

**X-VISION**  
**2023**

# X-Ray vision of the energetic universe

XMM-Newton, NICER, and NuSTAR

A joint Workshop for X-Ray Data analysis

**6th - 17th February, 2023**

North-West University (NWU)  
Potchefstroom, South Africa

## Topics

- + Black holes
- + Pulsars
- + Jets
- + Galaxy clusters
- + Ionized outflows

## Key Lecturers and Project Leaders

Dr. Keith Arnaud, NASA, GSFC, USA  
Dr. Diego Altamirano, Univ. of Southampton, UK  
Prof. Markus Boettcher, NWU, SA  
Dr. Ignacio de la Calle, ESA/ESAC, Spain  
Prof. Gulab C. Dewangan, IUCAA, India  
Dr. Carlos Gabriel, COSPAR, Germany  
Dr. Matteo Guainazzi, ESA, The Netherlands  
Mr. Aitor Ibarra, ESA/ESAC, Spain  
Dr. Kristin K. Madsen, CalTech, USA  
Dr. Craig Markwardt, GSFC, USA  
Prof. Mariano Mendez, Univ. of Groningen  
Dr. Dan Wilkins, KIPC, Stanford, USA  
Dr. James Stiener, Harvard-Smithsonian, USA  
Dr. Randall Smith, Harvard-Smithsonian, USA

## Organizing committee

Prof. Markus Boettcher  
Dr. Sunil Chandra  
Prof. James Chibueze  
Dr. Carlos Gabriel  
Dr. Pranjupriya Goswami  
Dr. Matteo Guainazzi  
Prof. Mariano Mendez  
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Register at:

<https://xvisionastro2023.github.io>

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