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Spatial and temporal characteristics of the fish lateral line detection

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Acknowledgements

I always wanted to write a book. I had plenty of ideas about the social behaviour of people, some interesting life stories and so on. I never thought that it would be a booklet about science and especially not about an organ enabling a sense that humans actually don't have – the detection of underwater objects both stationary and moving by the lateral line organ. Here, I won't write fairytales, though I had in mind a fable before realising I could get jumped by some animal rights group. Therefore, I will write a serious acknowledgement (even though this booklet would never have been written if I hadn't worked so hard on gathering data and putting it all together). However, life brought me to unexpected areas so at this point I am thanking people who have helped in creating this PhD thesis. There are plenty of them who should be mentioned and as usual there is not enough room (or this paragraph would look more like a list from a telephone directory) to mention them all. Therefore, to begin with I would like to thank all the people who are not named below but who have been very helpful in creating this thesis.

In first place, winning the competition for the greatest contribution and the best daily supervising is my co-promotor Sietse van Netten. Without your guidance my brain would probably operate in a different mode. All those formulae would have different functions if you hadn't shown me how to visualise them. I highly admire your ability to incorporate hard-core physics in neuroscience such that it still makes sense to biologists. You helped me to understand fluid mechanics and to see it from a different, more practical point of view. Sietse, thanks a lot for all your help, guidance, lessons, discussions and ideas regarding the whole PhD project.

Working on a PhD project is more than just learning the scientific facts and obtaining the scientific findings and conclusions presented in the thesis. A PhD training should help in building up scientific and analytical thinking, learning to study everything with a critical eye and developing a strong attitude. My promotor Doekele directed me to realise that and to develop these skills.

The best colleague and office mate title belongs to Theo Dinklo. Theo helped me scientifically, practically and even emotionally to pass through the first year of PhD work. Thanks for all your clear and easy to follow instructions regarding experimental work : patch clamp, cell functioning, micro-pipette and fluid jet techniques and more. Your explanations about the Dutch system and being a friend in times

of need helped me in my first year abroad. All that without asking for anything in return makes me owe you a lot.

My paranimf not to be, Diana Dulic, has been the most important person outside the neurobiophysics group during this project. Professionally listening to and correcting my first talks, helping me to straighten and make clearer my ideas, and advising me strategically, Diana contributed a lot to rounding off this PhD thesis. On the social plane Groningen would have been a nightmare in the first weeks if Diana had not been around. Instead, those first years in Groningen were probably the happiest years of my life. Diana, thank you also for making me understand that everything that is good is never good for everybody!

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When one is little one doesn't know, but learns it with time, that one's teachers have also their teachers. Alfons Kroese, thank you for useful comments and suggestions regarding Sietse's and my publications.

Work on this thesis was partially financed through BCN with Diana Koopmans as a student co-ordinator. As a part of the BCN training, the GOSIP group had the greatest influence on my presentation and language skills – those that are most important to sell scientific work.

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My paranimfen Sonja and Andrija belong to the categories of both work-related and after working hours-related support. Sonjichen, after you entered the BMT group in our corridor, my hopes of mastering Dutch were washed away with the rain. Thanks for making those coffee breaks understandable and interesting. Thanks for information about various events, good tips, and encouragement when I needed it. Even though I thought that my life was socially rich, after your arrival I met a ton of new interesting people. My second paranimf – Andrija – brought a hurricane

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called Alarm evoking the need for ear plugs but I must admit – also a smile on my face! Thanks for making me both angry and laugh.

Living abroad where one knows only work-related people who explain that they never socialise after work would be very difficult without friends to keep company with. Luckily, Groningen is a great student city where I met and dined with a huge number of very interesting people coming from all continents. All of them brought me inside their cultures, especially their cuisine, and made me a happy person. I would like to mention first my best friends Sonja and Diana, then my Russian mob with Yue, Alya, Yura, Denis, Nikos, Maria and Ralf; people from the solid state physics and chemistry groups including Karina, Mark, Wilma, Michele, Patricio & Anita, Gabi, Diana R., Tjipke and others; the tropical fruit family including Mango, Ananas, Mela & Kiwi, and Limuna with Tito; the Noorderstationstraat mob including Paola & Gilles, Lara, Karol and Marco; the Delft group with Jelena as leader; the Dutch course people; the film society & Spanish lessons padre and madre; my Gangistan compatriots; the beautiful French mob – typical duck eaters; the ex-YU group that is getting larger and larger – at least somewhere we are becoming a majority; the volleyball people; the Boon family; my Camphuysenstraat neighbours starting with Mr and Mrs Žagar – Vujičić, ending at Mevrouw Witska's door and extending to Jovanović street; the Romanian mob; artistic people from the hofje; and for the most delicious evenings and stars on the dark sky of Groningen, or rather the stomach eliminator with laugh injections : the preferans squad with the star player Mladen.

As is usual at this point, I will also thank my parents because they brought me into this world and did the hard work of raising me. To my father, special thanks for the cover illustration.

Working with all those fishes helped me seriously in life: I fetched my own special fish! I am not sure if I should be more grateful to this PhD project for meeting Graeme, or to Graeme not only for offering me support and help with English which are directly useful for the thesis but also for making all days no matter what the weather is like outside look sunny. And then there is now Danilo, but there are years in front of us for me to show what I feel for him.