WARWICK
THE UNIVERSITY OF WARWICK

UKI Discs

Main Programme

Monday 9th

- **10:45-12:30:** ***Introduction and Review Talks*** – Chair: Anna Penzlin
  - **10:45-11:00**: **Introduction (Welcome, Code of Conduct, Logistics)**
  - **11:00-11:30**: **Review Talk: Protoplanetary Discs** — Richard Booth (Leeds)
  - **11:30-12:00**: **Review Talk: Debris Discs** — Mark Booth (Edinburgh)
  - **12:00-12:30**: **Review Talk: White Dwarf Discs** — Laura Rogers (Cambridge)
- **12:30-14:00**: **Lunch**

- **14:00-15:00**: ***Disc Structures 1*** – Chair: Lucy Evans
  - **14:00-14:12**: **Constraining the population of planets in debris disc systems with gaps and astrometric accelerations using JWST** — Raphael Bendahan-West (University of Exeter)
  - **14:12-14:24**: **The Inner Regions of Protoplanetary Discs** — Isabelle Codron (University of Exeter)
  - **14:24-14:36**: **How do planets carve smooth gaps in inviscid discs?** — Amelia Cordwell (DAMTP, University of Cambridge)
  - **14:36-14:48**: **Sandwich Planet Formation in action** — Maria de Juan Ovelar (University of Warwick)
  - **14:48-15:00**: **How Planet-Induced Disc Morphology Encourages Planetesimal Growth** — Amena Faruqi (University of Warwick)

- **15:00-15:30**: **Coffee break**

- **15:30-16:30**: ***Disc Structures 2*** – Chair: Lucy Evans
  - **15:30-15:42**: **Directly imaging massive planets sculpting the inner edges of debris discs with JWST-MIRI** — Andrew James (University of Exeter)
  - **15:42-15:54**: **Multi-Wavelength Analysis of HD 32297's Edge-on Debris Disk** — Patricia Luppe (Trinity College Dublin)
  - **15:54-16:06**: **Shadows and spiral arcs in the Protoplanetary Disc HD 139614** — Katie Milsom (University of Exeter)
  - **16:06-16:18**: **Disc walls and fake vortices: crescent-shaped asymmetries in ALMA observations of protoplanetary discs** — Álvaro Ribas (Institute of Astronomy, University of Cambridge)

- **16:20-16:50**: **All Poster Pop-ups**
- **16:50-17:00: Conference Photo**
- **17:00-18:00**: **Poster Session**

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Tuesday 10th

- **09:30-10:30**: ***Disc Composition & Chemistry 1*** – Chair: Álvaro Ribas
  - **09:30-09:42**: **Constraining the inner disk structure around intermediate mass YSOs from CO overtone emission** — Cade Bürgy (University College Dublin)
  - **09:42-09:54**: **Unraveling the origin of excess carbon in planet-forming environments around low-mass stars** — Javiera Díaz (University of Leeds)
  - **09:54-10:06**: **ARKS - Presenting spectrospatial distribution of CO gas in 18 nearby debris discs** — Sorcha Mac Manamon (Trinity College Dublin)
  - **10:06-10:18**: **Volatile composition of the planet-hosting disk HD 169142** — Luke Keyte (UCL)
  - **10:18-10:30**: **The detectability of amorphous and crystalline water ice in debris discs: insights from scattered light observations** — Minjae Kim (University of Warwick)

- **10:30-11:00**: **Coffee break**

- **11:00-12:00**: ***Disc Composition & Chemistry 2*** – Chair: Álvaro Ribas
  - **11:00-11:12**: **Chemcomp: Calculating disc and planetary compositions** — Bertram Bitsch (University College Cork) — online

- **11:12-11:24**: **A general framework for the chemical characterization of circumstellar gaseous discs around white dwarfs with Cloudy** — Felipe Lagos-Vilches (University of Warwick)
- **11:24-11:36**: **Constraining the rotational temperature of methanol in the planet-forming disc HD 100546** — Lucy Evans (University of Leeds)
- **11:36-11:48**: **The snow line instability in protoplanetary discs** — Alfie Robinson (Imperial College London)
- **11:48-12:00**: **Determining the H2/CO Ratios of Gas Rich Exocometary Belts: Primordial or Secondary Origins?** — Kevin Smith (Trinity College Dublin)

- **12:00-13:30**: **Lunch**
- **13:30-14:30**: **EDI talk** — Ryan Arthur

- **14:30-15:30**: ***Star-disc Connection*** – Chair: Daniela Iglesias
  - **14:30-14:42**: **The rise and fall of the giant planet occurrence rate** — Heather Johnston (University of Leeds) — online
  - **14:42-14:54**: **What Time Can Tell Us About Space: Mapping Accretion in Intermediate-Mass YSO** — Ruhee Kahar (University of Dundee)
  - **14:54-15:06**: **Discs around neutron stars** — Bettina Posselt (University of Oxford)

