



**International and African Mathematical Union
Commission
on the
History of Mathematics in Africa
(AMUCHMA)**

AMUCHMA-NEWSLETTER-33

Special Issue:

African women with a doctorate in mathematics

TABLE OF CONTENTS

	page
1. Presentation	2
2. Country index	2
3. Catalogue in chronological order	5

Maputo (Mozambique), 02.11.2006

African women with a doctorate in mathematics

1. Presentation

This special issue of the AMUCHMA newsletter presents a list of African ¹ women who hold a doctorate in mathematics or mathematics education.

The percentage of female doctorate holders of the total of African doctorate holders in mathematics is still only 11%. The only doctorate holder from Djibouti is a woman. In the case of Swaziland 3 out of 5 doctorate holders in mathematics are female and in the case of Somalia one of the two doctorate holders. The next highest percentages of female doctorate holders in mathematics are: Malawi (31%), Egypt (21%), South Africa (18%), Tunisia (18%), Algeria (17%) and Mauritius (17%). Sixty percent of the doctorates earned by African female mathematicians have been awarded in the last ten years.

The list of 241 African female mathematicians is extracted from my book *African Doctorates in Mathematics. A Catalogue* (African Academy of Sciences Publishers, Nairobi, 2006, 214 pages). Some additional doctoral theses are included in the new list. Firstly, a country index is presented, followed by a catalogue of African doctoral theses in historical order.

Any colleague who has additional information is invited to send it to me.

Paulus Gerdes
Chairman AMUCHMA
C.P. 915, Maputo, Mozambique
(pgerdes@virconn.com)

2. Country index

Algeria (15)

Zoubida Souici BENHAMMADI (1988), Nouri Fatma ZOHRA (1988), Assia LAGHA-BENABDELLAH (1989), Amina BENBERNOU (1996), Rouquia DJABALI (1998), Isma BOUCHEMAKH (2001), Yasmina MAÏZI (2002), Nadia BENHABOUCHE (2003), Fadia BEKKAL BRIKCI (2005), Zakia KEBBICHE (2006), Hayet ROUMILI (2006), Karima AMOURA, Samia BENMEHIDI, Djemaia BENSİKADDOUR, Fouzia REBBANI.

Botswana (2)

Kgomotso Gertrude GAREGAE (2002), Sesutho Koketso KESIANYE (2002).

Burkina Faso (3)

Marie Françoise OUEDRAOGO (1999), Patricia ZOUNGRANA (2001), Geneviève KABRÉ (2004).

Burundi (1)

Janvière NDIRAHISHA (2003).

Cameroon (6)

Laure Pauline FOTSO (1981), Victoire TANKOU (1988), Marie Gisele KAMANOU-GOUNE (1999), Miranda Ijang TEBOH-EWUNGKEM (2003), Anne Marie TIAYA TSAGUE, Marguerite MVEH NZE.

¹ Born in Africa or citizens of an African country.

- Congo Brazzaville (1)
 Jeannette DZOUMBA (1985).
- DR Congo (1)
 Rebecca WALO OMANA
- Côte d'Ivoire (3)
 Joséphine GUIDY-WANDJA (1971), Alima KAMARA (1994), Patricia NEBOUT ARKHURST (1995).
- Djibouti (1)
 Madina DAHER OKIYE (2004).
- Egypt (44)
 Soraya SHERIF (1963), Maassouma Mohamed KAZIM (1964), Laila Mohamed Fahmy ABD-ELAL (1969), Nawal Mohamed Mahmoud EL-SAMRA (1969), Entsarat Mohamed EL-SHOBAKY (1973), Nashaat Farid MOHAMED (1975), Nabila Ahmed Gad EISSA (1979), Mona Kamel Abd EL-HADY (1980), Azza Mohamed Kamal KHALIFA (1980), Sawsan Sami ELIAS (1981), Nahid Abdel Salam MOKHLES (1981), Fawzia Abdel Azim SAID (1981), Soad El-Sayed BADAWI (1982), Soad Zaki MELEK (1982), Fatma Gab Allah Abo EL-MAGD (1983), Gamal Ali Fouad ISMAIL (1985), Samia S. ELAAZAB (1986), Rabha Md. M. EL-ASHWAH (1986), Samia Awaad METWALLY (1986), Bekchita Abdel Aziz SAAD (1986), Néfertiti MAGAHED (1988), Fatma Abdu Abu AL IA (1989), Hoda Kamal Mohammed EL-SAYIED (1989), Manal Mohamed Mohamed NASSAR (1989), Angail Amain SAMAAN (1989), Laila SOUEIF (1989), Nadia Radwaan Abd ELGWAAD (1991), Lubna Abdel Kadir FATIN (1991), Amal Talaat MOHAMED (1993), Salwa Fahmy KALDS (1994), Maha EL-ASHRAM (1995), Karima Mohamed Abed-Rabo RAMADAN (1995), Azza Gameel Hasan SAYED (1995), Mona Mohamed Mohamed TARRAD (1995), Sabah Hafez ABDALLAH (1996), Hoda Hamed EL-DIB (1996), Elham Mohamed EL-SHERIF (1996), Moshira Mohamed Hassan KAMEL (1996), Nabila Mohamed Ahmed Hassan EL-BAZEDY (1998), Fatma GAAFAR (1998), Iman Hafez IBRAHIM (1998), Nagwa Mohamed SABIR (1998), Hala Aly Ebrahim FERGANY (1999), Enaam Khalifa RAWY (1999).
- Ethiopia (2)
 Kbenesh W. BLAYNEH (1996), Mahlet Getachew TADESSE (2002).
- Ghana (3)
 Lucy J. CAMPBELL (2000), Natalie MENSAH (2003), Roselyn Aba Mansa ABBIW-JACKSON (2004).
- Kenya (3)
 Eunice MUREITHI (1997), Irene Sitawa WATTANGA (2003), Penina Adhiambo Ogolla KAMINA (2005).
- Lesotho (2)
 'Mamphono KHAKETLA (1991), Nomusic MOROBE (2000).
- Madagascar (3)
 Irène RAVOLOMANANA RASOLOFONIAINA (1983), Aimée Egyptienne RAMASY (1984), Fanja RAKOTONDRAJAO (1999).
- Malawi (4)
 Nyovani Janet MADISE (1993), Eunice Gogo MPHAKO (2001), Catherine Panji CHAMDIMBA (2002), Mercy KAZIMA (2002).

Mauritania (3)

Salma Bent El HACEN (1999), Mariem Mint El MOUVID (2000), Fatimettou Bent El MOUNIR (2005).

Mauritius (3)

Jayrani CHEENEEBASH, Preethee NUNKOO GONPOT, Jowaheer VANDNA.

Morocco (26)

Nouzha EL YACOUBI (1978), Habiba EL BOUAZZAOUI (1982), Bahija EL BAROUDI (1985), Awatef SAYAH (1991), Soumaya MOUSSA (1994), Khadija NIRI (1994), Fatima EZZAKI (1996), Badia El GHALI (1996), Souad Ameziane HASSANI (1997), Naima BENTOUDJA (1998), Bochra Ec-Cherif EL KETTANI (1998), Khadija AYAZ (2000), Hasna CHAMLAL (2000), Khadija EL AMRI (2000), Ouafae GUENNOUN (2000), Hakima KEMMOUN (2000), Amale LAHLOU (2000), Boutaina BOUZOUF (2001), Yamna El MAKKAB (2001), Rajae Ben TAHER (2001), Nawale BERRAHOU (2002), Mouna ESSAOUINI (2002), Fatiha ZIRARI (2002), Souad ASSOUDOU (2003), Widad BOUHMAMA (2003), Noufissa MIKOU.

Mozambique (2)

Sarifa Abdul FAGILDE (née MAGIDE) (2002), Elena ALVES (née VLADIMIROVNA) (2002).

Niger (4)

Moumouni Kane AÏSSATA (1983), Maimouna Malam IDI (2002), Hadiza Moussa SALEY (2002), Haoua HAMIDOU.

