



## Program



### Mock Perth: Challenges for Simulations in the Era of SKA and Large IFU Surveys 20-22 March 2017, ICRAR, University of Western Australia

#### Day 1: Monday 20 March 2017

Time	Item
8:30am – 8:50am	Registration Desk Open
Welcome	
9:00am	Welcome/Acknowledgement of Country
9:05am – 9:10am	Welcome and Workshop Objectives Chris Power, SOC/LOC Chair
Session I: Physical Process on Small Scales – Part 1 Session Chair: Claudia Lagos	
9:10 – 9:45	<b>Mark Krumholz</b> <i>Star Formation and Feedback in Dwarf Galaxies</i> (25 min presentation + 10 min Q&A)
9:45 – 10:20	<b>Naomi McClure-Griffiths</b> <i>ISM Evolution in the Milky Way and Magellanic System</i> (25 min presentation + 10 min Q&A)
10:20 – 10:40	<b>Attila Popping</b> <i>The Extended HI Properties of Galaxies with IMAGINE</i> (15 min presentation + 5 min Q&A)
10:40 – 11:00	<b>Rodrigo Canas</b> <i>The Importance of the Identification of Simulated Galaxies</i> (15 min presentation + 5 min Q&A)
11:00 – 11:30	Morning Tea

## Session II: Physical Process on Small Scales – Part 2

Session Chair: Chris Power

11:30 – 12:00	<b>Brent Groves</b> <i>Photoionization and ISM Heating in Low Mass Galaxies</i> (20 min presentation + 10 min Q&A)
12:00 – 12:30	<b>JJ Eldridge</b> A Double Take on Stellar Population Synthesis (20 min presentation + 10 min Q&A)
12:30 – 13:00	Group Discussion: Physical Processes on Small Scales (30 minutes discussion)
<b>13:00 – 14:00</b>	<b>Lunch</b>
<b>Session III: Galaxy Formation and Evolution – State of the Art Part I</b>	
<b>Session Chair: Charlotte Welker</b>	
14:00 – 14:35	<b>Matthieu Schaller</b> <i>Dwarf Galaxies in the EAGLE Simulation and Future Runs</i> (25 min presentation + 10 min Q&A)
14:35 – 15:10	<b>Violeta Gonzalez-Perez</b> <i>Summary of SAMs: State-of-the-Art and What's Next</i> (25 min presentation + 10 min Q&A)
15:10 – 15:30	<b>Pascal Elahi</b> <i>Synthetic UniveRses for Surveys</i> (15 min presentation + 5 min Q&A)
<b>15:30 – 16:00</b>	<b>Afternoon Tea</b>

## Session IV: Galaxy Formation and Evolution - State of the Art Part II

Session Chair: Violeta Gonzalez-Perez

16:00 – 16:30	<b>Elisabete Da Cunha</b> <i>SEDs.</i> (20 min presentation + 10 min Q&A)
16:30 – 16:50	<b>Gerhardt Meurer</b> <i>IMF Variations and Effects on Galaxy Formation</i> (15 min presentation + 5 min Q&A)
16:50 – 17:20	<b>Alex Knebe</b> <i>Mocking Astrophysics</i> (20 min presentation + 10 min Q&A)
17:20:17:40	<b>Manodeep Sinha</b> <i>The TAO of Building Mock Galaxy Catalogues</i> (15 min presentation + 5 min Q&A)
17:40 – 18:00	<p>“Challenges for Connecting Cosmological Simulations with Small Scale Physical Phenomena”</p> <p>Chair: Discussion all together and people should decide here at the latest which break-out groups they want to participate in on Tuesday and Wednesday.</p> <p>Separating people into 4 discussion groups to start follow this on Tuesday:</p> <ul style="list-style-type: none"><li>- Small scale physical phenomena (Group 1).</li><li>- Dynamics of galaxies and current/future IFU surveys (Group 2).</li><li>- EoR and the high-redshift universe (Group 3)</li><li>- Synergies between radio and optical telescopes and what is needed from simulations (Group 4)</li></ul>
18:30	<b>Welcome Drinks at ICRAR</b>