- **15:06-15:35**: **Coffee break**

- **15:35-16:50**: ***Disc Properties 1*** – Chair: Daniela Iglesias
  - **15:35-15:47**: **Study of the degree of dust settling and turbulence in highly-inclined protoplanetary discs** — Juanita Antilen (UCL)
  - **15:47-15:59**: **Investigating YSO Dippers with XShooter** — Aaron Empey (University College Dublin)
  - **16:00-16:12**: **Results from the Planet-Earth Building-Blocks Legacy e-MERLIN Survey (PEBBLeS) - how do the rocks start forming in discs?** — Jane Greaves (Cardiff University)
  - **16:12-16:24**: **Exploring the Gas-Dust-Planetesimals Interplay in WD Debris Discs with SPH** — Rafael Martinez-Brunner (University of Warwick)
  - **16:24-16:36**: **A multi-wavelength study of the VLA 1623 protostellar system using JWST, ALMA and JVLA** — Isaac Radley (University of Leeds)

- **16:36-16:50**: **Comfort Break**
- **16:50-17:50**: **Discussion Session** — Tim Pearce (University of Warwick) & Andrew Swan (University of Warwick)

Wednesday 11th

- **09:30-10:55**: ***Disc Properties 2 + New and Improved Models/Methods 1*** - Chair: Matthäus Schulik

  Disc Properties 2

  - **09:30-09:42**: **Constraints on the physical origin of large cavities in transition disks from multi-wavelength dust continuum emission** — Anibal Sierra (Mullard Space Science Laboratory, University College London)

  New and Improved Models/Methods 1

  - **09:42-09:54**: **Horseshoes and spiral waves: capturing the 3D flow near a low-mass planet analytically** — Joshua Brown (DAMTP, University of Cambridge)
  - **09:54-10:06**: **The properties of embedded disc-instability protoplanets** — Ethan Carter (University of Central Lancashire)
  - **10:06-10:18**: **A flared model of gaseous white dwarf accretion discs** — Yixuan Chen (Imperial College London)
  - **10:18-10:30**: **Characterizing Infall-Driven Gravitational Instability in Protostellar Discs** — Cristiano Longarini (University of Cambridge, Institute of Astronomy)
  - **10:30-10:42**: **Exocomet Hunting with Convolutional Neural Networks** — Azib Norazman (University of Warwick)
  - **10:42-10:54**: **Realistic modelling of radiative cooling for gravitationally unstable discs** — Alison Young (University of Edinburgh)

- **10:55-11:25**: **Coffee break**

- **11:25-12:50**: ***New and Improved Models/Methods 2 + Disc Processes 1*** - Chair: Matthäus Schulik

  New and Improved Models/Methods 2

  - **11:25-11:37**: **The Role of Drag and Gravity on Dust Concentration in a Gravitationally Unstable Disc** — Sahl Rowther (University of Leicester)
  - **11:37-11:49**: **Pebble drift in HD 163926 - constraining the mass of dust and ice reaching the terrestrial planet formation region** — Joe Williams (University of Exeter)

  Disc Processes 1

  - **11:49-12:01**: **On the role of resonance absorption in flows receptive to the magnetorotational instability** — Mattias Brynjell-Rahkola (DAMTP, University of Cambridge)
  - **12:01-12:13**: **The effect of disc photoevaporation on the evolution of migrating giant planets** — Emmanuel Greenfield (Imperial College London)
  - **12:13-12:25**: **Hydrodynamic instability and warping in vertically bouncing accretion disks** — Loren E Held (DAMTP, University of Cambridge)
  - **12:25-12:37**: **Disc evolution in intermediate mass stars: survey extension** — Daniela Iglesias (University of Leeds)

- **12:37-12:49**: **Dust dynamics in the inner regions of protoplanetary disks** — Thomas Jannaud (DAMTP, University of Cambridge)

- **12:50-14:20**: **Lunch**

- **14:20-15:45**: ***Disc Processes 2*** - Chair: Alexandros Ziampras
  - **14:20-14:32**: **From Minutes to Decades: Dynamical Activity in Planetary Debris Disks Around White Dwarfs** — Hiba tu Noor (UCL)
  - **14:32-14:44**: **Analysis of triggered fragmentation in self-gravitating discs** — Pratishtha Rawat (University of Warwick)
  - **14:44-14:56**: **Discs within discs - formation conditions and structures in moon forming discs** — Matthäus Schulik (Imperial College London)
  - **14:56-15:08**: **The Fomalhaut disc's high interior dust content: PR-drag-caused and universal?** — Max Sommer (University of Cambridge, Institute of Astronomy)
  - **15:08-15:20**: **On the origin of the wide orbit circumbinary gas giant planet, Delorme 1 (AB)b** — Matthew Teasdale (University of Central Lancashire)
  - **15:20-15:32**: **Can the dominant mechanism for angular momentum transport be identified by measuring gas disc sizes?** — Simin Tong (University of Leicester)
  - **15:32-15:44**: **Planet Formation in the Inner Disc** — Morgan Williams (Imperial College London)

- **15:45-15:50**: **Closing remarks**