Nigeria (16)

Grace Awani ALELE-WILLIAMS (1963), Elizabeth ETUK (1967), Bukunola Mabogunje OSIBODU (1975), Orefole Olabisi UGBEBOR (née FALODE) (1976), Isabelle Agwaledo ADJAERO (1981), Victoria Wilson INYANG (1984), Yewande OLUBUMMO (1991), Uche AGWAGAH (1993), Nkechi Madonna Adeleine AGWU (1995), Deborah Olayide A. AJAYI (née SUBERU) (1996), Ada Felicitas MUONEKE (2001), Clara Idowu NOSEGBE (2001), Folake Oyedigba AKINPELU (2003), O. BIDEMI YUSUF (2005), Uzoma C. NWICHI, Edith Onowe ONOBUN.

Senegal (5)

Aissa WADE (1996), Marie Salomon SAMBOU (2001), Sophie DABO-NIANG (2002), Ndèye Rokhaya GUËYE (2004), Salimata GUEYE DIAGNE.

Somalia (1)

Halima Nur ALI (1993).

South Africa (57)

Jennifer D. KEY (1969), Hendrika Cornelia Scott SWART (1971), June M. JURITZ (1973), Marié GROBBELAAR (née VAN DALSEN) (1978), Christina M. MYNHARDT (1978), Emmarentia Liefde RAATH (1978), Anna Francina HARDING (née MEIRING) (1981), Frieda THERON (née MINNAAR) (1982), Heiltjie Magdalena RAUTENBACH (1983), Barbara SWART (1983), Norma C. PRESMEG (1985), Marietjie FRICK (née UYS) (1986), Jacqueline Suzanne GALPIN (1986), Susanah J. M. BRITS (1987), Laurette PRETORIUS (1987), Andriette BEKKER (1990), Kathleen Ann DRIVER (1991), Isabella Cornelia BURGER (1992), Anneliese SCHAUERTE (1992), Christien THIART (1994), Emmerentia Hendrika Antoinetta VENTER (1995), Joanne WALTERS-WAYLAND (née WALTERS) (1995), Jillian Beryl ADLER (née Smidt) (1996), Susan Antoinette DE SWARDT (1996), Elna UNGERER (1996), Reina NIEUWOUDT (1997), Hester Margaretha VAN NIEKERK (1997), Hermien

ZAAIMAN (1998), Phethiwe Precious MATUTU (1999), Magda BOTHA (2000), Elsa MENTZ (2000), Renuka VITHAL (2000), Lizette ZIETSMAN (2000), Nora ALEXEEVA (2001), Elmari DU TOIT (2001), Meria HOCKMAN (2001), Lizelle FLETCHER (2002), Mellony GRAVEN (2002), Sarah HOWIE (2002), Iris Gugu MOCHE (2002), Mamokgethi SETATI (2002), Diane WILCOX (2002), Margot BERGER (2003), Birgit ERNI (2003), Kerstin JORDAAN (2003), Dorothee KLEINE (2003), C. J. (Ina) LOUW (2003), Susanna Maria NIEUWOUDT (2003), Suriza VAN DER SANDT (2003), Leilani GOOSEN (2004), Ariane NEETHLING (2004), Karin Michelle BRODIE (2005), Karin Michelle HUNTER (2005), Dalene SWANSON (2005), Nthabiseng NTENE (2006), Marelize KRIEL, Henda SWART.

Sudan (1)

Manar Elshiekh Abdel RAHMAN (1995).

Swaziland (3)

J. Thuli NHLENGETFWA (1993), Londiwe C. MASINGA (1995), Gcina DLAMINI (2003).

Tanzania (5)

Rosalia Sam KATAPA (1984), Verdiana Grace MASANJA (née Kashaga) (1986), Joyce Lazaro NDALICHAKO (1997), Angelina Matinde BIJURA (1999), Joyce R. MGOMBELO (2002).

Tunisia (15)

Fatma MOALLA (1964), Souad REDJEB (1977), Hajer BAHOURI (1982), Hanène HATTAB ABROUGUI (1998), Chiraz LATIRI (1999), Saima KHENISSY (2002), Karima DJEBALI (2003), Faïza CHELLOUGUI (2004), Lobna ABDELMOULA (2005), Najoua HAJALI (2005), Inès ABDELJAOUED, Laila ABEL-LAI, Nadia Chaouchi Ben ATTI, Fatma HADDED, Leila MOALLA.

Uganda (3)

Margaret NABASIRYE (1995), Immaculate Kizito NAMUKASA (2004), Rebecca Namugabwe NSUBUGA (2004).

Zimbabwe (3)

Elizabeth HENDRIKZ (1973), Cecilia WANGECHI-MWATHI (1997), Selani Dorothy MUSEKWA (2005).

2. Catalogue in chronological order

Soraya SHERIF [Egypt]

1963 (Ph.D.) *Tanberian theorems*, Birmingham University (UK); Advisor: Brian Kutner.

Grace Awani ALELE-WILLIAMS [Nigeria] ²

1963 (Ph.D.) *Dynamics of education in the birth of a New Nation: Case study of Nigeria*, University of Chicago (USA).

² The mathematician Grace ALELE-WILLIAMS (born 1932) was the first female Ph.D. of Nigeria. She received her doctorate in education (1963). She was also the first female Vice Chancellor of a Nigerian university and the chair of the council of vice chancellors of Nigeria. She has been the Vice President of the World Organisation for Early Childhood Education. Alele-Williams served the African Mathematical Union as the first chairperson of its Commission on Women in Mathematics in Africa (1986-1991).

- Maassouma Mohamed KAZIM [Egypt]
 1964 (Ph.D.) *Basic assumptions for a secondary school mathematics program*, University of Kansas (USA).
- Fatma MOALLA [Tunisia]
 1964 (Doctorat 3^{ème} cycle) *Sur quelques théorèmes globaux en géométrie finisérienne*, Université de Paris (France)
 1967 (Doctorat d'état) Université de Paris (France).
- Elizabeth ETUK [Nigeria]
 1967 (Ph.D.) *The development of number concepts, an examination of Piaget's theory with Yoruba Nigerian children*, Columbia University (New York, USA).
- Laila Mohamed Fahmy ABD-ELAL [Egypt]
 1969 (Ph.D.) *Numerical solutions of integral equations*, Sussex University (U.K.); Advisor: L. M. Davies.
- Jennifer D. KEY [South Africa]
 1969 (Ph.D.) *Some Topics in Finite Permutation Groups*, University of London (UK); Advisors: Ascher Wagner & Kurt Hirsch.
- Nawal Mohamed Mahmoud EL-SAMRA [Egypt]
 1969 (Ph.D.) *Spin-orbit forces and nuclear binding energies*, University of Southampton (UK); Advisor: H. A. Jahn.
- Joséphine GUIDY-WANDJA (née WANDJA) [Côte d'Ivoire]
 1971 (Doctorat 3^{ème} cycle) *Sous les courbes fermées convexes du plan et le théorème des quatre sommets*, Université de Paris 6 (France); Advisor : René Thom.
 1981 (Doctorat d'état en sciences mathématiques) *Modèles de décision entre investissement en biens durables et épargne en biens fiduciaires et Modèle de partage équitable ou théorie du chômage*, Université Nationale de Cote d'Ivoire (Abidjan, Côte d'Ivoire); Advisor: Jean-Pierre Aubin.
 [1992] (Doctorat d'état en science économie) *La dynamique d'intégration commerciale des pays de l'Afrique subsaharienne: cas de la Zone Franc*, Université Nationale de Cote d'Ivoire (Abidjan, Côte d'Ivoire)
- Hendrika Cornelia Scott SWART [South Africa]
 1971 (D.Sc.) *Sesquilinear Curves in Desarguesian Planes*, Universiteit Stellenbosch (South Africa); Advisor: Kurt-Rüdiger Kannenberg.
- Elizabeth HENDRIKZ (d. 2005) [Zimbabwe]
 1973 (Ph.D.) *A study of the scientific and mathematical concepts and levels of scientific thinking available to selected adolescent academic secondary school pupils and the factors influencing their development*, University of London (UK).

