

NICHOLAS J. WRIGHT

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RESEARCH INTERESTS Kinematics of star formation and star clusters.
The influence of massive stars on the star formation process and its products.
Stellar X-ray emission and magnetic dynamo activity.
Galactic Plane surveys and the structure of our Galaxy.

EDUCATION **University College London** Ph.D. Astrophysics, 2009
The Structure and Chemistry of Evolved Stars and Nebulae (advisor: Michael J. Barlow)
Bristol University MSci (Hons) Physics and Astrophysics (1st), 2003
The Structure of the Coma Cluster (advisor: Mark Birkinshaw)

HONOURS AND AWARDS **Royal Astronomical Society Research Fellowship**, 2012
Smithsonian Predoctoral Fellowship, 2008
Detica Prize for best academic performance, Bristol University, 2002
Dean's Award for best overall performance, Bristol University, 2000

APPOINTMENTS AND RESEARCH EXPERIENCE **Royal Astronomical Society Research Fellow**, University of Hertfordshire, 2012 –
The Dynamics of Young Star Clusters
Postdoctoral Fellow, Smithsonian Astrophysical Observatory, 2009 – 2012
Project Scientist for the Cygnus OB2 *Chandra* Legacy Survey
Studying the decay of stellar dynamos and X-ray activity (advisor: Jeremy J. Drake)
Predoctoral Fellow, Smithsonian Astrophysical Observatory, 2008 – 2009
A multi-wavelength study of the Cygnus OB2 association (advisor: Jeremy J. Drake)
Graduate Student, University College London, 2004 – 2008
Photometric & spectroscopic study of 3rd dredge-up surface chemistry in AGB stars
3D photoionization & radiative transfer modeling of PNe (advisor: Michael J. Barlow)
Summer Intern, Cambridge University, 2001
Abundances & evolutionary status of blue supergiants (advisor: Stephen J. Smartt)
Undergraduate Research Project Bristol University, 1999 – 2003
The structure of the Coma Cluster from analytical techniques (advisor: Mark Birkinshaw)

STUDENTS SUPERVISED **Michael Mohr-Smith**, University of Hertfordshire PhD student (2012 – 2015)
Co-supervisor: Using Galactic Plane surveys to identify runaway OB stars from Wd 2.
Charlie Roe, University of Hertfordshire Masters student (2014 – 2015)
Principal supervisor: Automated methods for H α imaging in wide-field surveys.
John Robinson, University of Hertfordshire Masters student (2012 – 2013)
Principal supervisor: Probing the evolutionary status of the proplyd-like objects in Cyg OB2.
John Hoffman, SAO Summer Intern Program (June – August 2011)
Co-supervisor: Search for stellar X-ray cycles in XMM-Newton data (Hoffman et al. 2012).
Erik van der Veen, SAO / Southampton Astronomy Masters Program (2010 – 2011)
Co-supervisor: A spectral survey of X-ray selected stars in Cygnus OB2.

GRANTS
AWARDED

Citizen Science for the Classroom

March 2014, £500 (“I’m a Scientist Get Me Out of Here” Winner)

Sharing the Wonders of the Universe

February 2013, £600 (University of Hertfordshire skills development funding)

Can Massive Stars form in Isolation?

September 2012, \$53,228 (Chandra observing proposal)

Probing the Dynamo Mechanism in Fully Convective Stars

September 2012, \$48,208 (Chandra observing proposal)

Co-I: The Small Magellanic Cloud - X-ray Populations at Low Metallicity

September 2012, \$143,000 (Chandra observing proposal, P.I.: Andreas Zezas)

Testing ‘Collect and Collapse’ Triggered Star Formation

September 2010, \$40,000 (Chandra observing proposal)

CDFS Study of Stellar X-ray Cycles

August 2010, \$57,000 (Chandra archive proposal)

Co-I: The Massive Star Forming Region, Cygnus OB2

September 2009, \$269,000 (Chandra observing proposal, P.I.: Jeremy Drake)

TEACHING
EXPERIENCE

The Physical Universe, University of Hertfordshire (2012 –)

Set problems sheets and taught problems classes for first year undergraduate physics

Introduction to X-ray Astronomy, University of Hertfordshire (2012 –)

Postgraduate lecture course on X-ray astronomy

Teaching Assistant, University College London (2004 – 2007)

Grading and classroom assistance for courses on Mathematics, Mechanics, and the ISM

Teaching Assistant, University of London Observatory (2004 – 2006)

Taught telescope usage, spectroscopy, and astrophysical techniques to students

SERVICE

Principal organiser of ‘The Kinematics of Star Formation: Theory and Observation in the GAIA Era’, RAS Specialist Discussion Meeting, January 2015.

