Utrecht University, Netherlands. Role: master student
2002-2003	Quantifying reactive and proactive aggression in children's behaviour. Duration: 6 months (master project, concluded with thesis). Funding: Utrecht University, Netherlands. Role: master student





## PATENTS

Patent
none

## CONGRESSES AND SEMINARS

Date	Title	Place
2019	Briefer, EF; Linhart, P; Policht, R; Špinka M; <b>Leliveld, LMC</b> ; Düpjan, S; Puppe, B; Padilla de la Torre, M; Janczak, A; Bourguet, C; Deiss, V; Boissy, A; Coulon, M; Hillmann, E; Tallet, C. Vocal expression of valence in pigs across multiple call types and contexts (talk).	2 <sup>nd</sup> International Workshop on Vocal Interactivity in-and-between Humans, Animals and Robots, London, UK.
2019	<b>Leliveld, LMC</b> ; Düpjan, S; Tuchscherer, A; Puppe, B. Hemispheric specialisation for processing the communicative and emotional content of vocal communication signals in young pigs (talk).	53 <sup>rd</sup> Congress of the International Society for Applied Ethology, Bergen, Norway.
2019	Goursot, C; Düpjan, S; Tuchscherer, A; Puppe, B; <b>Leliveld, LMC</b> . Visual laterality and affective reactions in domestic pigs (talk).	53 <sup>rd</sup> Congress of the International Society for Applied Ethology, Bergen, Norway.
2019	Goursot, C; Düpjan, S; Kanitz, E; Tuchscherer, A; Puppe, B; <b>Leliveld, LMC</b> . Functional lateralization in pigs: Interactions with emotions and personality (poster).	CogEvo2019: Rovereto Workshop on Cognition and Evolution, Rovereto, Italy.
2019	<b>Leliveld, LMC</b> . Indicators of emotions - Lateralisation (invited talk).	PhD course: The fundamentals of animal emotions, Wageningen University, Wageningen, The Netherlands.
2019	<b>Leliveld, LMC</b> . Indicators of emotions - Vocalizations (invited talk).	PhD course: The fundamentals of animal emotions, Wageningen University, Wageningen, The Netherlands.
2018	Goursot, C; Düpjan, S; Tuchscherer, A; Puppe, B; <b>Leliveld, LMC</b> . Visual laterality and affective reactions in domestic pigs (talk; in German).	50. Internationale Tagung Angewandte Ethologie (International Conference on Applied Ethology), Freiburg, Germany.
2017	<b>Leliveld, LMC</b> . Laterality and animal welfare: examples from pigs and other vertebrates (seminar).	Ruhr-Universität Bochum, Bochum, Germany.
2017	<b>Leliveld, LMC</b> . Laterality and animal welfare: examples from pigs and other vertebrates (seminar).	Leibniz-Institute for Farm Animal Biology, Dummerstorf, Germany.



2016	<b>Leliveld, LMC.</b> Acoustic communication in captive animals ( <b>invited talk</b> ).	Sound and the City (Workshop), University of Turin, Turin, Italy.
2016	<b>Leliveld, LMC; Düpjan, S; Puppe, B.</b> Laterality and animal welfare: examples from pigs and other vertebrates ( <b>invited talk</b> ).	5 <sup>th</sup> North Sea Laterality Meeting, Groningen, Netherlands.
2016	<b>Leliveld, LMC; Düpjan, S; Puppe, B.</b> Laterality and animal welfare: examples from pigs and other vertebrates ( <b>Keynote talk in symposium on laterality in vertebrates</b> ).	8 <sup>th</sup> European Conference on Behavioural Biology, Vienna, Austria.
2016	Goursot, C; Düpjan, S; Kalbe, C; Kanitz, E; Puppe B; Tuchscherer, A; <b>Leliveld, LMC.</b> Investigating motor lateralisation patterns in domestic pigs ( <i>Sus scrofa</i> ) ( <b>poster</b> ; in German).	48. Internationale Tagung Angewandte Ethologie (International Conference on Applied Ethology), Freiburg, Germany.
2016	Goursot, C; Düpjan, S; Kalbe, C; Kanitz, E; Puppe B; Tuchscherer, A; <b>Leliveld, LMC.</b> Investigating motor lateralisation patterns in domestic pigs ( <i>Sus scrofa</i> ) ( <b>poster</b> ).	8 <sup>th</sup> European Conference on Behavioural Biology, Vienna, Austria.
2015	<b>Leliveld, LMC; Düpjan, S; Tuchscherer, A; Puppe, B.</b> Anticipation of mildly positive and negative stimuli in juvenile fattening pigs ( <b>talk</b> ; in German).	47. Internationale Tagung Angewandte Ethologie (International Congress on Applied Ethology), Freiburg, Germany.
2015	<b>Leliveld, LMC.</b> Behavioural methods for studying emotions and personality in pigs ( <b>seminar</b> ).	University of Rennes, Rennes, France.
2014	<b>Leliveld, LMC.</b> Behavioural methods for studying emotions and personality in pigs ( <b>seminar</b> ).	ETH Zurich, Zurich, Switzerland.
2012	<b>Leliveld, LMC; Fiszka, P; Nolan, T; Lynch, PB; O'Doherty, JV; Lawlor, PG.</b> Liquid pig manure composition on a small sample of Irish farms ( <b>talk</b> ).	Agricultural Research Forum, Tullamore, Ireland.
2010	<b>Leliveld, LMC; Scheumann, M; Zimmermann, E.</b> Studies on mouse lemurs ( <i>Microcebus spp.</i> ): Handedness and acoustic communication ( <b>invited talk</b> ).	Workshop of the European Association of Zoo and Wildlife Veterinarians, Göttingen, Germany.
2010	<b>Leliveld, LMC.</b> Asymmetries in hand use and the perception of communication sounds in early primates ( <i>Microcebus spp.</i> ): effects of sex and experience ( <b>seminar</b> ).	University of Veterinary Medicine Hannover, Hannover, Germany.
2009	<b>Leliveld, LMC; Scheumann, M; Zimmermann, E.</b> Acoustic correlates to individuality in the	7 <sup>th</sup> International Conference on Behaviour, Physiology and Genetics of Wildlife, Berlin, Germany.