- June M. JURITZ [South Africa]
 1973 (Ph.D.) *Aspects of non-central multivariate t distributions*, University of Cape Town (South Africa); Advisor: C. J. Troskie.
- Entsarat Mohamed El-SHOBAKY [Egypt]
 1973 (Dr.rer.nat.) (Germany)
- Bukunola Mabogunje OSIBODU [Nigeria]
 1975 (Ph.D.) *The development of a model program for in-service mathematics education of primary school teachers in Western State, Nigeria*, Michigan State University (USA).
- Oreofe Olabisi UGBEBOR (née FALODE) [Nigeria]
 1976 (Ph.D.) *Sample path properties of Brownian motion*, University of London (UK); Advisor: S. James Taylor.
- Souad REDJEB [Tunisia]
 1977 (Doctorat 3eme cycle) *Le developpement des structures logico-mathématiques élémentaires chez des enfants tunisiens de milieux sociaux différents*, Université de Bordeaux 2 (France); Advisor. de Jacques Wittwer.
- Marié GROBBELAAR (née VAN DALSEN) [South Africa]
 1978 (D.Sc.) *Die teorie van nie-stasionêre B-evolusies geassosieer met dinamies-gekoppelde randwaardeprobleme* [The theory of non-stationary B-evolutions associated with dynamically-linked border value problems], University of Pretoria (South Africa); Advisor: N. Sauer.
- Christina M. MYNHARDT [South Africa]
 1978 (Ph.D.) *The G-constructability of graphs*, Rand Afrikaans University (Pretoria, South Africa); Advisor: Izak Broere.
- Emmarentia Liefde RAATH [South Africa]
 1978 (Ph.D.) *Polinoomreekse in meerveranderlike analise*, University of South Africa (Pretoria); Advisor: J. J. J. Roux.
- Nouzha El YACOUBI [Morocco]
 1978 (Doctorat 3ème cycle) *Sur les Modules Topologiques et Bornologiques* [On topological and bornological modules], Université de Rabat (Rabat, Morocco); Mohamed Akkar.
 1995 (Doctorat d'état) *Sur les Algèbres Topologiques non Associatives* [On non-associative topological algebras], Université de Rabat (Rabat, Morocco); Advisor: Mohamed Akkar.
- Fatoumata Camara DIALLO [Mali]
 1979 (Doctorat 3eme cycle) *Recherche des conditions de possibilite d'une didactique mathématique au Mali*, Université de Bordeaux 2 (France); Advisor: Jacques Wittwer.

- Nabila Ahmed Gad EISSA [Egypt]
1979 (Ph.D.) *Application of group theory on molecular vibration*, Ain-Shams University (Cairo, Egypt); Advisor: Afaf A. Sabry.
- Mona Kamel Abd EL-HADY [Egypt]
1980 (Ph.D.) *Studies on the stability and instability tending to fission of nuclei*, Ain-Shams University (Cairo, Egypt); Advisor: Afaf A. Sabry.
- Azza Mohamed Kamal KHALIFA [Egypt]
1980 (Ph.D.) *New approach to constructive topology and measure theory*, Moscow University (Russia); Advisor: A. A. Markov.
- Isabelle Agwaledo ADJAERO [Nigeria]
1981 (Ph.D.) *Uniqueness of the Coefficient Ring and Related Problems in Group Rings*, University of Connecticut (Storrs CT, USA); Advisor: Eugene Spiegel.
- Sawsan Sami ELIAS [Egypt]
1981 (Egypt)
- Laure Pauline FOTSO [Cameroon]
1981 (Ph.D.) *Multiple objective programming*, Rensselaer Polytechnic Institute (USA); Advisor: Joseph Ecker.
- Anna Francina HARDING (née MEIRING) [South Africa]
1981 (D.Sc.) *Numerical Studies of Reaction-Diffusion in Physiological Processes*. University of Pretoria (Pretoria, South Africa); Advisors: J. A. Snyman (Pretoria) & R. Mitchell (Dundee, Scotland).
- Noufissa MIKOU [Morocco]
1981 (Doctorat d'état) *Modèles de réseaux de files d'attente avec pannes* [Models of queuing networks subject to breakdowns], Université de Paris 11 (France).
- Nahid Abdel Salam MOKHLES [Egypt]
1981 (Ph.D.) (USSR)
- Fawzia Abdel Azim SAID [Egypt]
1981 (Ph.D.) *A study of kinetics of protiodeacylation*, Brunel University (UK).
- Soad El-Sayed BADAWI [Egypt]
1982 (Ph.D.) *Waves on beaches*, Cairo University (Egypt); Advisors: A. A. Ashour & J. P. Germain.
- Hajer BAHOURI [Tunisia]
1982 (Doctorat 3^{ème} cycle) *Unicité et non unicité du problème de Cauchy pour des opérateurs à symbole principal réel*, Université de Paris-Sud (France);
1987 (Doctorat d'état) *Unicité, non unicité et continuité Hoeder du problème de Cauchy pour des équations aux dérivées partielles: propagation du front d'onde $C^*(L)$ pour des équations non linéaires*, Université de Paris-Sud (France); Advisor: Serge Alinhac.

Habiba EL BOUAZZAOUI [Morocco]

1982 (Doctorat 3ème cycle) *Etude de situations scolaires des premiers enseignements du nombre et de la numération. Relations entre divers caractères de ses situations et le sens, la compréhension de l'apprentissage de ces notions* [Study of school situations of the first teaching of number and numeration. Relationships between diverse characters of these situations and the meaning, the understanding of the learning of these notions]. Université Bordeaux 1 (Bordeaux, France); Advisor: Guy Brousseau.

1988 (Ph.D.) *Conceptions des élèves et des professeurs a propos de la notion de continuité d'une fonction* [Pupils' and teachers' conceptions concerning the notion of continuity of a function], Université Laval (Québec, Canada); Advisors: Claude Gaulin & Guy Brousseau.

Soad Zaki MELEK [Egypt]

1982 (Ph.D.) (Egypt)

Frieda THERON (née MINNAAR) [South Africa]

1982 (D.Sc.) *Relative Injectivity for R-modules* [in Afrikaans], University of Pretoria (South Africa); Advisor: L. M. Pretorius.

Moumouni Kane AÏSSATA [Niger]

1983 (Doctorat 3ème cycle) *Étude de quelques problèmes pédagogiques et linguistiques concernant l'enseignement des mathématiques au Niger*, Université Paris VII (France).

Fatma Gab Allah Abo EL-MAGD [Egypt]

1983 (Ph.D.) (Egypt)

Heiltjie Magdalena RAUTENBACH [South Africa]

1983 (Ph.D.) *Kwaternione: Ontwikkeling en toepassings met spesiale verwysing na die kwaternioonnormaalverdeling*, University of South Africa (Pretoria); Advisor: J. J. J. Roux.

Irène RAVOLOMANANA RASOLOFONIAINA [Madagascar]

1983 (Doctorat) *Présentation et utilisation d'informations dans un texte, les conditions d'un apprentissage mathématique par la lecture*, Université de Strasbourg (France).

Barbara SWART [South Africa]

1983 (Ph.D.) *Numerical solution of hyperbolic partial differential equations*, University of Pretoria (Pretoria, South Africa); Advisor: Tunc Geveci.

Victoria Wilson INYANG [Nigeria]

1984 (Ph.D.) *Uniserial Space Groups*, University of London (UK); Advisor: Susan McKay.

Rosalia Sam KATAPA [Tanzania]

1984 (Ph.D.) *Statistical Analysis of Familial Data*, University of Toronto (Canada); Advisor: Muni Srivastava.

