

BINCY SUSAN JACOBS

Department of Physics, University of Johannesburg | sjacobs@uj.ac.za

PERSONAL PARTICULARS

Sex: Female
Race: Indian
Nationality: South African

EDUCATION

University of Johannesburg
PhD **2019**
Thesis title: "Physical properties of $(\text{Cr}_{84}\text{Re}_{16})_{100-x}\text{Y}_x$ alloys (Y = V, Mn)

University of Kerala
BEd **2005**
Field of Study: Science Education
Grade achieved: Distinction

University of Kerala
MSc in Physics **2004**
Specialization: Electronics
Grade achieved: Distinction

University of Kerala
BSc in Physics **2002**
Grade achieved: Distinction

AWARDS

Proficiency award: Second year BSc **2001**
Proficiency award: Third year BSc **2002**
Frank Nabarro Prize for the best PhD oral presentation in Condensed Matter Physics at annual SAIP conference **2012**
Most outstanding PhD poster presentation in Condensed Matter Physics at annual SAIP conference **2013**

GRANTS RECEIVED

NRF Thuthuka grant (2012-2014)
NRF lecturer replacement grant to complete doctoral degree (2014-2015)
University of Johannesburg Accelerated Academic Mentorship Programme (AAMP) funding for teaching relief (2017)
NRF Thuthuka grant -Post-PhD track (2019-2021)

COURSES LECTURED/CO-ORDINATED

Physics for Life Sciences (PHYL01A): Developed this course and delivered it for the first time in 2014

Auxiliary Physics for Biological Sciences (PHY1C01 and PHY1D01)

Introductory Physics 1B (PHYE0B1)

Physics for Engineers and Scientists – Extended degree (PHY1AEx and PHY2AEx)

SET (Bridging program for first year students)

Second year Physics Practical – PHY2A and PHY2B

Classical Mechanics and Special Relativity (PHY00A2/PHY002A)

RESEARCH**PUBLICATIONS**

Possible quantum critical behaviour in the $(\text{Cr}_{84}\text{Re}_{16})_{100-y}\text{V}_y$ alloy system

BS Jacobs, ARE Prinsloo, CJ Sheppard and AM Strydom *J. Appl. Phys* **113** 17E126 (2013)

Low temperature and magnetic field behaviour of the $(\text{Cr}_{84}\text{Re}_{16})_{89.6}\text{V}_{10.4}$ alloy

BS Jacobs, CJ Sheppard, ARE Prinsloo and L Lodya *J. Appl. Phys* **115** 17E121 (2014)

Spin-density-wave properties of $(\text{Cr}_{84}\text{Re}_{16})_{100-x}\text{V}_x$ alloys

BS Jacobs, ARE Prinsloo, CJ Sheppard and AM Strydom *SAIP Conference Proceedings* (2011)

Spin-density-wave behaviour in the $(\text{Cr}_{84}\text{Re}_{16})_{100-y}\text{V}_y$ system

BS Jacobs, ARE Prinsloo, CJ Sheppard and AM Strydom *SAIP Conference Proceedings* (2012)

Influence of magnetic field on the transition temperature of the $(\text{Cr}_{84}\text{Re}_{16})_{89.6}\text{V}_{10.4}$ alloy

BS Jacobs, ARE Prinsloo and CJ Sheppard *SAIP Conference Proceedings* (2013)

Probing the magnetic order in $(\text{Cr}_{84}\text{Re}_{16})_{100-y}\text{V}_y$ alloys using neutron diffraction

BS Jacobs, ARE Prinsloo, CJ Sheppard, AM Venter and HE Maynard-Casely *SAIP Conference Proceedings* (2014)

Electronic and magnetic properties of the $(\text{Cr}_{84}\text{Re}_{16})_{100-y}\text{Mn}_y$ alloy system

BS Jacobs, AD Faceto, CJ Sheppard, ARE Prinsloo, PC de Camargo and AJA de Oliviera *SAIP Conference Proceedings* (2015)

Neutron diffraction study of the $\text{Cr}_{84.7}\text{Re}_{15.3}$ alloy

B. S. Jacobs, A. R. E. Prinsloo, A. M. Venter, Z. N. Sentsho, A. J. Studer and C. J. Sheppard, *AIP Advances* **11** 015037 (2021).

Spin glass effects in the $(\text{Cr}_{84}\text{Re}_{16})_{99.6}\text{Mn}_{0.4}$ alloy

B. S. Jacobs, C. J. Sheppard, P. C. de Camargo and A. R. E. Prinsloo, AIP Advances 11 015012 (2021).

Thermal decomposition of GdCrO_4 to GdCrO_3 : Structure and magnetism

P. Mohanty, B. S. Jacobs, A. R. E. Prinsloo and C. J. Sheppard, AIP Advances 11 015235 (2021).

CONFERENCE PRESENTATIONS

INTERNATIONAL

12th Joint MMM/Intermag conference, Chicago, USA (2013)

The 58th Annual Magnetism and Magnetic Materials (MMM) conference, Denver, USA (2013)

The 59th Annual Magnetism and Magnetic Materials (MMM) conference, Hawaii, USA (2014)

The 65th Annual Magnetism and Magnetic Materials (MMM) conference, Virtual Platform (2020)

NATIONAL

56th Annual conference of the South African Institute of Physics, Pretoria, South Africa (2011)

57th Annual conference of the South African Institute of Physics, Pretoria, South Africa (2012)

58th Annual conference of the South African Institute of Physics, Richards Bay, South Africa (2013)

59th Annual conference of the South African Institute of Physics, Johannesburg, South Africa (2014)

60th Annual conference of the South African Institute of Physics, Port Elizabeth, South Africa (2015)

64th Annual conference of the South African Institute of Physics, Polokwane, South Africa (2019)

INTERNATIONAL LABORATORIES VISITED

Australian Nuclear Science and Technology Organisation (ANSTO) (2013 and 2014)

Federal University of São Carlos (UFSCar) (2014)

INTERNATIONAL WEBINAR

International webinar on Physical Properties of $(\text{Cr}_{84}\text{Re}_{16})_{100-y}\text{V}_y$ alloy system which was hosted by the Research and Post Graduate Department of Physics, St Aloysius College, Edathua, India.

STUDENT SUPERVISION

1. Mr Murei Mulibana, Honours Project (2020), Grade awarded: Distinction

2. Mr Murei Mulibana, MSc, (Current)