PROGRAMME AND ABSTRACTS OF THE

SYMPOSIUM ON THE AFRICAN WOMAN AND MATHEMATICS

29 - 30 NOVEMBER, 2008

MAPUTO - MOZAMBIQUE

PROGRAMME

SYMPOSIUM SCIENTIFIC ORGANIZING COMMITTEE (SOC)

Dr. Kgomotso Garegae	University of Botswana, Botswana
Prof. Samwel Ilori	AMMSI Coordinator, West Africa Zone 1, Nigeria
Prof. Edward Lungu	AMMSI Coordinator, Southern Africa, Botswana
Prof. José Miguel	Eduardo Mondlane University, Mozambique
Prof. Bhangy Cassy	Eduardo Mondlane University, Mozambique
Prof. Verdiana G. Masanja	National University of Rwanda, Rwanda
Prof. Joao S. P. Munembe	Eduardo Mondlane University, Mozambique
Prof. Bitjong Ndombol	AMMSI Coordinator, Central Africa, Cameroon
Prof. Wandera Ogana	AMMSI Programme Director, Kenya
Prof. Rebecca W. Omana	University of Kinshasa, DR Congo
Prof. Francoise Ouedraogo	University of Ouagadougou, Burkina Faso
Dr. Alet Roux	University of York, United Kingdom
Dr. Anabela Sengulane	Eduardo Mondlane University, Mozambique
Dr. Temba Shonhiwa	SAMSA President, South Africa
Prof. Hamidou Toure	AMMSI Coordinator, West Africa, Zone 2, Burkina Faso
Prof. Nouzha El Yacoubi	Secretary General, African Mathematical Union, Tunisia
Dr. Patricia L. Zoungrana	University of Ouagadougou, Burkina Faso
Miss Petronilla Masila	AMMSI Administrator, Kenya

SYMPOSIUM LOCAL ORGANIZING COMMITTEE

Prof. Joao P. Munembe	Eduardo Mondlane University, Mozambique
Prof. Lorenco Magaia	Eduardo Mondlane University, Mozambique
Prof. Andrei Shindiapin	Eduardo Mondlane University, Mozambique
Prof. José Miguel	Eduardo Mondlane University, Mozambique
Prof. Bhangy Cassy	Eduardo Mondlane University, Mozambique

WELCOME NOTE

Dear Colleagues,

It gives me great pleasure to welcome you to the *"Symposium on the African Woman and Mathematics"*, being held at Girassol Indy Village, Maputo, Mozambique.

The decision to hold the Symposium in Maputo was taken only a few months ago but it is gratifying to note that we have been able to attract participation by a diverse group of women mathematicians from different regions in Africa. Indeed, had the arrangements been made much earlier, we could have had among us women mathematicians from Europe, the USA, among other countries.

Some of you know one another but, I believe, the Symposium will provide you an opportunity to meet new friends and future collaborators. Among us are young African women who are working hard on their postgraduate theses. We hope the Symposium will give them an opportunity to interact with senior mathematicians, both male and female, and help to sharpen their mathematical thinking.

I wish to thank:

- **The Scientific Organizing Committee (SOC), for coming up with such a dynamic programme of activities in the two days of the meeting;**
- **The Local Organizing Committee (LOC) for hosting the meeting and for working hard to ensure that everything turns out fine in Maputo;**
- **The AMMSI Programme Committee for conceiving the idea of a symposium dedicated to exploring the role of the African women in mathematics;**
- **All of the participants for showing enthusiasm to attend and for providing papers and abstracts at short notice.**

I wish you a pleasant stay at the Girassol Indy Village and an enjoyable period in Mozambique. I am sure that you will find other attractions in this beautiful country to complement the pedagogy and theorems you will be examining for two days.

Thank you.