- Aimée Egyptienne RAMASY [Madagascar]
 1984 (Doctorat 3ème cycle) *Propriétés extrémales des valeurs singulières d'opérateurs compacts: applications statistiques à la réduction de variables*, Université de Pau et des Pays de l'Adour, Pau (France); Advisor: Alain Pousse.
- Bahija EL BAROUDI [Morocco]
 1985 (Doctorat 3ème cycle) *Bifurcations de codimension 1 et 2 pour un système différentiel autonome de R^3 à non linéarité quadratique*, Université Paul Sébatier (Toulouse, France).
- Jeannette DZOUMBA [Congo Brazzaville]
 1985 (Doctorat 3ème cycle) *Sur les polynômes de Laguerre-Hahn*, Université Pierre et Marie Curie (Paris, France).
- Gamal Ali Fouad ISMAIL [Egypt]
 1985 (Ph.D.) *Accuracy of the multi-step methods for solving differential equations*, Ain-Shams University (Cairo, Egypt); Advisor: Abbas Ibrahim Abdel Karim.
- Norma C. PRESMEG [South Africa]
 1985 (Ph.D.) *The Role of Visually Mediated Processes in High School Mathematics: A Classroom Investigation*, University of Cambridge (Cambridge, UK); Advisor: Alan Bishop.
- Samia S. ELAAZAB [Egypt]
 1986 (Ph.D.) *Linear and non-linear stability of rotating fluid cylinder under the influence of surface tension and (or) other forces*, Ain-Shams University (Cairo, Egypt); Advisors: Dirk K. Callebaut & A. A. Sabry.
- Rabha Md. M. El-ASHWAH [Egypt]
 1986 (Ph.D.) *On Bazilevic and close-to-convex functions*, University of Wales (Swansea, UK).
- Marietjie FRICK (née UYS) [South Africa]
 1986 (Ph.D.) *Generalized colourings of graphs*, Rand Afrikaans University (Pretoria, South Africa).
- Jacqueline Suzanne GALPIN [South Africa]
 1986 (D.Sc.) *Robust and bounded influence regression*, University of Potchefstroom (South Africa).
- Verdiana Grace MASANJA (née Kashaga) [Tanzania]
 1986 (Dr.-Ing.) *A Numerical Study of a Reiner-Rivlin Fluid in an Axi-Symmetrical Circular Pipe*, Technical University of Berlin (West Berlin, Germany); Advisors: Wolfgang Mushick, Gert Brunk & Heinrich Fiedler.
- Samia Awaad METWALLY [Egypt]
 1986 (Ph.D.) (USSR)

Bekchita Abdel Aziz SAAD [Egypt]

1986 (Ph.D.) (Egypt)

Susanah J. M. BRITS [South Africa]

1987 (Ph.D.) *Voorwaardelik gespesifiseerde inferensie: Rangnommer vooraftoets-prosedures vir die verewekansigde blokontwerp en die genestelde ontwerp* [in Afrikaans], Rand Afrikaans University (South Africa); Advisor: Hermanus Lemmer.

Laurette PRETORIUS [South Africa]

1987 (D.Sc.) *Gauss-type Quadrature Formulas for Spline Functions*, Potchefstroom University for Christian Higher Education (South Africa); Advisor: Dirk Laurie.

Zoubida Souici BENHAMMADI [Algeria]

1988 (Doctorat 3ème cycle) *Transformations holomorphiquement projectives des espaces symétriques complexes*, Université Claude Bernard (Lyon, France); Advisor: Yvan Kerbrat.

Néfertiti MAGAHED [Egypt]

1988 (Doctorat) *Autour des algèbres de Malcev*, Université de Montpellier II (France); Advisor: Artibano Micali.

Victoire TANKOU [Cameroon]

1988 (Ph.D.) *Use of auxiliary information in sampling theory*, Southern Illinois University (Carbondale IL, USA); Advisor: Sudhakar Dharmadhikari.

Nouri Fatma ZOHRA [Algeria]

1988 (Ph.D.) *A study of Pseudospectral Methods for the solution of nonlinear dispersive equations*, University of Strathclyde (UK); Advisor: D. M. Sloan.

Fatma Abdu Abu AL IA [Egypt]

1989 (Ph.D.) *Equilibrium forms and stability of charged drops*, Ain-Shams University (Cairo, Egypt); Advisor: Afaf Ahmed Sabry.

Assia LAGHA-BENABDELLAH [Algeria]

1989 (Doctorat) *Problèmes aux limites pour des E.D.P. hyperboliques non linéaires*, Université des Sciences et de la Technologie Houari Boumedienne (Algiers, Algeria).

Manal Mohamed Mohamed NASSAR [Egypt]

1989 (Ph.D.) *Characterizations of some statistical distributions*, University of Cincinnati (Ohio, USA); Advisor: Dan Rapescu.

Hoda Kamal Mohammed EL-SAYIED [Egypt]

1989 (Ph.D.) *On Riemannian and complex submanifolds*, Tanta University (Egypt); Advisor: Mohammad Afwat Abd El-Meged.

- Angail Amain SAMAAN [Egypt]
 1989 (Ph.D.) *Temperature-dependent viscosity and thermal conductivity in steady-incompressible boundary layer flow*, Ain-Shams University (Cairo, Egypt); Advisor: Samy Abd-El-Shead.
- Laila SOUEIF [Egypt]
 1989 (Ph.D.) *Transfer of properties in normalizing extensions*, Cairo University (Egypt); Advisors: M. Amer & A. Page.
- Andriette BEKKER [South Africa]
 1990 (Ph.D.) *Generalising, compounding and characterising as methods to obtain parameter-rich distributions* (In Afrikaans), University of South Africa (Pretoria); Advisor: J. J. J. Roux.
- Kathleen Ann DRIVER [South Africa]
 1991 (Ph.D.) *Convergence of Pade Approximants for some q-Hypergeometric Series*, University of the Witwatersrand (Johannesburg, South Africa); Advisor: Doron Lubinsky.
- Nadia Radwaan Abd ELGWAAD [Egypt]
 1991 (Ph.D.) *Nonlinear electrodynamic stability for different periodic fields*, Ain-Shams University (Cairo, Egypt); Advisors: Mohamed G. S. El-Mohandis & El Sayed E. A. El Shehaway.
- Lubna Abdel Kadir FATIN [Egypt]
 1991 (Ph.D.) (Egypt)
- 'Mamphono KHAKETLA [Lesotho]
 1991 (Ph.D.) *An Analysis of the Lesotho Junior Certificate Mathematics Examination and its Impact on Instruction (Mathematics Examination)*, University of Wisconsin (Madison WI, USA); Advisor: Thomas A. Romberg.
- Yewande OLUBUMMO [Nigeria]
 1991 (Ph.D.) *Measures on empirical logics and the properties of their associated dual Banach spaces*, University of Massachusetts (Amherst, USA); Advisor: Thurlow Cook.
- Awatef SAYAH [Morocco]
 1991 (Doctorat d'état) *Contribution à l'étude des équations d'Hamilton-Jacobi*, Université Mohammed V Agdal (Rabat, Morocco).
- Isabella Cornelia BURGER [South Africa]
 1992 (Ph.D.) *Pre-orderings of theories induced by semantic information* (in Afrikaans), Rand Afrikaans University (Johannesburg, South Africa); Advisor: Johannes Heidema.
- Anneliese SCHAUERTE [South Africa]
 1992 (Ph.D.) *Biframes*, McMaster University (Canada); Advisor: B. Banaschewski.

- Uche N. V. AGWAGAH [Nigeria]
 1993 (Ph.D.) *Instruction in mathematics reading as a factor in students' achievement and interest in word problem solving*, University of Nigeria (Nsukka, Nigeria).
- Halima Nur ALI [Somalia]
 1993 (Ph.D.) *On the Stability of the Couette Flow between Rotating Cylinders*, Howard University (Washington DC, USA); Advisor: Isom H. Herron.
- Nyovani Janet MADISE [Malawi]
 1993 (Ph.D.) *Birth spacing in Malawi and its impact on under five mortality* [Social Statistics], University of Southampton (UK); Advisor: Ian Diamond.
- Amal Talaat MOHAMED [Egypt]
 1993 (Ph.D.) (Egypt)
- J. Thuli NHLENGETFWA [Swaziland]
 1993 (Ph.D.) *The impact of mathematics/science inservice teacher education programs on the Manzini region (Swaziland) elementary schools*, Ohio University (USA).
- Salwa Fahmy KALDS [Egypt]
 1994 (Ph.D.) *On the stability conditions for some problems of couple-stresses in fluids*, Ain-Shams University (Cairo, Egypt); Advisor: M. G. S. El Mohandis.
- Alima KAMARA [Côte d'Ivoire]
 1994 (Doctorat) *Contribution à la modélisation par éléments finis des écoulements turbulents; application au remplissage en fonderie*, Ecole Nationale Supérieure des Mines de Paris (France); Advisor: Michel Bellet.
- Soumaya MOUSSA [Morocco]
 1994 (Ph.D.) *Propriétés géométriques d'agregats de polygones aléatoires et application à la classification d'images*, Université de Montréal (Canada); Advisor: Marc Moore.
- Khadija NIRI [Morocco]
 1994 (Doctorat d'état) *Étude théorique et numérique des oscillations dans les systèmes différentiels à retard*, Université Mohammed V Agdal (Rabat, Morocco).
- Christien THIART [South Africa]
 1994 (Ph.D.) University of Cape Town (South Africa).
- Nkechi Madonna Adeleine AGWU [Nigeria]
 1995 (Ph.D.) *Using a Computer Laboratory Setting to Teach College Calculus*, Syracuse University (Syracuse, New York, USA); Advisor: Howard Johnson.
- Maha EL-ASHRAM [Egypt]
 1995 (Ph.D.) Cairo University (Egypt)