	vocal repertoire of a nocturnal lemur ( <i>Microcebus murinus</i> ) (talk).	
2009	Leliveld, LMC; Scheumann, M; Zimmermann, E. Individual signatures in communication calls of a nocturnal lemur ( <i>Microcebus murinus</i> ) (poster).	31 <sup>st</sup> International Ethological Conference, Rennes, France.
2009	Leliveld, LMC; Schopf, C; Scheumann, M; Zimmermann, E. Individual cues in vocalisations across the vocal repertoire of two mouse lemur species (talk).	11 <sup>th</sup> Meeting of the Gesellschaft für Primatologie, Hannover, Germany.
2009	Leliveld, LMC; Scheumann, M; Zimmermann, E. Do ancestral primates have handedness (poster).	Marie Curie Monitoring of DE-EST contracts, Bonn, Germany.
2008	Leliveld, LMC; Scheumann, M; Zimmermann, E. Individual signatures in communication calls of a nocturnal lemur ( <i>Microcebus murinus</i> ) (poster).	International Primatological Society XXII Congress, Edinburgh, Scotland.
2008	Leliveld, LMC; Scheumann, M; Zimmermann, E. Individual signatures in communication calls of a nocturnal lemur ( <i>Microcebus murinus</i> ) (poster).	International Conference on Vocal Communication in Birds and Mammals, St Andrews, Scotland.
2008	Leliveld, LMC; Scheumann, M; Zimmermann, E. Do ancestral primates have handedness (poster).	Marie Curie Conference, Barcelona, Spain.
2007	Leliveld, LMC; Scheumann, M; Zimmermann, E. Manual lateralization in early primates: a comparison of two mouse lemur species (talk).	30 <sup>th</sup> International Ethological Conference, Halifax, Canada.
2007	Leliveld, LMC; Scheumann, M; Zimmermann, E. Manual lateralization in early primates: a comparison of two mouse lemur species (poster).	Brainstorming 3: Stroke and Traumatic brain injury, Hannover, Germany.

## PUBLICATIONS

### Books

**Book chapter:** Zimmermann, E.; Leliveld, LMC; Schehka, S. Toward the evolutionary roots of affective prosody in human acoustic communication: A comparative Approach to mammalian voices. In: Altenmüller E, Schmidt S Zimmermann E, editors. Evolution of emotional communication: from sounds in nonhuman mammals to speech and music in man, Oxford, UK: Oxford University Press; p. 116-32 (2013) DOI: 10.1093/acprof:oso/9780199583560.003.0008

### Articles in reviews

**Leliveld, LMC.** From science to practice: A review of laterality research on ungulate livestock. Symmetry, Basel, Switzerland: MDPI; Vol. 11(9) 1157 (2019) DOI: 10.3390/sym11091157