Wandera Ogana, AMMSI Programme Director

ARRIVAL DAY – FRIDAY, 28/11/2008	
16.00 – 20.00	**Registration: Girassol Indy Village**

DAY 1 – SATURDAY, 29/11/2008	
08.00 – 09.00	**Registration:**
09.00 – 10.00	**Opening Ceremony**
10.00 – 10.30	**Coffee Break**
10.30 – 12.40	**SESSION 1: MATHEMATICS EDUCATION** **Chair: Prof. Edward Lungu** **Rapporteur: Ms Theresia Marijani**
10.30 – 10.50	**OGANA, Wandera:** *(AMMSI Programme Director)* Setting the agenda for the Symposium
10.50 – 11.30	**GAREGAE, Kgomotso Gertrude:** *(University of Botswana, Botswana)* Life skills-based mathematics teaching approach: being responsive to an African woman's method of learning
11.30 – 12.00	**CHERINDA, Nilsa A.I.E. P.:** *(Eduardo Mondlane Univ, Mozambique)* The first experience of Eduardo Mondlane University on Teaching mathematics via Distance Education
12.00 – 12.20	**BROWNE, Nana Ama Kum:** *(University of Cape Town, South Africa)* Increasing the participation and performance of girls in Mathematics in Africa
12.20 – 12.40	**AYIVOR, Audry:** *(University of Cape Town, South Africa)* Mathematics and the 'she' factor

12.40 – 14.00	**Lunch**
14.00 – 15.40	**SESSION 2: MATHEMATICS EDUCATION** **Chair: Dr. Patricia Lucie Zoungrana** **Rapporteur: Ms Betty Nannyonga**
14.00 – 14.40	**EL YACOUBI, Nouzha:** *(University Mohamed V, Morocco)* African girls and Mathematics competition
14.40 – 15.10	**KGOSIMORE, Natalia:** *(Ledumang Senior Sec School, Botswana)* Educational issues affecting female's mathematics learning in the context of HIV/AIDS
15.10 – 15.40	**VAN HOEPEN, Willemien:** *(UNISA, South Africa)* Trends in a first-level module at UNISA
15.40 – 16.10	**Coffee Break**
16.10 – 17.50	**SESSION 3: MATHEMATICS EDUCATION** **Chair: Dr. Anabela J. I. Sengulane** **Rapportuer: Ms Abília da Conceição Mutemba**
16.10 – 16.50	**CHUKWU, Angela Unna:** *(University of Ibadan, Nigeria)* Mathematics education and the girl child-an overview
16.50 – 17.20	**MUSEKWA, Senelani Dorothy:** *(NUST, Zimbabwe)* An investigation into problems faced by the rural girl child in secondary education in Bullima district
17.20 – 17.50	**SANGARE, Daouda:** *(University of Abobo-Adjame, Ivory Coast)* Publication in Afrika Matematika and the contribution of women

19.00 – 20.30	**Reception: Girassol Indy Village**

DAY 2 – SUNDAY, 30/11/2008

08.00 – 10.00	**SESSION 4: CONTRIBUTIONS TO MATHEMATICS** **Chair: Hamidou Toure** **Rapporteur: Ms Audry Ayivor**
08.00 – 08.40	**ZOUNGRANA, Patricia L.:** *(University of Ouagadougou, Burkina Faso)* On the nilradical of Lie triple algebras
08.40 – 09.10	**BABATOLA, Patricia O.:** *(FUTA, Nigeria)* One-stage semi-implicit hybrid Runge-Kutta scheme for solution of stiff ODEs.
09.10 – 09.40	**KWASHIRA, Rugare:** *(University of Botswana, Botswana)* Rational homotopy groups of function spaces
09.40 – 10.00	**GUEMMEGNE, Juliette T.:** *(University of Yaounde I, Cameroon)* Vector weighted games
10.00 – 10.30	**Coffee Break**
10.30 – 12.40	**SESSION 5: CONTIBUTIONS TO MMATHEMATICS** **Chair: Dr. Angela Unna Chukwu** **Rapporteur: Ms Nana Ama Kum Browne**
10.30 – 11.10	**AGUSTO, Folashade Benette:** *(FUTA, Nigeria)* Theoretical assessment of avian influenza vaccine in two avian populations
11.10 – 11.40	**NANNYONGA, Betty:** *(Makerere University, Uganda)* The role of biomathematics in biology and medicine
11.40 – 12.00	**MARIJANI, Theresia:** *(Stellenbosch University, South Africa)* Modeling drug resistance in malaria
12.00 – 12.20	**CHIGIDI, Esther:** *(University of Botswana, Botswana)*