- Londiwe C. MASINGA [Swaziland]
 1995 (Ph.D.) *Application of linear quadratic tracking to the regulation of harvested populations*, University of Sheffield (UK).
- Margaret NABASIRYE [Uganda]
 1995 (Ph.D.) *Statistical inferences on insect pest resistance indices: implications for selection in crop plants*, Makerere University (Kampala, Uganda).
- Patricia NEBOUT ARKHURST [Côte d'Ivoire]
 1995 (Doctorat) *La signification contextuelle dans les processus de transposition didactique: l'exemple de l'enseignement de la géométrie au niveau du collège en Côte d'Ivoire*, Université de Paris 5 (France).
- Manar Elshiekh Abdel RAHMAN [Sudan]
 1995 (Ph.D.) *Comparisons of tests for trend in proportions with small samples*, Boston University (USA); Advisor: L. Adrienne Cupples.
- Karima Mohamed Abed-Rabo RAMADAN [Egypt]
 1995 (Ph.D.) *A study on multicriteria decision making integer non-linear problems*, Ain-Shams University (Cairo, Egypt); Advisor: Omar M. Saad.
- Azza Gameel Hasan SAYED [Egypt]
 1995 (Ph.D.) *A parametric analysis on multi-criteria integer decision-making problems*, Ain-Shams University (Cairo, Egypt); Advisor: Mohamed Sayed Ali Osman.
- Mona Mohamed Mohamed TARRAD [Egypt]
 1995 (Ph.D.) *Recent methods in solving multi-criteria decision making problems*, Ain-Shams University (Cairo, Egypt); Advisor: Mohamed Sayed Ali Osman.
- Emmerentia Hendrika Antoinetta VENTER [South Africa]
 1995 (Ph.D.) *Aanpasbare Numeriese Integrasie [Adaptable numerical integration]*, Potchefstroom University for Christian Higher Education (South Africa); Advisor: Dirk Laurie.
- Joanne WALTERS-WAYLAND (née WALTERS) [South Africa]
 1995 (Doctorat) *Completeness and nearly fine uniform frames*, Université Catholique de Louvain (Belgium); Advisors: Francis Borceux & C. Gilmour (South Africa).
- Sabah Hafez ABDALLAH [Egypt]
 1996 (Ph.D.) *On integrodifferential equations and mathematical models in population dynamics*, Ain-Shams University (Cairo, Egypt); Advisor: Afaf A. E. S. Zaghrou.
- Jillian Beryl ADLER (née Smidt) [South Africa]
 1996 (Ph.D.) *Secondary School Teachers' Knowledge of the Dynamics of Teaching and Learning mathematics in Multilingual Classrooms*, University of the Witwatersrand (Johannesburg, South Africa).

- Deborah Olayide A. AJAYI (née SUBERU) [Nigeria]
 1996 (Ph.D.) *Stiefel-Whitney classes and the span of some real flag manifolds*, University of Ibadan (Nigeria); Advisor : S. A. Ilori.
- Amina BENBERNOU [Algeria]
 1996 (Doctorat) *Estimation des résidus de la matrice de diffusion en limite semi-classique*, Université Paris 13 (France); Advisor: André Martinez.
- Kbenesh W. BLAYNEH [Ethiopia]
 1996 (Ph.D) *Hierarchical Size-Structured Population Models*, Univeristy of Arizona (Tucson, AZ, USA); Advisor: J. M Cushing.
- Hoda Hamed EL-DIB [Egypt]
 1996 (Ph.D.) *Theoretical investigations on fusion reactions*, Ain-Shams University (Cairo, Egypt); Advisor: Afaf A. Sabry.
- Fatima EZZAKI [Morocco]
 1996 (Doctorat d'état) *Convergence des esperances conditionnelles d'ensembles aléatoires et lfgn*, Université Mohammed V Agdal (Rabat, Morocco).
- Badia El GHALI [Morocco]
 1996 (Doctorat d'état) *Optimisation vectorielle: stabilité et dualité*, Université Mohammed V Agdal (Rabat, Morocco).
- Elham Mohamed EL-SHERIF [Egypt]
 1996 (Ph.D.) (Egypt)
- Souad Ameziane HASSANI [Morocco]
 1997 (Doctorat) Université de Fez (Morocco); Advisor: Salah-Eddine Kabbaj.
- Moshira Mohamed Hassan KAMEL [Egypt]
 1996 (Ph.D.) *Differential-difference equations and related topics*, Ain-Shams University (Cairo, Egypt); Advisor: Hassan Nasr.
- Susan Antoinette DE SWARDT [South Africa]
 1996 (Ph.D.) *Nodal Spline Error Analysis and Applications in Quadrature*, Stellenbosch University (South Africa); Advisor: Johan de Villiers.
- Elna UNGERER [South Africa]
 1996 (Ph.D.) *Aspects of signed and minus domination in graphs*, Rand Afrikaans Universiteit (Pretoria, South Africa); Advisor: Johannes H. Hattingh.
- Aissa WADE [Senegal]
 1996 (Doctorat unique) *Normalisation de structures de Poisson* [Normalisation of Poisson structures], Université de Montpellier 2 (France); Advisor: Jean-Paul Dufour.

- Eunice MUREITHI [Kenya]
 1997 (Ph.D.) *Effects of thermal buoyancy on the stability properties of boundary layer flows*, University of New South Wales (Australia); Advisor: James P Denier.
- Joyce Lazaro NDALICHAKO [Tanzania]
 1997 (Ph.D.) *Comparison of number right item response and finite state approaches to scoring multiple choice items*, University of Alberta (Edmonton, Canada).
- Hester Margaretha VAN NIEKERK [South Africa]
 1997 (Ph.D.) *A subject didactical analysis of the development of the spatial knowledge of young children through a problem-centred approach to mathematics teaching and learning*, Potchefstroom Universiteit (South Africa); Advisors: Hercules D. Nieuwoudt & Dirk C.J. Wessels.
- Reina NIEUWOUDT [South Africa]
 1997 (Ph.D.) *Modellering van afhanklikheid in die lineêre model: 'n meteorologiese toepassing* [Modelling of dependence in the linear model: a meteorological application], University of South Africa; Advisor: Francois Steffens.
- Cecilia WANGECHI-MWATHI [Zimbabwe]
 1997 (D.Phil.) *Groups of Units in Algebraic Number Fields of Fourth and Eighth Degrees*, University of Zimbabwe (Harare, Zimbabwe).
- Nabila Mohamed Ahmed Hassan EL-BAZEDY [Egypt]
 1998 (Ph.D.) *Dadeis conjecture*, Hungarian Academy of Sciences (Budapest, Hungary); Advisor: Peter Herman.
- Naima BENTOUDJA [Morocco]
 1998 (Doctorat 3ème cycle) *Comparaison de méthodes numériques pour problèmes de transport*, EMI (Rabat, Morocco); Advisors: Fayssal Benkhaldoun, Ouazar & Esselaoui.
- Rouquia DJABALI [Algeria]
 1998 (Doctorat) *Optimisation non linéaire en variables bivalentes et applications*, Conservatoire National des Arts et Métiers (France); Advisor: Alain Billionnet.
- Fatma M. E. GAAFAR [Egypt]
 1998 (Ph.D.) *On some problems in the fractional calculus*, Alexandria University (Egypt); Advisor: Ahmed M. A. El-Sayed.
- Hanène HATTAB ABROUGUI [Tunisia]
 1998 (Doctorat 3ème cycle) *La démonstration en géométrie dans l'enseignement secondaire tunisien: exigences d'enseignants et difficultés d'élèves de 4ème relativement à un problème de démonstration* [Proof in geometry in the Tunisian secondary school: teachers' demands and and 4th grade pupils difficulties concerning a type of proof], Université de Grenoble 1 (Grenoble, France); Advisor: Colette Laborde.