Co-organiser of ‘GAIA and Galactic Plane Surveys’, a parallel session at the RAS National Astronomy Meeting 2014.

Organiser, University of Hertfordshire Colloquium Series, 2014–15.

Scientific Referee for MNRAS, A&A, and CFHT Time Allocation Committee (2010–).

Co-organiser of ‘The Panchromatic View of Star Formation’, a special session at the 218th Meeting of the AAS (2011).

Judge of the Chambliss Astronomy Achievement Student Awards for graduate and undergraduate student posters at the 218th Meeting of the AAS (2011).

Committee Member, CfA Virtual Observatory User Group (2010 – 2012)

User group to develop virtual observatory tools and infrastructure for CfA scientists.

Committee Member, CfA Postdoctoral Organisation Committee (2010 – 2011)

Organised postdoc welcome events and initiated the first survey of CfA postdocs.

Co-Organiser, Annual CfA Postdoctoral Symposium (2010)

Coordinated speakers and logistical support for CfA Postdoc Symposium.

Organiser, CfA High Energy Astrophysics Lunch Talks (2009 – 2011)

Organised weekly seminars for the High Energy Astrophysics group.

OUTREACH

CREST awards for citizen science classroom projects (June 2014 –)
 Helping local schools to establish STEM clubs and CREST awards that use citizen science projects to allow children to perform scientific experiments using real astronomical data.

Winner of “I’m a Scientist Get Me Out of Here” (March 2014)
 An outreach initiative that connects active scientists with school children in classrooms across the country, with a £500 prize for my own outreach work.

Sharing the Wonders of the Universe (February 2013 -)
 A project to share recent astronomical images and discoveries with school children in the UK through attractive and inspirational science posters distributed freely.

STEM Ambassador (2013 –)
 Working with local schools to inspire young people to study and enjoy STEM subjects.

Cambridge Science Festival (April 2009 – 2012)
 Involved in the SAO’s “Cambridge Explores the Universe” activities for the Cambridge Science Festival, including participation in the “Ask an Astronomer” event.

IPHAS Survey Publicity (2004 –)
 Prepared large astronomical images from IPHAS data, which have appeared in national newspapers, on television, and twice on the *Astronomy Picture of the Day* website.

UCL Astrophysics Outreach Group (2005 – 2008)
 Started an outreach group to coordinate efforts and organise school talks.

Greenwich Astronomy Project, Greenwich University (2006 – 2008)
 Set up to get more astronomy into schools by giving talks and helping with school projects.

INVITED AND
 REVIEW TALKS

Galactic Plane H α Surveys, *Universe of Digital Sky Surveys*, Capodimonte, Nov. 2014
The Dynamics of Star Clusters, *218th Meeting of the AAS*, USA, May 2011

SEMINAR
 PRESENTATIONS
 (SELECTED)

Smithsonian Astrophysical Observatory, September 2014
Yale University, September 2014
ETH Zurich, October 2013
University of Warwick, October 2013
University of Hertfordshire, May 2013
Imperial College London, May 2013
University of Sheffield, November 2012
Max Planck Institut für Astronomie, January 2012
Osservatorio Astrofisico di Arcetri, July 2011
Ludwig-Maximilians Universität München, July 2011
European Southern Observatory, July 2011
Argelander-Institut für Astronomie, July 2011
Université de Liège, June 2011
European Space Agency, June 2011
Smithsonian Astrophysical Observatory, May 2009
Bristol University, June 2007

CONFERENCE
 TALKS
 (SELECTED)

