

# New Perspectives on Galactic Magnetism

June 10<sup>th</sup>-14<sup>th</sup> 2019, Newcastle Upon Tyne, UK

## **Monday June 10<sup>th</sup>**

11:30-12:50	Registration in Robert Boyle Lecture Theatre	
12:50-13:00	Opening Remarks	Andrew Fletcher
13:00-13:30	Magnetic fields in external galaxies	George Heald
13:30-13:50	The radio continuum view on galactic winds	Volker Heesen
13:50-14:10	Magnetic fields in the halo of spiral galaxies seen edge-on - as deduced from CHANG-ES	Marita Krause
14:10-14:30	Magnetized disk-halo transition region of M51	Maja Kierdorf
14:30-15:10	Coffee & Posters	
15:10-15:50	Dynamo theory	Kandu Subramanian
15:50-16:10	Physical aspects of turbulent dynamos	Anvar Shukurov
16:10-16:30	Magnetic fields in elliptical galaxies	Amit Seta
16:30-16:50	Synthesizing theory and observation to understand galactic magnetic fields	Luke Chamandy
16:50-17:10	Discussion	

## **Tuesday June 11<sup>th</sup>**

09:00-09:40	Large-scale magnetic fields and the Milky Way ISM	Tess Jaffe
09:40-10:00	Probing Galactic magnetic field using radio observations of absorbed HII regions	Irene Polderman
10:00-10:20	Radio broadband Faraday depth grid towards the Milky Way field reversal region	Yik Ki (Jackie) Ma
10:20-11:00	Coffee & Posters	
11:00-11:40	Galactic Center magnetic fields	Cornelia Lang
11:40-12:00	High-latitude synchrotron polarization and the local interstellar field	Paddy Leahy
12:00-12:20	Low frequency Faraday rotation measure towards pulsars using LOFAR: probing the 3-D Galactic halo magnetic field	Charlotte Sobey

12:20-12:40	Discussion	
12:40-14:00	Lunch	
14:00-14:30	Low-frequency polarimetry	Cameron Van Eck
14:30-14:50	The Global Magneto-Ionic Medium Survey	Tom Landecker
14:50-15:10	Revealing the magneto-ionic structure of the nearby ISM with GMIMS Faraday tomography	Alec Thomson
15:10-15:50	Coffee & Posters	
15:50-16:10	Observations of the interaction between HVCs of neutral hydrogen and the Galactic magnetic field	Roland Kothes
16:10-16:30	GMIMS and the Polarization Horizon	Alex Hill
16:30-16:50	Synthetic spectro-polarimetric observations of MHD turbulence in the ISM	Aritra Basu
16:50-17:10	Discussion	

### **Wednesday June 12<sup>th</sup>**

09:00-09:40	Small-scale magnetic fields and the Milky Way ISM	Marijke Haverkorn
09:40-10:00	The Zeeman effect as a tracer of magnetic fields in the Milky Way and beyond	Tim Robishaw
10:00-10:20	Linking scales of Galactic magnetism: star forming fields traced by maser Zeeman splitting	Chikaedu Ogbodo
10:20-11:00	Coffee & Posters	
11:00-11:30	Polarized filaments	Vibor Jelic
11:30-11:50	The magnetic interstellar medium in three dimension	Susan Clark
11:50-12:10	Radio Polarimetry and 21 cm HI as a Probe of Galactic Magnetism	Jessica Campbell
12:10-12:30	Magnetic helicity from the Local Bubble	Katia Ferrière
12:30-12:50	Discussion	
12:50-14:00	Lunch	
14:00-14:20	The LOFAR Magnetism Key Science Project	Cathy Horellou
14:20-15:00	Broadband polarimetry at m, cm and mm wavelengths	Shane O'Sullivan
15:00-19:30	Free afternoon to explore	
19:30-	Conference Dinner: Turknaz in Whitney Bay	

**Thursday June 13<sup>th</sup>**

09:00-09:40	Cosmic rays - Propagation	Carmelo Evoli
09:40-10:10	Cosmic ray acceleration & SNR	Tony Bell
10:10-10:50	Coffee & Posters	
10:50-11:30	Dynamo & MHD simulations	Rüdiger Pakmor
11:30-11:50	Large-scale dynamos at high magnetic Reynolds numbers and helicity fluxes	Pallavi Bhat
11:50-12:10	How cosmic rays shape galaxies	Christoph Pfrommer
12:10-12:30	Modeling CR electron propagation and synchrotron emission from CR-driven dynamo in spiral galaxies	Michał Hanasz
12:30-12:50	Discussion	
12:50-14:00	Lunch	
14:00-14:30	Gamma rays, the ISM & magnetic fields	Isabelle Grenier
14:30-14:50	The dynamical impact of cosmic rays and magnetic fields in the ISM	Philipp Girichidis
14:50-15:10	Simulating galaxy formation with cosmic rays: the multi-frequency view	Maria Werhahn
15:10-15:50	Coffee & Posters	
15:50-16:20	Redshift evolution of galactic magnetic fields	Sui Ann Mao
16:20-16:40	Magnetic fields and dynamo action in evolving galaxies	Luiz Rodrigues
16:40-17:00	Discussion	

**Friday June 14<sup>th</sup>**

09:00-09:40	Polarization Surveys	Bryan Gaensler
09:40-10:00	Magnetic fields around galactic disks	Dimitry Sokoloff
10:00-10:20	Detecting the magnetoionized intragroup medium of galaxy group NGC 2563	Anna Williams
10:20-11:00	Coffee & Posters	
11:00-11:20	FRB as probes of extragalactic magnetic fields	Ryan McKinnen
11:20-11:40	Discussion	
11:40-12:10	Conference Wrap up	Ralf-Jürgen Dettmar

**End of conference**

# Posters

Ariel Amaral	Using cross-correlation methods to probe large-scale magnetic fields
Prasanta Bera	Dynamo action in dwarf galaxies
Nergis Cesur	The Magnetic Field Strength in the $\zeta$ -Ophiuchi HII Region Sh2-27
Jennifer Chan	Cosmological polarized radiative transfer as a probe of large-scale magnetic field structures
Can Evirgen	Magnetic effects on the structure of the interstellar medium
Adriana Gazol	Geometrical properties of simulated magnetized cold neutral clouds
Fred Gent	Dynamo driven magnetic fields in the interstellar medium
Gilberto Gomez	MHD simulations of jellyfish galaxies
Gilberto Gomez	Magnetic structures in molecular filaments
Sarah Higdon	Magnetic fields in the star forming nuclear ring in NGC 2997
Irina Makarenko	Comparison of MHD simulations and observations of the Galaxy using topological analysis
Yoshimitsu Miyashita	Faraday dispersion function of disk galaxies with axisymmetric global magnetic fields II - 3D structure
Mateusz Ogrodnik	Implementation of energy dependent transport of cosmic rays in MHD code Piernik
Anna Ordog	Comparing extended emission and compact source rotation measures to probe the large-scale Galactic magnetic field
Nicolas Peschken	Cosmic ray driven winds from magnetized galactic disks
Julia Piotrowska	LOFAR Insight into Cosmic Ray Electron Propagation in NGC 6946
Luke Pratley	Wide-band Rotation Measure Synthesis
Devika Tharakkal	Random magnetic fields, cosmic rays and synchrotron fluctuations
Marek Wezgowiec	Can we observe reconnection heating in spiral galaxies
Georg Winner	Evolution of cosmic ray electron spectra in magnetohydrodynamical simulations
Dominic Wóltański	Synchrotron emission from a spiral galaxy in the CR-driven dynamo model