- Iman Hafez IBRAHIM [Egypt]
 1998 (Ph.D.) *Numerical treatment of stiff differential equations*, Ain-Shams University (Cairo, Egypt); Advisor: Gamal Ali Fouad Ismail.
- Bochra Ec-Cherif EL KETTANI [Morocco]
 1998 (Doctorat d'état) *Système à base de connaissance pour la modélisation de la propagation d'ondes (Crue/Submersion)*, EMI (Rabat, Morocco); Advisors: Fayssal Benkhaldoun & Ouazar.
- Nagwa Mohamed SABIR [Egypt]
 1998 (Ph.D.) (Egypt)
- Hermien ZAAIMAN [South Africa]
 1998 (Ph.D.) *Selecting students for mathematics and science: the challenge facing higher education in South Africa*, Vrije Universiteit (Amsterdam, Netherlands).
- Angelina Matinde BIJURA [Tanzania]
 1999 (Ph.D.) *Singularly Perturbed Volterra Integral Equations*, Dublin City University (Ireland); Advisor: David W. Reynolds.
- Hala Aly Ebrahim FERGANY [Egypt]
 1999 (Ph.D.) *Inventory models with demand dependent unit cost*, Tanta University (Egypt); Advisors: Mohamad Kamel Gabr, Metwally Osman Abou-El-Ata, & Kotob Abd-El-Hamid Mahmoud Kotb.
- Salma Mint El HACEN [Mauritania]
 1999 (Doctorat) *Sur les représentations algébriquement irréductibles des groupes de Lie exponentiels et nilpotents*, Université de Metz (France); Advisor: Jean Ludwig.
- Marie Gisele KAMANOU-GOUNE [Cameroon]
 1999 (Ph.D.) *An Index of Household Material Wealth Based on Principal Components of Disease Indicators*, University of California (Berkeley CA, USA); Advisor: Kjell Doksum.
- Chiraz LATIRI [Tunisia]
 1999 (Doctorat) *Exemples d'utilisation de la notion de condition d'impédance*, Ecole Polytechnique (Palaiseau, France); Advisors: Habib Ammari & Jean-Claude Nédélec.
- Phethiwe Precious MATUTU [South Africa]
 1999 (Ph.D.) *Bisigma Frames*, University of Cape Town (South Africa); Advisor: C. Gilmour.
- Marie Françoise OUEDRAOGO [Burkina Faso]
 1999 (Doctorat 3ème cycle) *Sur les Superalgèbres Triples de Lie [On Lie Triple Superalgebras]*, Université de Ouagadougou (Ouagadougou, Burkina Faso); Advisor: Akry Koulibaly.

- Fanja RAKOTONDRAJAO [Madagascar]
 1999 (Doctorat 3ème cycle) *R-multipermutations hiérarchisées et dérangements*, Université d'Antananarivo (Antananarivo, Madagascar); Advisor: Roberto Mantaci (Université Paris 7, France).
- Enaam Khalifa RAWY [Egypt]
 1999 (Ph.D.) *Numerical solution of some one dimensional problems of non-linear thermo-elasticity for the half space*, Cairo University (Egypt); Advisor: Ahmed Fouad Mohamed Fouad Ghaleb.
- Khadija El AMRI [Morocco]
 2000 (Doctorat) *Intégrale de petits et convergence*, Université Mohammed V Agdal (Rabat, Morocco).
- Khadija AYZAZ [Morocco]
 2000 (Doctorat) *Formule de trace de Selberg pour les noyaux automorphes de poids k associés aux laplaciens de Maass sur l'espace hyperbolique complexe $H_n(c)$ $n > 2$* , Université Mohammed V Agdal (Rabat, Morocco).
- Magda BOTHA [South Africa]
 2000 (Ph.D.) *Some general measures of repairable stochastic systems*, University of South Africa (Pretoria); Advisor: Venkata Sarma S. Yadavalli.
- Lucy J. CAMPBELL [Ghana]
 2000 (Ph.D.) *Nonlinear critical layer development of forced wave packets in geophysical shear flows*, McGill University (Montreal, Canada); Advisor: S. Maslowe.
- Hasna CHAMLAL [Morocco]
 2000 (Doctorat) *Contributions en analyse discriminante*, Université Mohammed V Agdal (Rabat, Morocco).
- Ouafae GUENNOUN [Morocco]
 2000 (Doctorat d'état) *Modélisation et analyse d'un semi-conducteur de type Mesfet*, Université Mohammed V Agdal (Rabat, Morocco).
- Hakima KEMMOUN [Morocco]
 2000 (Doctorat d'état) *Théorèmes type Gelfand-Mazur et Kaplansky en théorie des Algèbres Non-Associatives*, Université Mohamed V (Rabat, Morocco); Advisor: Nouzha El Yacoubi.
- Amale LAHLOU [Morocco]
 2000 (Doctorat) *Caractérisation de la monotonie généralisée des opérateurs affines en terme des matrices sous-définies positives et étude du problème de complémentarité linéaire*, Université Mohammed V Agdal (Rabat, Morocco).
- Elsa MENTZ [South Africa]
 2000 (Ph.D.) *Rekenaartegnologie-opleiding vir onderwysers: 'n uitkomsgebaseerde beandering* [Computer technology training for teachers: an outcomes-based

approach], Potchefstroom Universiteit (South Africa); Advisors: Jan J. A. Smit, Emmanuel J. Spamer, Hercules D. Nieuwoudt & Tjaart Steyn.

Nomusic MOROBE [Lesotho]

2000 (Ph.D.) *Lesotho pre-service teachers' understanding of function and the effect of instruction with a graphing calculator on pre-service teachers' understanding of function*, University of Iowa (USA); Advisor: Rose Mary Zbiek.

Mariem Mint El MOUVID [Mauritania]

2000 (Doctorat) *Sur l'estimateur linéaire local de la fonction de répartition conditionnelle*, Université de Montpellier 2 (France); Advisor: Gilles Ducharme.

Renuka VITHAL [South Africa]

2000 (Ph.D.) *In Search of a Pedagogy of Conflict and Dialogue for Mathematics Education*, Aalborg University (Aalborg, Denmark); Advisor: Ole Skovmose.

Lizette ZIETSMAN [South Africa]

2000 (Ph.D.) *Finite Element Analysis of Vibration Models with Interface Conditions*, University of Pretoria (South Africa); Advisors: N. van Rensburg & A. van der Merwe.

Nora ALEXEEVA [South Africa]

2001 (Ph.D.) *Spatially coherent solutions of damped-driven nonlinear evolution equations and reaction-diffusion systems*, University of Cape Town (South Africa); Advisors: I. V. Barashenkov & B. M. Herbst.

Isma BOUCHEMAKH [Algeria]

2001 (Doctorat d'état) *Sur quelques problèmes extrémaux dans les ordres partiels finis*, Université des Sciences et de la Technologie Houari Boumediene (Algiers, Algeria); Advisor: Konrad Engel.

Boutaina BOUZOUF [Morocco]

2001 (Doctorat 3ème cycle) *Méthodes de volumes finis pour intrusion de l'eau salée*, EMI (Rabat, Morocco); Advisors: Fayssal Benkhaldoun & Ouazar.

Elmari DU TOIT [South Africa]

2001 (Ph.D.) *A quantitative bio-economic investigation of inshore fisheries*, University of Stellenbosch (South Africa); Advisor: J. van Vuuren.

Meria HOCKMAN [South Africa]

2001 (Ph.D.) *The development of levels of awareness of senior mathematics students through direct engagement with the mathematical subject and pedagogical matter*, University of the Witwatersrand (Johannesburg, South Africa); Advisor: Paul Laridon.

Yamna El MAKKAB [Morocco]

2001 (Doctorat d'état) *Algèbre de Clifford d'une forme polynome et représentations*, Université Mohammed V Agdal (Rabat, Morocco).

