



# Women in Physics in Africa

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# Who am I?



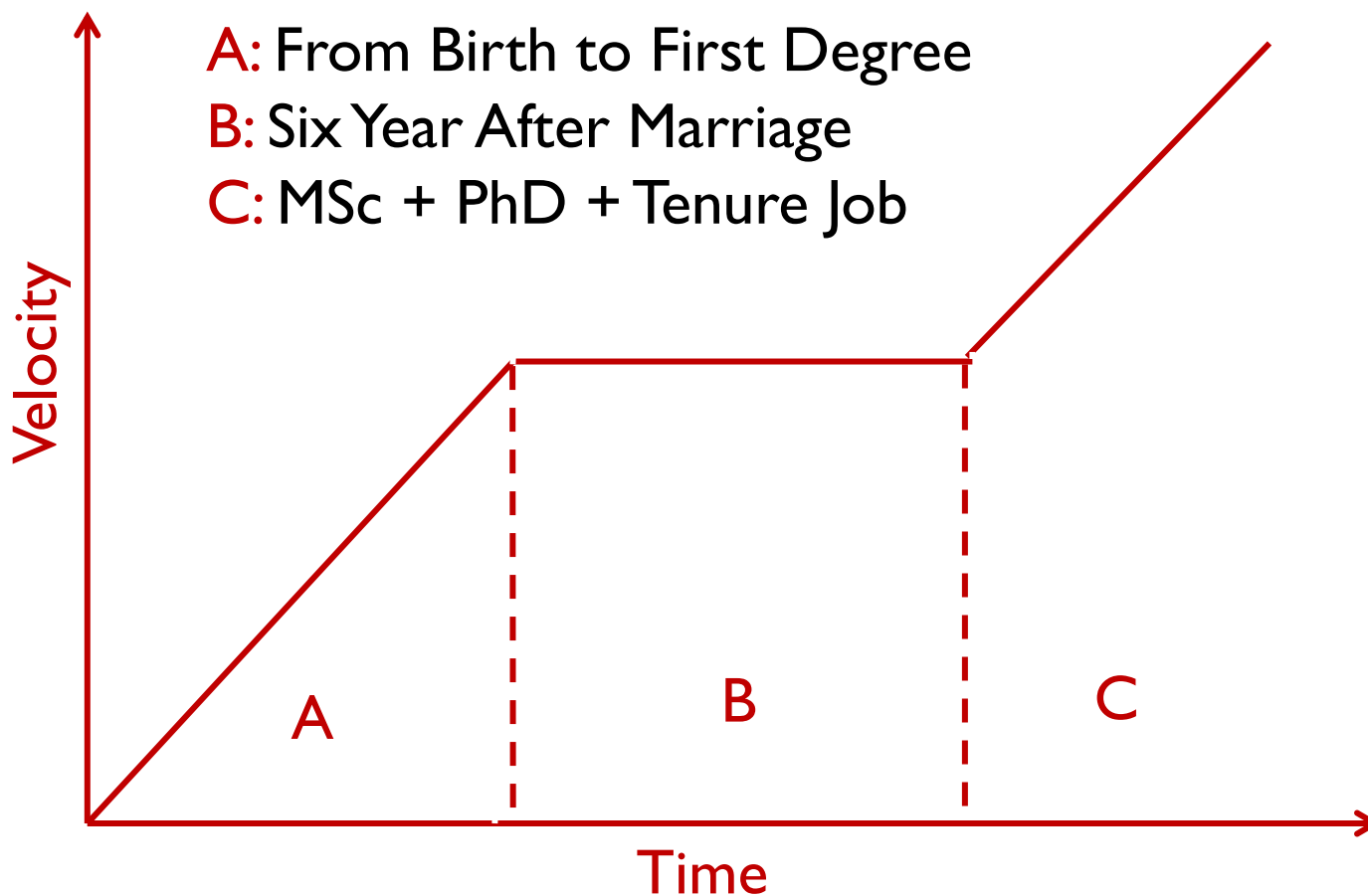
- Mother: Blessed with two Daughters
- Lecturer: Transfer of Knowledge
- Mentor: Supervision of Postgraduate Students
- Researcher: Experimental Nuclear Physics
- Professional Associates: SAIP, WiPiSA,  
SARPA, Win-Global

# Professional Trajectory



- Research Area : Experimental Nuclear Physics
- 2010-2012 : Post-Doctoral Research Scientist; iThemba LABS, Cape Town, South Africa
- 2012 till Date : Lecturer; School of Physics, University of the Witwatersrand, Johannesburg, South Africa.

