

# Kenny X. Van

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## Research Interests

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stellar astrophysics, stellar multiplicity, high energy astrophysics, stellar populations, hydrodynamics, numerical methods

## Education

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- 2017 – PRESENT    PhD candidate in PHYSICS  
                         **University of Alberta**, Edmonton  
                         Major: Astrophysics  
                         Thesis: “Binary Evolution and Magnetic Braking”  
                         Advisor: Prof. Natalia Ivanova
- 2015 – 2017        Master of Science in PHYSICS  
                         **University of Alberta**, Edmonton  
                         Major: Astrophysics  
                         Thesis: “Select Topics in Mass Transfer and Magnetic Braking”  
                         Advisor: Prof. Natalia Ivanova
- 2010 – 2015        Undergraduate Degree in PHYSICS  
                         **University of Alberta**, Edmonton  
                         Major: Astrophysics

## Research & Employment

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- SEPT 2017 - PRESENT    The Effect of Magnetic Braking on Neutron Star Low Mass X-Ray Binaries  
                         Graduate research  
                         University of Alberta  
                         Supervised by Prof. Natalia Ivanova
- SEPT 2015 - AUG 2017    Select Topics in Mass Transfer and Magnetic Braking  
                         Graduate research  
                         University of Alberta  
                         Supervised by Prof. Natalia Ivanova
- FALL 2014            Black Hole Binaries in Globular Clusters  
                         Undergraduate research project  
                         University of Alberta  
                         Supervised by Prof. Natalia Ivanova
- WINTER 2013        Finding a Pattern in the Outbursts of SS Cygni  
                         Undergraduate research project  
                         University of Alberta  
                         Supervised by Prof. Gregory Sivakoff

## Awards

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- FALL 2018    Queen Elizabeth II Scholarship (Doctoral Level, \$7500)
- SUMMER 2016    FGSR Graduate Travel (Master’s Level, \$1500)

## Teaching Experience

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- JAN 2019 – MAR 2019    Marker for undergraduate astronomy course  
University of Alberta
- SEPT 2018 – DEC 2018    Teaching assistant for graduate stellar astrophysics course  
University of Alberta
- JAN 2018 – MAR 2018    Marker for undergraduate astronomy course  
University of Alberta
- SEPT 2017 – DEC 2017    Teaching assistant for graduate stellar astrophysics course  
University of Alberta
- JAN 2017 – MAR 2017    Volunteer at the University of Alberta observatory  
University of Alberta
- SEPT 2016 – DEC 2016    Teaching assistant for graduate stellar astrophysics course  
University of Alberta
- SEPT 2015 – APR 2016    Teaching assistant for second year physics lab  
University of Alberta

## Proposals

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- 2019    "Resources for Research Groups Competition", Compute Canada  
Awarded 314 CPU core years and 6 GPU core years

## Publications

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- Dec 2018    Low Mass X-ray Binaries: The Effects of Magnetic Braking Prescription  
**Van, K. X.**, Ivanova, N., Heinke, C. O.  
Monthly Notices of the Royal Astronomical Society
- July 2017    Formation of Black Hole X-Ray Binaries With Non-Degenerate Donors in Globular Clusters  
Ivanova, N.; da Rocha. C.A.; **Van, K. X.**; Nandez, J.L.A  
Astrophysical Journal Letters
- Feb 2017    Stability of mass transfer from massive giants: double black-hole binary formation and  
ultra-luminous X-ray sources  
Pavlovskii, K.; Ivanova, N.; Belczynski, K.; **Van, K. X.**  
Monthly Notices of the Royal Astronomical Society

## **Presentations and Talks**

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- June 2019 “Inverse Population Synthesis: Searching for the Origins”  
16 June 2019 - 20 June 2019, Montreal, Canada, poster
- May 2018 “Low Mass X-ray Binaries: Population at Roche Lobe Overflow”  
22 May 2018 - 26 May 2018, Victoria, Canada, poster
- May 2017 “Low Mass X-ray Binaries: Population at Roche Lobe Overflow”  
30 May 2017 - 1 June 2017, Edmonton, Canada, poster
- March 2017 “Stability of Mass Transfer from Massive Giants”  
20 March 2017 - 24 March 2017 Santa Barbara, USA, poster
- Sept 2016 “Population Study of LMXBs Using Standard Magnetic Braking in MESA”  
23 Sept 2016, Edmonton, Canada, talk
- July 2016 “Stability of Mass Transfer from Massive Giants”  
24 July 2016 - 30 July 2016, Cambridge, England, poster presentation

## **Conferences and Workshops**

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- JUNE 2019 CASCA (Montreal, Canada)
- MAY 2019 Westgrid Summer School (Calgary, Canada)
- AUG 2018 MESA Summer School - TA (Santa Barbara, USA)
- MAY 2018 CASCA (Victoria, Canada)
- MAY 2017 CASCA (Edmonton, Canada)
- MARCH - MAY 2017 The Mysteries and Inner Workings of Massive Stars (Santa Barbara, USA)
- JULY 2016 Binary Stars in Cambridge (Cambridge, England)