Quantifying nucleosome dynamics and protein binding with PIE-FCCS and spFRET

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Publications

spFRET reveals changes in nucleosomal breathing by neighbouring nucleosomes. R. Buning, W. Kropff, **K. Martens** and S.J.T. van Noort. *J Phys: Condens Matter, 2015, 27(6)*

Reliability and accuracy of single-molecule FRET studies for characterization of structural dynamics and distances in proteins. G. Agam, C. Gebhardt, M. Popara, R. Mächtel, J. Folz, B. Ambrose, N. Chamachi, T.D. Craggs, M de Boer, D. Grohmann, T. Ha, A. Hartmann, J. Hendrix, V. Hirschfeld, C.G. Hübner, T. Hugel, C. Jackers, D. Kammerer, H. Kang, A. Kapanidis, G. Krainer, K. Kramm, E. Lemke, E. Lerner, E. Margeat, **K. Martens**, J. Michaelis, J. Mitra, G.G. Moya Muñoz, R. Quast, N. Robb, M. Sattler, M. Schlierf, J. Schneider, T. Schröder, A. Sefer, P.S. Tan, J. Thurn, P. Tinnefeld, S.J.T. van Noort, S. Weiss, N. Zijlstra, A. Barth, C.A.M. Seidel, D.C. Lamb, T. Cordes. *Biorxiv, 2022. Submitted to Nature Methods.*

Curriculum Vitae

I was born on January 8^{th} 1985 in Nijmegen, the Netherlands. I attended primary and high school in Tegelen and Venlo (Gymnasium, Collegium Marianum). In 2003 I moved to Leiden to study Astronomy and after one year switched to Chemistry. During my bachelors I followed several courses in Mathematics, was active in many committees of the study association De Leidsche Flesch, and became member of her board for educational and study activities in 2006-2007. My bachelor internship was performed in the Theoretical Chemistry group of prof. Kroes on modelling scattering of H_2 over Cu using potential energy surfaces. In 2010 I started my master Biological Chemistry with electives in mathematical biology, natural computing and neurocognition. I performed an *in silico* study on the binding and interaction of stress hormone receptors GR and MR at the Medical Pharmacology group of prof. de Kloet, and an experimental study of nucleosome dynamics at the Biophysics group of prof. van Noort.
After obtaining my masters degree in 2012 I started working at the Leiden Institute of Chemistry as a policy officer and project coordinator for the national Cyttron II consortium. In 2014 I returned to the group of prof. van Noort for a PhD position to characterize DNA-GR interactions in chromatin using FCCS and spFRET. I presented my work at national and international conferences, seminars, winter, spring and summer schools. I assisted in bachelor and master courses on experimental and theoretical Biophysics and Molecular Quantum Chemistry, and (co-)supervised several bachelor and master students.
In 2019 I took up the role of research policy officer in the academic affairs department under the board and dean of the Science faculty; end of 2021, I switched to NWO to the position of programme coordinator.

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