# My Life-Line Velocity-Time Graph



# Women in Physics in Africa; Facts and Challenges



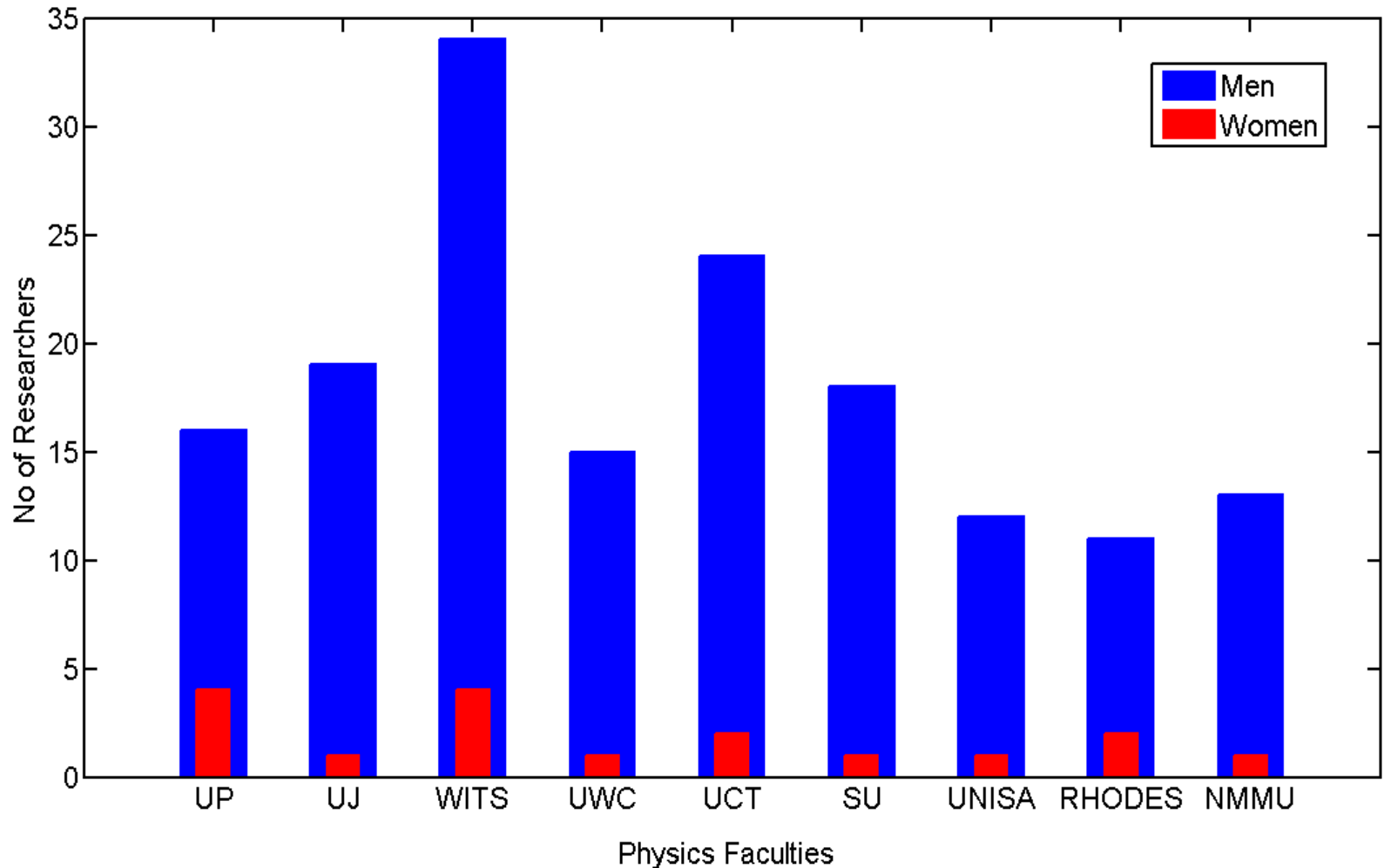
- Women have had various challenges in order to obtain equal education
- Societal influences affect girls' choice of study
- Religious and Cultural Beliefs have impacts on women advancement
- Political and Economic problems hindering the progress of women in physics in Africa. These include poverty and social violence toward women, intimidation, lack of mentorship stereotype and superiority among men.
- Rapid socio-economic development of a nation has been observed to depend on the calibre of women and their education in that country