- Eunice Gogo MPHAKO [Malawi]
 2001 (Ph.D.) *Tutte Polynomials, Chromatic Polynomials and Matroids*, Victoria University of Wellington (Wellington, New Zealand); Advisor Geoff Whittle.
- Ada Felicitas MUONEKE [Nigeria]
 2001 (Ph.D.) *The Effects of a Question and Action Strategy on the Mathematical Word Problem-Solving Skills of Students with Learning Problems in Mathematics*, University of Texas (Austin TX, USA); Advisor: Diane Bryant.
- Clara Idowu NOSEGBE [Nigeria]
 2001 (Ph.D.) *Middle school students' sense-making of their solutions to mathematical word problems*, Indiana University (USA); Advisor: Frank K. Lester Jr.
- Marie Salomon SAMBOU [Senegal]
 2001 (Doctorat) *Equation de Cauchy-Riemann pour les courants prolongeables*, Université Joseph Fourier (Grenoble, France).
- Rajae Ben TAHER [Morocco]
 2001 (Doctorat d'état) *Suites de Fibonacci généralisées: trois nouvelles applications*, Université Mohammed V Agdal (Rabat, Morocco).
- Patricia ZOUNGRANA [Burkina Faso]
 2001 (Doctorat unique) *Sur les sous-boucles de Cartan d'une boucle homogène et les sous-algèbres de Cartan d'une algèbre triple de Lie* [On Cartan subloops of homogeneous loop and Cartan subalgebras of Lie triple algebra], Université de Ouagadougou (Ouagadougou, Burkina Faso); Advisor: Akry Koulibaly.
- Nawale BERRAHOU [Morocco]
 2002 (Doctorat) *Étude du comportement asymptotique des tra estimateurs : théorie et simulation*, Université Mohammed V Agdal (Rabat, Morocco).
- Catherine Panji CHAMDIMBA [Malawi]
 2002 (Ph.D.) *Co-operative learning and gender in mathematics education: A case study in a Malawian secondary school*, University of Waikato (New Zealand).
- Sophie DABO-NIANG [Senegal]
 2002 (Doctorat) *Sur l'estimation fonctionnelle en dimension infinie. application aux diffusions*, Université Pierre et Marie Curie (Paris, France); Advisor: Denis Bosq.
- Mouna ESSAOUINI [Morocco]
 2002 (Doctorat) *Reconstruction des conditions aux limites pour deux classes de problèmes inverses*, Université Mohammed V Agdal (Rabat, Morocco).
- Sarifa Abdul FAGILDE (née MAGIDE) [Mozambique]
 2002 (Ph.D.) *Towards a characterisation of communication and gender patterns in secondary mathematics classrooms in Mozambique*, University of the Western Cape (Bellville, South Africa); Advisors: Cyril Julie (South Africa) & Maria Luiza Cestari (Norway).

Lizelle FLETCHER [South Africa]

2002 (Ph.D.) *Statistical modelling by neural networks*, University of South Africa (Pretoria); Advisor: F. E. Steffens.

Kgomotso Gertrude GAREGAE [Botswana]

2002 (Ph.D.) *Teachers' beliefs about mathematics, its teaching and learning and the communication of these beliefs to students: A case study in Botswana*, University of Manitoba (Winnipeg, Manitoba, Canada); Advisor: Lars Jansson.

Mellony GRAVEN [South Africa]

2002 (Ph.D.) *An investigation of teachers learning to become professionalized mathematics teachers: The centrality of confidence*, University of the Witwatersrand (Johannesburg, South Africa); Advisor: Jill Adler.

Sarah HOWIE [South Africa]

2002 (Ph.D.) *English language proficiency and contextual factors influencing mathematics achievement of secondary school pupils in South Africa*, Universiteit Twente (Enschede, Netherlands).

Maimouna Malam IDI [Niger]

2002 (Doctorat unique) *Théorie algorithmique des anneaux arithmétiques, des anneaux de Prüfer et des anneaux de Dedekind*, Université de Franche-Comté (Besançon, France); Advisor: Henri Lombardi.

Mercy KAZIMA [Malawi]

2002 (Ph.D.) *Malawian students understanding of probability*, University of Leeds (UK); Advisors: Tom Roper & Melissa Rodd.

Sesutho Koketso KESIANYE [Botswana]

2002 (Ed.D.) *Teachers learning to assess students' mathematics: an investigation with Botswana preservice teachers*, University of Leeds (UK).

Saima KHENISSY [Tunisia]

2002 (Doctorat) *Équations aux dérivées partielles elliptiques non linéaires: équation de Ginzburg-Landau, équation de Bahri-Cordon surcritique*, Université Pierre et Marie Curie (Paris, France); Advisor: H. Brezis.

Yasmina MAÏZI [Algeria]

2002 (Doctorat) *Modélisation et optimisation de bases de données déductives fondées sur les réseaux de petri de haut niveau*, Conservatoire National des Arts et Métiers (France); Advisor: M. Scholl.

Joyce R. MGOMBELO [Tanzania]

2002 (Ph.D.) *Mathematics content-pedagogy knowledge: a psychoanalytic and enactivist approach*, University of Alberta (Canada); Advisor: Terry Carson.

- Iris Gugu MOCHE [South Africa]
 2002 (Ph.D.) *The Natural Map of beta (omega x omega) into beta (omega) x beta(omega) is 'Very Badly' Not an Isomorphism on the Smallest Ideal*, Howard University (Washington DC, USA); Advisor: Neil Hindman.
- Hadiza Moussa SALEY [Niger]
 2002 (Doctorat unique) *Utilisation optimale de l'information privée et évolution stochastique des prix sur un marché financier*, Université Henri Poincaré (Nancy, France).
- Mamokgethi SETATI [South Africa]
 2002 (Ph.D.) *Language practices in intermediate multilingual mathematics classroom*, University of the Witwatersrand (Johannesburg, South Africa); Advisor: Jill Adler.
- Mahlet Getachew TADESSE [Ethiopia]
 2002 (Sc.D.) *Bayesian Models for Gene Expression Analysis*, Harvard University (Boston MA, USA); Advisor: Josphe Ibrahim.
- Elena VLADIMIROVNA ALVES [Mozambique]
 2002 *Theoretical fundamentals of a physical-mathematical model for non-stationary processes of combustion for solid missile propellant and development of methods of calculation of non-stationary velocity of combustion*, Perm State University, Russia
- Diane WILCOX [South Africa]
 2002 (Ph.D.) *Multivalued semi-Fredholm operators in normed linear spaces*, University of Cape Town (South Africa); Advisor: Ronald Cross.
- Fatiha ZIRARI [Morocco]
 2002 (Doctorat) *Étude formelle de branches de solutions d'équations algébriques*, Université Mohammed V Agdal (Rabat, Morocco).
- Folake Oyedigba AKINPELU [Nigeria]
 2003 (Ph.D.) *In the response of Euler-Bernoulli beam with an attached mass to uniform partially distributed moving mass*, University of Ilorin (Kwara state, Nigeria); Advisor J. A. Gbadeyan.
- Souad ASSOUDOU [Morocco]
 2003 (Doctorat) *Modèles bayésiens pour les chaînes de Markov*, Université Mohammed V Agdal (Rabat, Morocco).
- Margot BERGER [South Africa]
 2003 (Ph.D.) *The appropriation of mathematical objects by undergraduate mathematics students: A study*, University of the Witwatersrand (Johannesburg, South Africa); Advisor: Jill Adler.
- Nadia BENHABOUCHA [Algeria]
 2003 (Doctorat) *Quelques problèmes mathématiques relatifs à la modélisation des conditions aux limites fluide-solide pour des écoulements de faible épaisseur*, Université Claude Bernard (Lyon, France); Advisors: Guy Bayada & Michèle Chambat.

- Widad BOUHMAMA [Morocco]
 2003 (Doctorat) *Opérateurs pseudo Fredholm et opérateurs de Riesz*, Université Mohammed V Agdal (Rabat, Morocco).
- Karima DJEBALI [Tunisia]
 2003 (Doctorat) *Modélisation et résolution de problèmes d'optimisation combinatoire par la programmation mathématique en variables mixtes*, Conservatoire National des Arts et Métiers (France); Advisor: Alain Billionnet.
- Gcina DLAMINI [Swaziland]
 2003 (Ph.D.) *Aspects of Distances in Graphs*, University of Natal (Durban, South Africa); Advisors: Peter Dankelmann & Hendrika Swart.
- Birgit ERNI [South Africa]
 2003 (Ph.D.) *A computer simulation of bird migration*, University of Basle (Switzerland).
- Kerstin JORDAAN [South Africa]
 2003 (Ph.D.) *Zeros of general hypergeometric polynomials*, University of the Witwatersrand (South Africa); Advisor: Kathleen Ann Driver.
- Dorothee KLEINE [South Africa]
 2003 (Ph.D.) *Finite element Analysis of flows in secondary settling*, University of Cape Town (South Africa); Advisors: B. D. Reddy & G.A. Ekam.
- C. J. (Ina) LOUW [South Africa]
 2003 (Ph.D.) University of Pretoria (South Africa).
- Natalie MENSAH [Ghana]
 2003 (Ph.D.) *Modeling and analysis on ion permition in AChion membrane channels*, University of Cape Coast (Ghana).
- Janvière NDIRAHISHA [Burundi]
 2003 (Doctorat) *Réprésentations de Grothendieck* [Grothendieck Representations], University of Antwerp (Belgium); Advisor: Fred Van Ostayen.
- Susanna Maria NIEUWOUDT [South Africa]
 2003 (Ph.D.) *Strategiese onderrig en leer van skoolwiskunde in 'n videoklasstelsel* [Strategic teaching and learning of school mathematics in a video class system.] Potchefstroomse Universiteit (South Africa); Advisors: Jan L. de K. Monteith & Hercules D. Nieuwoudt.
- Miranda Ijang TEBOH-EWUNGKEM [Cameroon]
 2003 (Ph.D.) *Mathematical Analysis of Oxygen and Substrate Transport within a Multicappilary System in Skeletal Muscle*, Leligh University (Bethlehem, Pennsylvania, USA); Advisor: Eric P. Salathe.

