

**ALEXANDER IAN MERSON**

CURRICULUM VITAE

November 25, 2014

Nationality: BRITISH

**Contact Details**

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**Education**

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- **Oct 2008 - Jan 2013:** *Doctorate : Durham University*  
Supervisor: Prof. Carlton Baugh  
Thesis: Mock Galaxy Catalogues And Their Application To Future Galaxy Surveys
- **Oct 2007 - Jun 2008:** *Physics & Astronomy MSci (taught): Durham University*  
1<sup>st</sup> class honours  
Supervisor: Prof. Richard Bower  
Title: The Assembly Of Massive Red Galaxies In The Durham GALFORM Model
- **Oct 2004 - Jun 2007:** *Physics & Astronomy BSc: Durham University*  
1<sup>st</sup> class honours  
Supervisor: Dr John Lucey  
Title: A Determination Of The Distance To The Hyades Star Cluster

**Research Experience**

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- Oct 2012 - present: Post-doctoral Research Assistant (University College London)
- Oct 2008 - Sep 2012: Postgraduate research student (Durham University)
- Jul 2008 - Sep 2008: Research assistant (Australian Astronomical Observatory, Sydney)
- Oct 2007 - Jun 2008: Masters research student (Durham University)
- Jan 2007 - Apr 2007: Undergraduate research student (Durham University)

**Publications**

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Square brackets indicate number of citations as of 10 October 2014.

- (13) *The 6dF Galaxy Survey: Fundamental Plane data*  
Campbell L. A.; Lucey J. R.; Colless M.; Jones D. H.; Springob C. M.; Magoulas C.; Proctor R. N.; Mould J. R.; Read M. A.; Brough S.; Jarrett T.; **Merson A. I.**; Lah P.; Beutler F.; Cluver M. E.; Parker Q. A.; 2014, MNRAS, 443, 1231-1251 [2]