## Day 2: Tuesday 21 March 2017

Time	Item
8:30am – 8:50am	Registration Desk Open
<b>Session V: Galaxy Dynamics and Angular Momentum – Part I</b> <b>Session Chair: Matthieu Schaller</b>	
9:00 – 9:35	<b>Nelson Padilla</b> <i>When to Care About the Angular Momentum of Your Model Galaxies When Making Mock Catalogues</i> (25 min presentation + 10 min Q&A)
9:35 – 10:05	<b>Danail Obreschkow</b> <i>Observational Status of Angular Momentum in Galaxies</i> (20 min presentation + 10 min Q&A)
10:05 – 10:25	<b>Kate Harborne</b> <i>Extracting Meaningful Kinematics from Simulated Galaxies</i> (15 min presentation + 5 min Q&A)
10:25 – 10:45	<b>Charlotte Welker</b> <i>Connecting Galaxy Dynamics to Cosmic Flows</i> (15 min presentation + 5 min Q&A)
10:45 – 11:05	<b>Anna Weigel</b> <i>A Phenomenological Model for the Origin of Fast and Slow Rotating Early Type Galaxies</i> (15 min presentation + 5 min Q&A)
11:05 – 11:35	<b>Morning Tea</b>
<b>Session VI: Galaxy Dynamics and Angular Momentum – Part II</b> <b>Session Chair: Adam Stevens</b>	
11:35 – 11:55	<b>Liang Wang</b> <i>Angular Momentum Evolution of Bulge Stars in Spiral Galaxies</i> (20 min presentation + 5 min Q&A)
11:55 – 12:15	<b>Rhys Poulton</b> <i>Be Nice to Satellites, they're Going Through a Tough Phase</i> (15 min presentation + 5 min Q&A)
12:15 – 12:35	<b>Kirsty Butler</b> <i>Angular Momentum of Dwarf Galaxies</i> (15 min presentation + 5 min Q&A)
12:35 – 13:40	<b>Lunch</b>
<b>Session VII: Break-out Session</b> <b>Session Chair:</b>	
13:40 – 15:00	Break-out sessions:

	<ul style="list-style-type: none"> <li>- Choose a chair for your group.</li> <li>- Identify main challenges in your area.</li> <li>- Think of synergies between simulations/observations and how to maximise that.</li> <li>- Come out with suggestions for how to achieve that.</li> </ul>
<b>15:00 – 15:30</b>	<b>Afternoon Tea</b>
<b>Session VIII: Epoch of Reionisation and High-Redshift Galaxies</b> <b>Session Chair: Alex Knebe</b>	
<b>15:30 – 16:00</b>	<b>Cath Trott</b> <i>Future Prospects for Detecting the EoR using 21cm HI Signal</i> (20 min presentation + 10 min Q&A)
<b>16:00 – 16:30</b>	<b>Simon Mutch</b> <i>Modelling High-z Galaxy Formation and the EoR with SAMs</i> (20 min presentation + 10 min Q&A)
<b>16:30 – 16:50</b>	<b>Anne Hutter</b> <i>Exploring 21cm: Lyman Alpha Emitter Synergies for SKA</i> (15 min presentation + 5 min Q&A)
<b>16:50 – 17:10</b>	<b>Hansik Kim</b> <i>A Hybrid Multiresolution Scheme to Efficiently Model the Structure of Reionization on the Largest Scales</i> (15 min presentation + 5 min Q&A)
<b>17:10 – 17:30</b>	<b>Jacob Seiler</b> <i>#nofilter: SAGE and the Epoch of Reionization, How Relevant is the Filtering Mass?</i> (15 min presentation + 5 min Q&A)
<b>17:30 – 18:00</b>	<b>Discussion</b>
<b>19:00</b>	<b>Social Dinner – Restaurant near ICRAR</b>

## Day 3: Wednesday 22 March 2017

Time	Item
8:30am – 8:50am	Registration Desk Open
<b>Session IX: HI in Galaxies and Environment – Part I</b> <b>Session Chair: Ivy Wong</b>	
9:00 – 9:35	<b>Luca Cortese</b> <i>Review of HI/Gas/Dust in Galaxies</i> (25 min presentation + 10 min Q&A)
9:35 – 10:05	<b>Jing Wang</b> <i>The Complexity of the Simple HI Size-Mass Relation of Galaxies</i> (25 min presentation + 10 min Q&A)
10:05 – 10:40	<b>Martin Meyer</b> <i>What ASKAP will tell us about Galaxy Evolution : Early Science Results and Prospects for the Future</i> (25 min presentation + 10 min Q&A)
10:40 – 11:0	<b>Virginia Kilborn</b> <i>The Impact of Environment on HI in Galaxies</i> (15 min presentation + 5 min Q&A)
11:00 – 11:30	Morning Tea
<b>Session X: HI in Galaxies and Environment – Part II</b> <b>Session Chair: Nelson Padilla</b>	
11:30 – 11:50	<b>Toby Brown</b> <i>HI Stripping in Satellite Galaxies</i> (15 min presentation + 5 min Q&A)
11:50 – 12:10	<b>Adam Stevens</b> <i>Environmental and Evolutionary Effects on Semi-Analytic Galaxies' HI Content</i> (15 min presentation + 5 min Q&A)
12:10 – 12:30	<b>Jonghwan Rhee</b> <i>HI Gas Evolution Over Cosmic Time</i> (15 min presentation + 5 min Q&A)
12:30 – 13:00	<b>Break-out sessions:</b> - Continue discussion and prepare a 5 minutes talk for what are the main conclusions of the discussion in the group.
13:00 – 14:00	Lunch
<b>Session XII: Summary and Close</b> <b>Session Chair: Chris Power/Claudia Lagos</b>	
14:00 – 14:10	Conclusions of discussion group 1 – Chair group 1

14:10 – 14:20	Conclusions of discussion group 2 – Chair group 2
14:20 – 14:30	Conclusions of discussion group 3 – Chair group 3
14:30 – 14:40	Conclusions of discussion group 4 – Chair group 4
14:40 – 15:00	Discussion and concluding remarks
15:00	Afternoon Tea and Close