- Goursot, C; Düpjan, S; Tuchscherer, A; Puppe, B; Leliveld, LMC. Visual laterality in pigs: Monocular viewing influences emotional reactions in pigs. *Animal Behaviour*, Amsterdam, the Netherlands: Elsevier; Vol. 154, 183-192 (2019) DOI: 10.1016/j.anbehav.2019.06.021
- Goursot, C; Düpjan, S; Kanitz, E; Tuchscherer, A; Puppe, B; Leliveld, LMC. Assessing animal individuality: links between personality and laterality in pigs (*Sus scrofa*). *Current Zoology*, Oxford, UK: Oxford University Press; 65, 541-551 (2019) DOI: 10.1093/cz/zoy071
- Goursot, C; Düpjan, S; Tuchscherer, A; Puppe, B; Leliveld, LMC. Behavioural lateralisation in domestic pigs (*Sus scrofa*) - variations between motor functions and individuals. *Laterality*, Abingdon, UK: Taylor & Francis Online; Vol. 23:5, 576-598 (2018) DOI: 10.1080/1357650X.2017.1410555
- Leliveld, LMC; Düpjan, S; Tuchscherer, A; Puppe, B. Vocal correlates of emotional reactivity within and across contexts in domestic pigs (*Sus scrofa*). *Physiology & Behavior*, Amsterdam, the Netherlands: Elsevier; Vol. 181, 117-126 (2017) DOI: 10.1016/j.physbeh.2017.09.010
- Leliveld, LMC; Düpjan, S; Tuchscherer, A; Puppe, B. Behavioural and physiological measures indicate subtle variations in the emotional valence of young pigs. *Physiology & Behavior*, Amsterdam, the Netherlands: Elsevier; Vol. 157, 116-124 (2016) DOI: 10.1016/j.physbeh.2016.02.002
- Kessler, SE; Radespiel, U; Hasiniaina, AIF; Leliveld, LMC; Nash, LT; Zimmermann, E. Modeling the origins of mammalian sociality: moderate evidence for matrilineal signatures in mouse lemur vocalizations. *Frontiers in Zoology*, London, UK: Biomed Central; Vol. 11:14 (2014) DOI: 10.1186/1742-9994-11-14
- Leliveld, LMC; Langbein, J; Puppe, B. The emergence of emotional lateralization: evidence in non-human vertebrates and implications for farm animals. *Applied Animal Behaviour Science*, Amsterdam, the Netherlands: Elsevier; Vol. 145, 1-14 (2013) DOI: 10.1016/j.applanim.2013.02.002
- Leliveld LMC; Riemensperger, AV; Gardiner, GE; O' Doherty, JV; Lynch, PB; Lawlor, PG. 2013. Effect of weaning age and post weaning feeding programme on the growth performance of pigs to 10 weeks of age. *Livestock Science*, Amsterdam, the Netherlands: Elsevier; Vol. 157, 225-233 (2013) DOI: 10.1016/j.livsci.2013.06.030
- Leliveld, LMC; Scheumann, M; Zimmermann, E. Acoustic correlates of individuality in the vocal repertoire of a nocturnal primate (*Microcebus murinus*). *Journal of the Acoustical Society of America*, Melville (NY), USA: AIP Publishing; Vol. 129 (4), 2278-2288 (2011) DOI: 10.1121/1.3559680
- Scheumann, M; Joly-Radko, M; Leliveld, LMC; Zimmermann, E. Does body posture influence hand preference in an ancestral primate model? *BMC Evolutionary Biology*, London, UK: Biomed Central; Vol. 11, 52 (2011) DOI: 10.1186/1471-2148-11-52
- Leliveld, LMC; Scheumann, M; Zimmermann, E. Effects of caller characteristics on auditory laterality in an early primate (*Microcebus murinus*). *PLoS ONE*, San Fransico (CA), USA: Public Library of Science; Vol. 5 (2): e9031 (2010) DOI: 10.1371/journal.pone.0009031
- Leliveld, LMC; Scheumann, M; Zimmermann, E. Manual lateralization in early primates: a comparison of two mouse lemur species. *American Journal of Physical Anthropology*, Hoboken (NJ), USA: Wiley; 137 (2), 156-163 (2008) DOI: 10.1002/ajpa.20852

## Congress proceedings

Briefer, EF; Linhart, P; Policht, R; Špinka, M; Leliveld, LMC; Düpjan, S; Puppe, B; Padilla de la Torre, M; Janczak, A; Bourguet, C; Deiss, V; Boissy, A; Coulon, M; Hillmann, E; Tallet, C. Vocal expression of valence in pigs across multiple call types and contexts. *Proceedings of VIHAR 2019: the 2nd International Workshop on Vocal Interactivity in-and-between Humans, Animals and Robots*, London, UK. Published in *PeerJ Preprints* (2019) DOI: 10.7287/peerj.preprints.27934

Goursot, C; Düpjan, S; Tuchscherer, A; Puppe, B; Leliveld, LMC. Visuelle Lateralisation und affektive Reaktionen beim Hausschwein. 50. Internationale Tagung Angewandte Ethologie (International Congress on Applied Ethology), Freiburg, Germany. Published in *KTBL-Schrift 514*, 273-275 (2018).





Leliveld, LMC; Düpjan, S; Tuchscherer, A; Puppe, B. Antizipation von mild positiven und negativen Reizen bei jungen Mastschweinen. 47. Internationale Tagung Angewandte Ethologie (International Congress on Applied Ethology), Freiburg, Germany. Published in KTBL-Schrift 510, 70-81 (2015).

## OTHER INFORMATION

### Contact details of references:

1. Prof. Dr. Birger Puppe  
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Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: Vall'alta di Albino (BG), 12/01/2020

SIGNATURE