- Suriza VAN DER SANDT [South Africa]
 2003 (Ph.D.) *The relationship between teachers' knowledge of geometry and the teaching and learning of geometry*, Potchefstroomse Universiteit (South Africa); Advisor: Hercules D. Nieuwoudt.
- Irene Sitawa WATTANGA [Kenya]
 2003 (Ph.D.) *Global optimization of quadratically constrained quadratic programs*, University of Botswana (Gaborone).
- Roselyn Aba Mansa ABBIW-JACKSON [Ghana]
 2004 (Ph.D.) *discrete optimization models in data visualization*, University of Maryland (College Park, USA); Advisor: Bruce L. Golden.
- Faïza CHELLOUGUI [Tunisia]
 2004 (Doctorat) *L'utilisation des quantificateurs universel et existentiel en première année universitaire, entre l'explicite et l'implicite* [Using universal and existential quantifications in first year university, switching between explicit and implicit usages], co-tutelle: Université de Tunis (Tunis, Tunisia) & Université Claude Bernard - Lyon I (Lyon, France); Advisors: Mahdi Abdeljaouad & Claude Tisseron.
- Madina DAHER OKIYE [Djibouti]
 2004 (Doctorat) *Etude et analyse asymptotique de certains systèmes dynamiques non-linéaires: application à des systèmes proie(s)-prédateur(s)*, Université du Havre (France); Advisor: Aziz Alaoui.
- Leilani GOOSEN [South Africa]
 2004 (Ph.D.) *Criteria and guidelines for the selection and implementation of a first programming language in high schools*, Potchefstroomse Universiteit (South Africa); Advisors: Hercules D. Nieuwoudt & Elsa Mentz.
- Ndèye Rokhaya GUÈYE [Senegal]
 2004 (Ph.D.) *Problème d'estimation de paramètres avec restriction sur l'espace des paramètres*, Université de Montréal (Canada); Advisors: F. Perron & E. Marchand.
- Geneviève KABRÉ [Burkina Faso]
 2004 (Doctorat) *Contribution à la résolution numérique de quelques problèmes de réaction diffusion non linéaires*, Université de Ouagadougou (Burkina Fasso); Advisors: Blaise Somé & Benjamin Mampassi (Senegal).
- Immaculate Kizito NAMUKASA [Uganda]
 2004 (Ph.D.) *Attending in Mathematics: A Dynamic View about Students' Thinking*, University of Alberta (Edmonton, Alberta, Canada); Advisor: Elaine Simmt.
- Ariane NEETHLING [South Africa]
 2004 (Ph.D.) *Calibration and integrated weighting in sample surveys*, University of the Witwatersrand (Johannesburg, South Africa); Advisor: Jacky S. Galpin.

- Rebecca Namugabwe NSUBUGA [Uganda]
 2004 (Ph.D.) *Statistical inference for infectious disease of animals*, University of Edinburgh (UK).
- Lobna ABDELMOULA [Tunisia]
 2005 (Doctorat) *Séparation des représentations unitaires des groupes de Lie connexes et application moment généralisée*, Université de Sfax (Tunisia).
- Fadia BEKKAL BRIKCI [Algeria]
 2005 (Doctorat) *Modélisation du cycle cellulaire et couplage avec la dynamique de population cellulaire*, Université de Paris 6 (France); Advisor: Pierre Auger.
- O. BIDE MI YUSUF [Nigeria]
 2005 (Ph.D.) *The epidemiology, population dynamics and mathematical modelling of antimalarial drug resistant malaria in Ibadan*, University of Ibadan (Nigeria); Advisor: C. Sowunmi.
- Karin Michelle BRODIE [South Africa]
 2005 (Ph.D.) *Classroom interaction and the development of mathematical thinking*, Stanford University (CA, USA); Advisor: Jo Boaler.
- Najoua HAJALI [Tunisia]
 2005 (Doctorat) *Quelles mathématiques enseigner dans une école supérieure d'économie ? Une étude de cas en Tunisie*, ISEFC (Le Bardo, Tunisia) & Université Claude Bernard (Lyon, France); Advisors: Mahdi Abdeljaouad (Université de Tunis) & Jean-Luc Dorier (Université de Lyon I).
- Karin Michelle HUNTER [South Africa]
 2005 (Ph.D.) *Interpolatory Refinable Functions, Subdivision and Wavelets*, Stellenbosch University (South Africa); Advisor: Johan de Villiers.
- Penina Adhiambo Ogolla KAMINA [Kenya]
 2005 (Ph.D.) *Teachers' Perceptions and Practices of Inquiry-based Instruction: A Case Study of Fifth Grade Investigations Curriculum in an Urban School*, Syracuse University (NY, USA); Advisor: Patricia P. Tinto
- Fatimettou Bent El MOUNIR [Mauritania]
 2005 (Doctorat d'état) Université Cheikh Anta Diop (Dakar, Senegal).
- Selani Dorothy MUSEKWA [Zimbabwe]
 2005 (Ph.D.) *The effect of asymptomatic HIV/AIDS infected individuals (Carriers) on the spread of HIV/AIDS*, University of Zimbabwe (Harare, Zimbabwe); Advisor: Edward M. Lungu.
- Dalene M. SWANSON [South Africa]
 2005 (Ph.D.) *Voices in the silence: Narratives of disadvantage, social context and school mathematics in post-apartheid South Africa*, University of British Columbia (Canada).

Zakia KEBBICHE [Algeria]

2006 (Doctorat d'état) *Méthodes des points intérieurs pour la résolution des problèmes d'optimisation non linéaire*, Université Ferhat Abbas (Sétif, Algeria); Advisor: Adnan Yassine.

Nthabiseng NTENE [South Africa]

2006 (Ph.D.) *A decision support system for the 2D strip packing problem*, University of Stellenbosch (South Africa); Advisor: J. van Vuuren.

Hayet ROUMILI [Algeria]

2006 (Doctorat d'état) *Méthodes des points intérieurs non réalisables en optimisation. Théorie, algorithmes et applications*, Université Ferhat Abbas (Sétif, Algeria); Advisor: Adnan Yassine.

Other African women with a doctorate in mathematics:

Karima AMOURA [Algeria]

Samia BENMEHIDI [Algeria]

Djemaia BENSİKADDOUR [Algeria]

Fouzia REBBANI [Algeria]

Anne Marie TIAYA TSAGUE [Cameroon]

Marguerite MVEH NZE [Cameroon]

Rebecca WALO OMANA [DR Congo]

Jayrani CHEENEBASH [Mauritius]

Preethee NUNKOO GONPOT [Mauritius]

Jowaheer VANDNA [Mauritius]

Haoua HAMIDOU [Niger]

Uzoma C. NWICHI (d. 2004) [Nigeria]

Edith Onowe ONOBUN [Nigeria]

Salimata GUEYE DIAGNE [Senegal]

Marelize KRIEL [South Africa]

Henda SWART [South Africa]

Inès ABDELJAOUED [Tunisia]

Laila ABEL-LAI [Tunisia]

Nadia Chaouchi Ben ATTI [Tunisia]

Fatma HADDED [Tunisia]

Leila MOALLA [Tunisia]