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Current Position:

Jan 2011 – Present University of Hertfordshire
University Research Fellow
Multi-wavelength Studies of Galaxy Evolution

Previous Position:

Sept 2010 – Dec 2010 University of Crete
Associate Scientist
Mid IR Properties of Early-Stage Interacting Galaxies

Sept 2006 – Aug 2010 Harvard-Smithsonian Center for Astrophysics
Postdoctoral Fellow (with Dr G. Fabbiano & collaborators)
The Low-Mass Binary Population of Elliptical Galaxies

Qualifications:

2006 Ph.D. Astrophysics, University of Birmingham
Supervisor: Prof. T. J. Ponman
Thesis Title: "*The Role of Galaxy Interactions*"

2002 M.Phys. Physics with Astrophysics, University of Manchester

Research Activities:

Awards and Grants

During the course of my research I have been successful in obtaining observing time on *Chandra*. As PI I have been awarded a time allocation of 100 ks and as Co-I a total time allocation of 850 ks. I am also the PI of a recently successful IRAM 30-m telescope proposal, which has been awarded 10 hours of time.

Seminars and Conferences

I have given 13 talks at national and international conferences, 2 of which have been invited. I have also given 12 invited seminars at UK and international universities.

Research Programme

- I am a collaborator of the Spitzer Interacting Galaxies Survey; a programme investigating the distribution and intensity of star-formation and nuclear activity in local early-stage interacting galaxies. In this work I am leading the photometric Spitzer data analysis as well as the X-ray analysis. As part of this collaboration I have been working with members of the Harvard-Smithsonian CfA IR division as well as researchers at the University of Crete.
- As part of the Spitzer Interacting Galaxies Survey I am leading a programme to study the behaviour of the cold gas in these systems. This involves determining the properties of both

the atomic and molecular gas in these galaxies. Collaborators of this work are in UK, French and Spanish institutes.

- I am the PI of a collaboration investigating *Infant Ellipticals*. In this work I am using *Chandra* X-ray observations to study a sample of post-merger galaxies, all within 5 Gyr since nuclear coalescence. Our focus in this research is to characterise the regeneration of the hot gaseous halo, which is observed in mature elliptical galaxies but not within systems that have recently undergone a major-merging event. We are also probing the point source population. My team in this research includes colleagues at the CfA and University of Crete.
- In further collaborative work I am part of the Cen A team, investigating Centaurus A, the nearest radio galaxy and the late-stage merger. Through this work we have been probing the particle acceleration processes of the jet, the nature of the low-mass binary population and the thermodynamic parameters of the gas. My contribution to this research is investigating the relationship between the central diffuse X-ray emission within the system and the dust content of the galaxy, as well as analysing the extended corona that has been observed around the galaxy.
- Also, through my work on low-mass X-ray binaries, which I carried out during my time at the CfA, I continue to be involved in a large international collaboration, investigating point source populations within elliptical galaxies. This team comprises observational X-ray and optical astronomers, as well as theorists studying population synthesis modelling and accretion processes.
- I am a member of the H-Atlas team. In this collaboration I am leading work on investigating the FIR properties of optically selected galaxy pairs.

Demonstrating and Teaching:

In 2012/13 I have delivered a graduate lecture course *Introduction to X-ray Astronomy*.

For the past two years I have been a tutor for the course *Mathematics for Engineers*, as part of this role, in addition to running tutorial groups, I have also been involved in setting questions for the final year examination.

I am currently the principal supervisor to a Master's student at the University of Hertfordshire, who is part of the programme "Behaviour of Cold Gas in *Damp Mergers*".

Between 2007 and 2009 I was involved in a Master's exchange programme with the University of Southampton, whereby I supervised Master's students who were conducting their research at the CfA. Both students have continued on to post-graduate studies.

I have also supervised a Harvard Undergraduate Physics Major whose research has contributed to the publication "Discovery of Hot Gas in Outflow in NGC 3379"

During my PhD I was involved in laboratory demonstrating for undergraduate students and I supervised students carrying out astronomy-based projects.

Professional Activities and Duties:

- From 2012 I have been involved in coordinating the pilot Research Mentoring Scheme at the University of Hertfordshire.
- I have served on the peer review panel for *Chandra*.
- I am a referee for the Monthly Notices of the Royal Astronomical Society, The Astrophysical Journal, The Astrophysical Journal Letters and Astronomy & Astrophysics Journal.
- Between 2008/2009 I was a member of the CfA postdoctoral fellow's committee. As part of this position I organised 2008's annual CfA postdoctoral symposium (attendance >100).
- For eighteen months between 2007/2008 I organised, promoted and chaired the High Energy Astrophysics group's weekly lunch seminars at the CfA.

Public Promotion of Astronomy:

I am interested in increasing the public's knowledge of and excitement about astronomy. In 2007 I recorded a *Chandra* podcast in which I discussed "Mergers And Acquisitions In The Cosmos". During my PhD I helped to run workshops for *Villiers Park Educational Trust*, a science outreach programme that encourages gifted students to continue studying physics at university level.

References:

References are available on request.