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Curriculum vitae

My interests in astronomy began at primary school when I was first introduced to astronomy during geography lessons. A few years later I attended a summer camp organized by a Polish astronomy club 'Almukantarat', which demythologized for me the job of an astronomer and that is when – at the age of 15 – I decided to pursue this career path.

I was very lucky to have many 'hands-on' experiences with research already in my high school years. The most important was a participation in the 'Semi-Automatic Variability Search' project in Piwnice, where we surveyed the northern sky to search for new variable stars and analyzed in more detail some short-period close binary systems such as W UMa type stars. I also visited many times the Observatory at the Mount Suhora to observe and model such multiple systems. The results were presented in a series of (short) papers and some conferences and competitions for high-school students, such as 'Ogólnopolskie Młodzieżowe Seminarium Astronomiczne', 'European Union Contest for Young Scientists', and 'First Step to Nobel Prize in Physics'. All of those experiences convinced me that there is no better job for me than becoming a professional astronomer.

In 2004-2009 I studied astronomy in Toruń, the birthplace of Nicolaus Copernicus and, for good reasons, a twin city of Leiden. From very early on, all the students were encouraged to optical observations and thus during this period I focused on observations of symbiotic variable stars and novae. After my 2nd year of studies I had an opportunity to participate in a summer project at the Notre Dame University in the USA (as part of the Research Experience for Undergraduates). As part of this project I made photometric observations of white dwarfs at the Vatican Observatory on Mount Graham in Arizona. The subsequent summer, I got my first experience with infrared data at Denver University, working on the *Spitzer* images of dust shells around evolved stars. My Master thesis back in Poland focused on comparisons of infrared properties of planetary nebulae in the Milky Way and Large Magellanic Clouds using the ISO spectra, the *Spitzer* photometry and the CLOUDY photoionization code. At this point, I anticipated the amazing improvement in the data quality that will be offered by the new far-infrared telescope *Herschel* and looked for PhD projects based on those data.

I was fortunate to get a position in the group led by Ewine van Dishoeck in Leiden and Garching as part of the 'Water in star-forming regions with Herschel' (WISH) project. Since I was going to work on the data specifically from the PACS instrument, built at MPE in Garching, I was supposed to spend the first three years in Garching and then move for the final year to Leiden. My personal life led to the modification of those plans – with two small children born during the PhD and a good job of my husband at the Technische Universität in Garching, so we decided to stay in Germany until the end of my PhD.

The pace of my PhD was 'measured' by participation in the *Herschel* group meetings, including 6 WISH only team meetings (5× in Leiden, 1 in Toledo, and 1 in Ringberg), 1 DIGIT team meeting in Pasadena, and 1 joined meeting at the Lorentz Center in Lei-

den. Together with regular telecons and shorter meetings during the conferences, this has been a very tight, fruitful and inspiring collaboration. Apart from the team meetings, I presented my results at several conferences: in Garching, Ringberg, Toledo, Grenoble, and Noordwijk. I also attended two interferometry summer schools, in Grenoble and Rimini, and participated in the joint Max-Planck and Dutch observing run at the APEX telescope in Chile. I enjoyed a lot the annual Star Formation Workshop at ESO and the Leiden-Garching group retreats, and the biannual MPE / Infrared Group retreats.

From October, I will start a position in the Adam Mickiewicz University in Poznań (Poland) as an assistant professor of astrophysics and the principal investigator of the PRELUDIUM grant of the National Science Center.

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Doing a PhD is a challenging experience, with long periods of 'invisible' work (not always progress..) and just a few moments of glory that we have to learn how to appreciate properly. I was very lucky to have a supportive group of collaborators and colleagues that helped me to become motivated and ambitious despited the difficulties. Certainly the biggest challenge in the last few years was not that much the science itself (I cannot complain on the quality of the *Herschel* spectra!), but the balance between the PhD workload and my growing family.

At the very beginning of my PhD I got pregnant and 9.5 months later gave birth to my son Maciej (on June 24th, 2010). It was not an easy start and I felt very insecure about the whole situation. I would not have survived this challenge, of combining a motherhood with a PhD, if not for many, many discussions with Greg, Linda, and Amelie at MPE, and Lars in Leiden. A very supportive approach of my employers, and the WISH and DIGIT teams, including the policy to secure the data for PhD students, helped enormously. A place in the institute's nursery for Maciej and additional financial support from the Max-Planck Society, the German government and the Christiane Nüsslein-Volhard-Foundation made it possible for me to continue my PhD. It also encouraged me to have a second baby, Joanna (born on May 31st, 2013), who has luckily stayed at home with my husband for the entire first year of her life (paternity leaves are fantastic!).

From the science point of view, I highly benefited from the meetings of the WISH and DIGIT teams, with their friendly atmosphere and collaborative effort to make the best possible science. Science is currently more competitive than ever but I did not feel it when interacting with my fantastic collaborators. Many people contributed to my papers and I am very indebted to all of them for all the small and big comments. In particular, I would like to thank Lars Kristensen and Gregory Herczeg, at the time post-docs in Leiden and Garching, who helped me to develop as a scientist, never stopped supporting me in the hard times and probably had the largest impact on my papers (together with 'those who only do their job' and cannot be mentioned explicitly here). I learned a lot and also enjoyed the collaboration with Simon Bruderer, Susanne Wampfler, Fabrice Herpin, Davide Fedele, Joe Mottram, Javier Goicoechea, and many many other WISH and DIGIT people. I would also like to acknowledge the support from some of the PACS team members on the corridor, in particular Albrecht Poglitsch, Eckhard Sturm, Helmut Feuchtgruber, Alessandra Contursi, and Javier Graciá Carpio.

It is always useful to chat with other PhD students suffering from the same or similar frustrations, be it science or life. In many cases the common experience leads to the life-long friendships. I owe a lot to Nienke van der Marel and Irene San José-García (my dear paranymphs!), Annemieke Jansen (thank you for translating the Dutch summary!), Daniel Harsono (so nice to wrap-up the thesis and organize the defense together!), Umut Yıldız (my HIFI and APEX expert), Heike Modest (I wouldn't make the room for children if

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“We gain strength, and courage, and confidence by each experience in which we really stop to look fear in the face... we must do that which we think we cannot."

– Eleanor Roosevelt