# Women in Physics in Africa; Figures from South African Universities

- University of Pretoria: 4 Females; 17 Males
- University of Johannesburg: 1 Female; 19 Males
- WITS University: 4 Females; 34 Males
- University of Western Cape: 1 Female; 15 Males
- University of Cape Town: 2 Females; 24 Males
- Stellenbosch University: 1 Female; 18 Males
- University of Pretoria: 4 Females; 17 Males
- NMMU: 1 Female; 13 Males
- Rhodes University: 2 Females; 11 Males
- UKZN: 2 Females; 21 Males
- North-West University: 2 Females; 10 Males

# Physics Faculty Members from South African Universities



# Financial Support for Women in Physics from South African Government

- Department of Science and Technology (DST)
- National Research Foundation (NRF): Thuthuka Funding
- South African Agency for Science and Technology Advancement (SASTA): Outreach Programs

## 2012 WiPiSA Call for Proposals Women in Physics in South Africa (WiPiSA)

There is a growing global concern over the declining number of students at higher education institutions enrolling for, and graduating in, physics. South Africa, like many other countries, experiences under-representation of women in physics in all institutions, including academia, research and development, government institutions and industry. In November 2005 Women in Physics in South Africa (WiPiSA) was launched, with funding from the Department of Science and Technology (DST) and under the auspices of the South African Institute of Physics. WiPiSA aims to address the following areas of concern:

- Attracting girls into physics, including changes in teaching and curricula
- Launching a successful physics career, including mentoring and evaluation
- Getting women into higher positions in institutional and leadership structures
- Breaking stereotypes
- Balancing family and career
- Jobs
- Funding, and eligibility for funding
- Improving the institutional structure and climate for WIP.

In 2012 WiPiSA has again received a grant from DST to address the issues listed above. We are therefore calling for proposals for projects of up to R25 000 to be submitted by 31 August 2012.



# Financial Support for Women in Physics from South African Government



## 2013 WiPiSA Call for Proposals Women in Physics in South Africa (WiPiSA)

Contact Person: Malebo Tibane, [tibanmm@unisa.ac.za](mailto:tibanmm@unisa.ac.za)

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### Low Cost Fascinating Physics Experiments Gifts Competition

The Women in Physics (WiPiSA) Forum of the South African Institute of Physics (SAIP) is calling on students and physics community to enter a competition to develop low cost but fascinating science kits that can be used to demonstrate physics concepts.

A key objective of WiPiSA is to encourage and stimulate an interest in girls to study physics. WiPiSA does this through organising various outreach activities. During such events WiPiSA distributes gifts and information to participating pupils.

Career Development Workshop for Women in Physics, 16 – 19 September 2013

# Women in Physics in Africa; Few Ideas



- Challenging the Stereotype: Women choose their destinies in Science
- Breaking the Glass-Ceiling Effect: What mind-set prevails determine what path development takes
- Climbing the Scientific Ladder: Expanding our horizons
- Intelligence can be developed with Growth Mindset to embrace challenges, learn from criticism, see effort as path to mastery, persist despite obstacles and be inspired by others' success
- No one said it would be easy; just try harder
- Believing in the potential for intellectual growth improves outcomes

# Women in Physics in Africa; My Views



- High Hopes, Broken Promises, and Persistence
- Constructing Gender, Constructing Science
- New Science, New Knowledge; Bringing Feminist Perspectives into Science and Technology studies
- Reproducible Insights; Women Creating Knowledge, Social Policy and Changes
- Science, Sex and Stereotypes: Cultural Images of Female Scientists, Image is the key to Transformation
- Knowledge, Dedication and Integrity: Change in Mind-set is a prerequisite
- Provide Mentoring for junior faculty
- Implement effective work-life balance policies

# Food for Thought



- Hope ends; when you stop **Believing**
- Life ends; when you stop **Dreaming**
- Our greatest asset is **Faith**
- The worst thing in life is to be without **Hope**
- The most prized possession is **Integrity**
- The greatest “Shot in the arm” is **Encouragement**

# So, Are We There Yet?



⇒ One of the Lucky Ones



Iyabo in the 70's  
With Siblings



Iyabo in 2012  
With DVC Research of WITS University



“If I have seen further, it is by standing on the shoulders of giants” (Isaac Newton, 1676)

Acknowledgements:

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