Structure and Dynamics of Star Clusters, Sexten, Italy, July 2014
Stellar Activity-Rotation Relationship, IAUS302 Magnetic Fields, France, Aug 2013
Constraining Massive Star Formation, Massive Stars, Greece, June 2013
Structure and Dynamics of Cyg OB2, Cygnus Workshop, Italy, May 2013
Photoevaporating Protostars in Cyg OB2, Galactic Plane Mtg, NL, Jan. 2013
The Stellar Activity - Rotation Relationship, Cool Stars 17, Spain, June 2012
Dynamics of an Expanding Cluster, Labyrinth of Star Formation, Crete, June 2012
Star Formation in Cygnus, Galactic Plane Surveys meeting, UK, July 2011
The Chandra Cygnus OB2 Legacy Survey, X-ray Universe, Germany, June 2011
Chandra Observations of Cygnus OB2, JENAM, Portugal, September 2010
Statistical Challenges in Chandra data, Astro-Statistics Workshop, USA, Aug. 2010
3D Photoionization Modeling of NGC 6302, Asymmetrical PNe IV, June 2007

- P.I. The Cygnus OB2 Dynamical Evolution Survey** (2011 – 2014)
Awarded 11 nights, MMT/Hectospec
- Co-I. Spectroscopic Follow-up for the VST VPHAS+ Survey** (June 2013)
Awarded 3 nights, ESO/NTT (P.I. Danny Steeghs)
- Co-I. Grain Evolution in Circumstellar Disks** (June 2013)
Awarded 1 night, GTC/CanariCam (P.I. Mario Guarcello)
- P.I. Can Massive Stars form in Isolation?** (August 2012)
Awarded 90ks, Chandra X-ray Observatory Cycle 14
- P.I. Probing the Dynamo Mechanism in Fully Convective Stars** (August 2012)
Awarded 55ks, Chandra X-ray Observatory Cycle 14
- Co-I. The Small Magellanic Cloud - X-ray Populations at Low Metallicity**
Awarded 1100ks, Chandra X-ray Observatory Cycle 14, Aug 2012 (P.I. Andreas Zezas)
- Co-I. Star formation near the most massive stars in our Galaxy in Pismis 11**
Awarded 100ks, Chandra X-ray Observatory Cycle 14, Aug 2012 (P.I. Mario Guarcello)
- Co-I. Star formation, disk evolution and coronal activity at low metallicity**
Awarded 150ks, Chandra X-ray Observatory Cycle 14, Aug 2012 (P.I. Mario Guarcello)
- P.I. Photoevaporating Protostars in Cygnus OB2** (May 2012)
Awarded 2 observing tracks with the Sub-Millimeter Array
- Co-I. A Chandra View of the RCW120 Bubble** (August 2011)
Awarded 80ks, Chandra X-ray Observatory Cycle 13 (P.I.: Konstantin Getman)
- P.I. Spectroscopy of Massive Stars near the Galactic Center** (April 2011)
Awarded 1/2 night, Magellan/FIRE
- P.I. Testing ‘Collect and Collapse’ Triggered Star Formation** (August 2010)
Awarded 40ks, Chandra X-ray Observatory Cycle 12
- P.I. CDFS Study of Stellar X-ray Cycles** (August 2010)
Awarded \$57,000, Chandra Archive Proposal Cycle 12
- Co-I. The Massive Star Forming Region Cygnus OB2** (August 2009)
Awarded 1080ks, Chandra X-ray Observatory Cycle 11 (P.I.: Jeremy Drake)
- Co-I. The Massive Star Forming Region Cygnus OB2** (April 2009)
Awarded 1 night, MMT/MMIRS (P.I.: Jeremy Drake)
- Co-I. The Cygnus OB2 Radio Survey** (January 2009)
Awarded 294 hours, e-Merlin/VLBI radio array (P.I.: Raman Prinja)
- Co-I. Probing the population of the Cygnus OB2 supercluster** (December 2008)
Awarded 14 hours, GTC/OSIRIS (P.I.: David Garcia)
- Co-I: Probing the Chemical Structure of NGC 6302** (December 2007)
Awarded 12.5 hours, Gemini/T-ReCS P.I.: Simon Casassus)
- Multiple long-slit and multi-object spectroscopy proposals** (2008 – 2013)
Awarded a total of 48 nights from 17 proposals (13 as P.I., 6 as Co-I) on various instruments, including MMT/Hectospec and FLWO 1.5m/FAST.