

# Venu Madhav Kalari

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Nationality: Indian

## Education

- Nov. 2011– *PhD. in Astrophysics at Queen’s University Belfast (UK)*  
May 2015 Thesis title: Disc accretion process in pre-main sequence evolution  
Adviser: Dr.Jorick Vink (Armagh)
- Sept. 2008– *BSc. in Physics at University of Manchester (UK)*  
June 2011 First Class with Honours

## Relevant Positions

- 2016– *Fondecyt Fellow at Universidad de Chile (Chile)*  
Current Obtained Fondecyt postdoctoral fellowship for research in “Star formation at low metallicities”
- 2011– *Research assistant at Armagh Observatory (UK)*  
2015 Three first author and two co-author referred publications  
Reduced and wavelength calibrated archive HST and VLT archive spectra  
Spectral analysis including line identification, and comparing with model atmospheres  
Wrote Python program to measure equivalent widths and identify spectral types based on line indicators
- June 2011– *Undergraduate research assistant at University of Manchester*  
July 2011 Reduced and analysed archive radio observations from Green Bank of LDN 1622.

## Research experience

- 2015– *Service*  
Referee for MNRAS
- 2012– *Data reduction*  
Spectroscopy- Multi-object fibre spectra (VLT-FLAMES), slit spectroscopy (UV/Optical/near-infrared)  
Integral Field Unit spectroscopy- VLT-MUSE  
Photometry- Data reduction (Optical, Near-infrared)

## Successful observing proposals

As P.I.

- 2015– *Are there old accretors?*, SALT-MOS
- 2015– *Measuring the mass accretion rate of pre-main sequence candidates in the LMC*, VLT-X shooter
- 2013– *Star formation in the low-metallicity Galactic region Dolidze 25*, SALT-RSS
- 2013– *Star formation in the LMC region 30 Doradus*, SALT-RSS

As Co.I.

- 2015– *OmegaCAM mini-survey of circumstellar discs in nearby galactic star-forming regions*, VLT-VST. PI: G.Beccari
- 2014– *Upper IMF of NGC 3603*, VLT-MUSE Science verification. PI: J.Vink

## Awards

- 2011–2014 DCAL-NI postgraduate scholarship
- 2008–2011 University of Manchester award for Excellence in Physics

## Conference contributions

- August 2015 *Star formation in open clusters using large surveys* - Irish National Astronomy meeting- Queen's University Belfast, Belfast, UK
- March 2015 *Pre-main sequence stars in distant star-forming regions* - Wide-Field Surveys Workshop, Royal Astronomical Society, London, UK
- August 2014 *Accretion rates in Dolidze 25* - Irish National Astronomy meeting- Trinity College Dublin, Ireland
- June 2014 *Star formation with VPHAS+* Poster contribution- National Astronomy Meeting, University of Portsmouth, UK
- May 2014 *Star formation within the Lagoon Nebula*- Young clusters in the GAIA-ESO survey, INAF Palermo, Italy
- Sep. 2013 *Measuring accretion rates homogeneously with VPHAS+* - VPHAS+ meeting- University of Warwick, Warwick, UK
- June 2013 *Accretion in Trumpler 14* - Annual ASGI meeting- Trinity College Dublin, Ireland
- April 2013 *Pre-main sequence accretion with GES/VPHAS* GAIA-ESO survey meeting- Observatoire de Nice, Nice, France
- Sep. 2012 *Star formation in Trumpler 14 and the Lagoon nebula* - VPHAS+ meeting- University of Warwick, Warwick, UK

## Supervision experience

- 2014– Co-supervisor supervisor of undergraduate student Krzysztof Barszcz (from Gdansk University of Technology) for six weeks
- 2014– Prime supervisor of masters project student Floor van Riggelen (from University of Amsterdam) for seven weeks
- 2013– Prime supervisor of undergraduate work experience student Joseph Totten (from University College London) for two weeks

## Relevant training

- 2015 Vitae Researcher Plus certification- Queen’s University Belfast
- 2013–2015 UK government approved first-aid and defibrillator training courses- Armagh Observatory
- 2014 Public awareness training- Armagh Observatory
- 2014 Northern Ireland Government approved Safeguarding training- Armagh Observatory
- 2013 Northern Ireland Government approved fraud awareness training- Armagh Observatory
- 2012 Python for astronomers training course- Armagh Observatory
- 2012 Image analysis course- University College Dublin
- 2010 Manchester Leadership Gold Award- University of Manchester

## Publications

### First author

1. *VLT-FLAMES Tarantula Survey XV. VFTS 822: A candidate Herbig B[e] star at low metallicity*, **Kalari, V. M.**, Vink, J. S., Dufton, P. L., Evans, C. J. et al. 2014, A&A, 564, L7
2. *Pre-main sequence accretion in the low metallicity Galactic star-forming region Sh 2-284*, **Kalari, V. M.**, Vink, J. S. 2015, ApJ, 800, 113
3. *VPHAS+ H $\alpha$  and u-band accretion rate measures of pre-main sequence stars in the Lagoon nebula*, **Kalari, V. M.**, Vink, J. S., Drew, J. E., Barentsen, G. 2015, MNRAS, 453
4. *Characterizing the Carina nebula cluster Trumpler 14*, **Kalari, V. M.**, Vink, J. S., Maíz-Apellániz, J. (in prep.)

In prep. papers available on request.

### Co-author

1. *VLT-FLAMES Tarantula Survey XX. Physical parameters of B-type supergiants*, McEvoy, C. M., Dufton, P. L., Evans, C. J., **Kalari, V. M.**, et al. 2015, A&A, 575, 70
2. *New OB star candidates in the Carina Arm around Westerlund 2 from VPHAS+*, Mohr-Smith M., Drew, J. E., Barentsen, G., Wright, N. J., Napiwotzki, R., Corradi, R. L., Eislöffel, J., Groot, P., **Kalari, V. M.** et al. 2015, MNRAS, 450, 3855
3. *The Gaia-ESO Survey: Pre-Main Sequence Stars in the Young Open Cluster NGC3293*, Delgado, A. J., Sampedro, L., Alfaro, E. J., Costado, M. T., incl. **Kalari, V. M.** and 16 co-authors (submitted)
4. *The Gaia-ESO Survey: Dynamical Analysis of the L1688 Region in Ophiuchus*, Rigliaco E., Wilking, B., Meyer, M. R., Jeffries, R., incl. **Kalari, V. M.** and 21 co-authors (submitted)