

**British-German WE-Heraeus-Seminar "Astrophysical Windows on Dark Matter"
Royal Society, Kohn Centre, London (3-5 November, 2021)**

Wednesday, 3 November 2021 (GMT)

<i>Session 1. Chair – Carlos Frenk</i>		
9:15 – 9:30	Carlos Frenk/ Jürgen Mlynek/ Stefan Jorda	Welcome / About the Wilhelm and Else Heraeus- Foundation
9:30 – 10:15	Gianfranco Bertone	A New Era in the Quest for Dark Matter
10:15 – 11:00	Chris McCabe	Astrophysical Constraints on Dark Matter Detection
11:00 – 11:30	<i>COFFEE</i>	
11:30 – 12:15	Francesca Calore	Astrophysical Inputs and Current Constraints from Indirect Dark Matter Detection
12:15 – 1:00	Tracy Slatyer	The Gamma-Ray Excess from the Galactic Centre
12:55 – 2:00	<i>LUNCH</i>	
<i>Session 2. Chair – Anne Green</i>		
2:00 – 2:20	Katie Mack	Dark Matter Annihilation and the First Structures
2:20 – 2:50	Alexander Murphy	Recent Results and the Future of Direct Searches for Particle Dark Matter
2:50 – 3:30	Andrew Robertson	Self-Interacting Dark Matter
3:30 – 4:00	<i>COFFEE</i>	
4:00 – 4:45	Alexey Boyarsky	Warm Dark Matter
4:45 – 5:30	Elisa Ferreira	Fuzzy Dark Matter
5:30 – 5:50	Francesca Chadha-Day	Astrophysical Windows on the String Axiverse
5:50 – 6:10	Dan Hooper	Dark Radiation and Superheavy Dark Matter from Hawking Evaporation of Primordial Black Holes

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Thursday, 4 November 2021 (GMT)

<i>Session 3. Chair – Andrew Robertson</i>		
9:30 – 10:15	Catherine Heymans	Weak Gravitational Lensing as a Probe of Dark Matter
10:15 – 11:00	Simona Vegetti	Strong Gravitational Lensing as a Probe of Dark Matter
11:00 – 11:30	<i>COFFEE</i>	
11:30 – 12:15	Denis Erkal	Dark Matter Halo Detection from Gaps in Tidal Streams
12:15 – 12:35	James Nightingale	Constraining the Dark Matter Particle with Strong Gravitational Lensing
12:35 – 12:55	Devon Powell	Visibility-Space Model Comparison for Global VLBI Observation of Strongly Lensed Quasar MG J0751+2716
12:55 – 2:00	<i>LUNCH</i>	
<i>Session 4. Chair – Volker Springel</i>		
2:00 – 2:45	Simon White	The Smallest Dark Matter Halos and their Annihilation Radiation
2:45 – 3:05	Martin Haehnelt	Constraining the Nature of Dark Matter Using the Lyman-Alpha Forest
3:05 – 3:25	Malcolm Fairbairn	Searching for Lumpy and Clumpy Dark Matter
3:25 – 4:00	<i>COFFEE</i>	
4:00 – 4:45	Andrew Pontzen	The Core-Cusp Controversy: Theory and Observations
4:45 – 5:05	Kyle Oman	Baryon-Induced Dark Matter Cores Struggle to Explain the Diversity of Dwarf Galaxy Rotation Curves
5:05 – 5:25	Francesca Fragkoudi	On the Tension between Bar Dynamics and the LCDM Cosmological Paradigm
5:25 – 6:10 Discussion	Mark Lovell, Giulia Despali, Nicola Amorisco	What Is the Best Probe for Dark Subhalos: Lensing, Gaps or Something Else?

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Friday, 5 November 2021 (GMT)

<i>Session 5. Chair – Anna Genina</i>		
9:30 – 10:15	Alejandro Benitez-Llambay	Baryon Deficient Galaxies - Dark Galaxies as a Probe of Dark Matter
10:15 – 11:00	Till Sawala	Lessons About Dark Matter from Satellite Galaxies
11:00 – 11:30	<i>COFFEE</i>	
11:30 – 12:15	Noam Libeskind	Cosmography of the Local Universe
12:15 – 1:00	Matthias Steinmetz	Dark Matter Structure in the Milky Way after Gaia
1:00– 1:55	<i>LUNCH</i>	
<i>Session 6. Chair – Simon White</i>		
1:55 – 2:15	Bradley Kavanagh	Detecting and Measuring Dark Matter around Black Holes with Gravitational Waves
2:15 – 3:00 Discussion	Justin Read, Azi Fattahi, Anna Genina	Dwarf Galaxies as Probes of Dark Matter
3:00 – 3:15	<i>COFFEE</i>	
3:15 – 4:00 Discussion	Sownak Bose, Louie Strigari, Alex Murphy	How Will We Convince the World that We've Detected the Dark Matter (if We Do)?
4:00		End of the Seminar