- (12) *A mass threshold in the number density of passive galaxies at  $z \sim 2$*   
Sommariva V.; Fontana A.; Lamastra A.; Santini P.; Dunlop J. S.; Nonino M.; Castellano M.; Ferguson H.; McLure R. J.; Galametz A.; Giavalisco M.; Grazian A.; Lu Y.; Menci N.; **Merson A.**; Paris D.; Pentericci L.; Somerville R.; Targett T.; 2014, arXiv/1409.7083 [0]
- (11) *Combining Dark Energy Survey Science Verification Data with Near Infrared Data from the ESO VISTA Hemisphere Survey*  
Banerji M.; Jouvel S.; Lin H.; McMahon R. G.; Lahav O.; Castander F. J.; Abdalla F. B.; Bertin E.; Bosman S. E.; Carnero A.; Carrasco Kind M.; da Costa L. N.; Gerdes D.; Gschwend J.; Lima M.; Maia M. A. G.; **Merson A.**; Miller C.; Ogando R.; Pellegrini P.; Reed S.; Saglia R.; Sanchez C.; Annis S. A. J.; Bernstein G.; Bernstein J.; Bernstein R.; Capozzi D.; Childress M.; Cunha C. E.; Davis T. M.; DePoy D. L.; Desai S.; Diehl H. T.; Doel P.; Findlay J.; Finley D. A.; Flaughner B.; Frieman J.; Gaztanaga E.; Glazebrook K.; Gonzalez-Fernandez C.; Gonzalez-Solares E.; Honscheid K.; Irwin M. J.; Jarvis M. J.; Kim A.; Kopolov S.; Kuehn K.; Kupcu-Yoldas A.; Lagattuta D.; Lewis J. R.; Lidman C.; Makler M.; Marriner J.; Marshall J. L.; Miquel R.; Mohr J. J.; Neilsen E.; Peoples J.; Sako M.; Sanchez E.; Scarpine V.; Schindler R.; Schubnell M.; Sevilla I.; Sharp R.; Soares-Santos M.; Swanson M. E. C.; Tarle G.; Thaler J.; Tucker D.; Uddin S. A.; Wechsler R.; Wester W.; Yuan F.; Zuntz J.; 2014, arXiv/1407.3801 [0]
- (10) *The ALHAMBRA survey: evolution of galaxy clustering since  $z \sim 1$*   
Arnalte-Mur P.; Martínez V. J.; Norberg P.; Fernández-Soto A.; Ascaso B.; **Merson A. I.**; Aguerri J. A. L.; Castander F. J.; Hurtado-Gil L.; López-Sanjuan C.; Molino A.; Montero-Dorta A. D.; Stefanon M.; Alfaro E.; Aparicio-Villegas T.; Benítez N.; Broadhurst T.; Cabrera-Caño J.; Cepa J.; Cerviño M.; Cristóbal-Hornillos D.; del Olmo A.; González Delgado R. M.; Husillos C.; Infante L.; Márquez I.; Masegosa J.; Moles M.; Perea J.; Pović M.; Prada F.; Quintana J. M.; 2014, MNRAS, 441, 1783-1801 [5]
- (9) *Probability Friends-of-Friends (PFOF) Group Finder: Performance Study and Observational Data Applications on Photometric Surveys*  
Jian H.-Y.; Lin L.; Chiueh T.; Lin K.-Y.; Liu H. B.; **Merson A.**; Baugh C.; Huang J.-S.; Chen C.-W.; Foucaud S.; Murphy D. N. A.; Cole S.; Burgett W.; Kaiser N.; 2014, ApJ, 788, 109 [8]
- (8) *Galaxy And Mass Assembly (GAMA): the large-scale structure of galaxies and comparison to mock universes*  
Alpaslan M.; Robotham A. S. G.; Driver S.; Norberg P.; Baldry I.; Bauer A. E.; Bland-Hawthorn J.; Brown M.; Cluver M.; Colless M.; Foster C.; Hopkins A.; Van Kampen E.; Kelvin L.; Lara-Lopez M. A.; Liske J.; Lopez-Sanchez A. R.; Loveday J.; McNaught-Roberts T.; **Merson A.**; Pimblet K.; 2014, MNRAS, 438, 177-194 [11]
- (7) *Lightcone mock catalogues from semi-analytic models of galaxy formation - I. Construction and application to the BzK colour selection*  
**Merson A. I.**; Baugh C. M.; Helly J. C.; Gonzalez-Perez V.; Cole S.; Bielby R.; Norberg P.; Frenk C. S.; Benson A. J.; Bower R. G.; Lacey C. G.; Lagos C. d. P.; 2013, MNRAS, 429, 556-578 [38]
- (6) *First SN Discoveries from the Dark Energy Survey*  
Abbott T. *et al.*; contributing author; 2012, The Astronomer's Telegram, 4668, 1 [5]
- (5) *The 6dF Galaxy Survey: the near-infrared Fundamental Plane of early-type galaxies*  
Magoulas C.; Springob C. M.; Colless M.; Jones D. H.; Campbell L. A.; Lucey J. R.; Mould J.; Jarrett T.; **Merson A.**; Brough S.; 2012, MNRAS, 427, 245-273 [15]
- (4) *Galaxy And Mass Assembly (GAMA): estimating galaxy group masses via caustic analysis*  
Alpaslan M.; Robotham A. S. G.; Driver S.; Norberg P.; Peacock J. A.; Baldry I.; Bland-Hawthorn J.; Brough

- S.; Hopkins A. M.; Kelvin L. S.; Liske J.; Loveday J.; **Merson A.**; Nichol R. C.; Pimbblet K.; 2012, MNRAS, 426, 2832-2846 [4]
- (3) *Clustering Properties of BzK-selected Galaxies in GOODS-N: Environmental Quenching and Triggering of Star Formation at  $z \sim 2$*   
Lin L.; Dickinson M.; Jian H.-Y.; **Merson A. I.**; Baugh C. M.; Scott D.; Foucaud S.; Wang W.-H.; Yan C.-H.; Yan H.-J.; Cheng Y.-W.; Guo Y.; Helly J.; Kirsten F.; Koo D. C.; Lagos C. d. P.; Meger N.; Messias H.; Pope A.; Simard L.; Grogin N. A.; Wang S.-Y.; 2012, ApJ, 756, 71 [26]
- (2) *Galaxy and Mass Assembly (GAMA): the GAMA galaxy group catalogue ( $G^3Cv1$ )*  
Robotham A. S. G.; Norberg P.; Driver S. P.; Baldry I. K.; Bamford S. P.; Hopkins A. M.; Liske J.; Loveday J.; **Merson A.**; Peacock J. A.; Brough S.; Cameron E.; Conselice C. J.; Croom S. M.; Frenk C. S.; Gunawardhana M.; Hill D. T.; Jones D. H.; Kelvin L. S.; Kuijken K.; Nichol R. C.; Parkinson H. R.; Pimbblet K. A.; Phillipps S.; Popescu C. C.; Prescott M.; Sharp R. G.; Sutherland W. J.; Taylor E. N.; Thomas D.; Tuffs R. J.; van Kampen E.; Wijesinghe D.; 2011, MNRAS, 416, 2640-2668 [44]
- (1) *Euclid Definition Study Report*  
Laureijs R. *et al.*; contributing author; 2011, astro-ph/1110.3193 [377]

## International Conferences & Workshops

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- **Invited Speaker at international conferences**

- (1) Mar 2013: Galaxy Mocks For Cosmology Workshop (IEEC/CSIC, Barcelona)  
Title: *Synthetic Galaxy Catalogues From A Galaxy Formation Model*

- **Contributed Talks at international conferences**

- (9) May 2014: Euclid Consortium Meeting 2014 (LAM-AMU/CPPM-AMU, Marseille)  
Title: *Galaxy Mock Catalogues From Semi-Analytic Models*
- (8) May 2014: Euclid Consortium Meeting 2014 (LAM-AMU/CPPM-AMU, Marseille)  
Title: *High Redshift Cluster Galaxies In Semi-Analytic Models*
- (7) May 2014: Euclid Consortium Meeting 2014 (LAM-AMU/CPPM-AMU, Marseille)  
Title: *Euclid Galaxy Mock Catalogues*
- (6) Dec 2012: Millennium Workshop (MPA, Garching, Germany)  
Title: *Synthetic Galaxy Catalogues From A Galaxy Formation Model*
- (5) Jan 2012: Durham-Edinburgh eXtra-galactic (DEX) Workshop (Durham University)  
Title: *Synthetic Galaxy Catalogues For Future Galaxy Surveys*
- (4) Dec 2011: VST ATLAS Science Kick-Off Meeting (Durham University)  
Title: *Synthetic Galaxy Catalogues From A Galaxy Formation Model*
- (3) Sep 2010: PS1 Science Consortium Meeting (Queen's University Belfast)  
Title: *Synthetic Catalogues For Pan-STARRS*
- (2) May 2010: Durham GALFORM Workshop (Durham University)  
Title: *Lightcone Mock Catalogues & Galaxy Group-Finding in the 6dFGS*
- (1) Sep 2009: Durham-Edinburgh eXtra-galactic (DEX) Workshop (Durham University)  
Title: *Synthetic Galaxy Catalogues For The GAMA Survey*

- **Seminars:** At universities or institutes since 2008.

## Honours & Awards

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- 2008 - 2012: Science and Technology Facilities Council (STFC) PhD Studentship
- 2008: Australian Astronomical Observatory Summer Student Fellowship

## Teaching Experience

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### Student Supervision

- 2014 - present: Tania Lemos De Sales Marques (MSc, co-supervisor)

### Demonstrating & Marking

- Oct 2014 - present: Demonstrator in undergraduate problem classes (University College London)
- 2008 - 2011: Postgraduate demonstrator in undergraduate laboratories (Durham University)

## Computational Skills

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- *OS*: Linux, Windows, Mac OS
- *Programming*: FORTRAN 90/95, Python, C-shell, LaTeX (good working knowledge); C++, Perl, IDL, SQL (basic knowledge)
- *Plotting*: Matplotlib, SM, Origin
- Experience submitting/managing jobs on supercomputing/cluster facilities.

## Outreach Experience

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- Jun 2013: *Cosmic Cookery* exhibit (demonstrator)  
The Royal Society Summer Science Exhibition, London
- Oct 2010: *Our Cosmic Origins* exhibit (demonstrator)  
Celebrate Science Exhibition, Durham
- Jun 2010: *Our Cosmic Origins* exhibit (demonstrator)  
The Royal Society Summer Science Exhibition, London
- Oct 2009: *Our Cosmic Origins* exhibit (demonstrator)  
ICC Exhibition, Durham
- Jun 2008: *Our Cosmic Origins* exhibit (demonstrator)  
The Royal Society Summer Science Exhibition, London

## Other skills & certifications

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- Hold a full UK driving license, no endorsements.

## References

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