	HAART resistance: A real or false alarm?
12.20 – 12.40	**KAGUNDA, Josephine Wairimu:** *(University of Nairobi, Kenya)* Stability and persistence of synchronization manifolds for diffusively coupled lattice oscillators with time lag
12.40 – 14.00	**Lunch**
14.00 -- 17.45	**SESSION 6: ROUNDTABLE ON MATHEMATICS EDUCATION AND THE AFRICAN WOMAN** **Chairs: Prof. Nouzha El Yacoubi** **Prof. Wandera Ogana** **Panelists: 4 – 6 panelists to be selected** **Rapporteurs: Dr. Senelani Dorothy Musekwa** **Ms Laura Ogana**
14.00 – 15.00	**Brief remarks by panelists** **Discussion** **Suggestion of small groups for discussion**
15.00 – 16.10	**Discussion by small groups**
16.10 – 16.40	**Coffee Break**
16.40 – 17.45	**Report back to plenary by small groups** **Discussion and Resolutions** **Final Reflections**

17.45 – 18.00	**Closing Ceremony**

ABSTRACTS

Theoretical assessment of avian influenza vaccine in two avian population

Folashade Benette Agusto, A.B. Gumel*

Federal University of technology Akure, P.O. Box 1165, Akure, Nigeria [folashade_agusto@yahoo.com]

This study presents a deterministic model for theoretically assessing the potential impact of avian influenza vaccine in two avian populations (domestic and wild birds). The model is analyzed to gain insights into the qualitative features of its associated equilibria. This allows the determination of important epidemiological thresholds such as the basic reproduction number and a measure for vaccine impact. A sub-model without vaccination is first considered. It is shown that the sub-model without vaccination has a globally asymptotically stable disease-free equilibrium whenever a certain reproduction threshold is less than unity and a unique endemic equilibrium whenever the reproduction threshold is greater than unity. Unlike the sub-model without vaccination, the avian vaccination model undergoes backward bifurcation, a phenomenon where multiple stable equilibria co-exist. In other words the classical epidemiological requirement of vaccinated reproduction number being less than unity does not guarantee disease elimination in the model. Further, the study shows that the vaccine impact is dependent on the sign of a certain threshold. Vaccine will have positive or no impact if this threshold is less than or equal to unity. Also, the vaccine with higher efficacy results in higher number of reduced infection of domestic and wild birds as the number vaccinated increases.

Mathematics and the 'she' factor

Audry Ayivor

Department of Mathematics and Applied Mathematics, University of Cape Town, Room 109, Private bag X3, Rondebosch 7701, South Africa [audry.ayivor@gmail.com]

Statistics from schools and Mathematics departments of universities all over the world have shown that the subject "Mathematics" is an area in which women are underrepresented. Factors which have contributed to this situation could be broadly categorized as psychological and socio-cultural among others. The talk addresses some perceptions people (the society) have about the subject, the factors that have lead to women either shying away from the subject or performing poorly in it and the problems women face with the subject. The talk will be concluded with some suggestions as to how these problems could be addressed.

One-stage semi-implicit hybrid R-K scheme for solution of stiff Ordinary Differential Equations

Patricia Olayinka Babatola

Department of Mathematical Sciences, School of Sciences, Federal University of Technology, P.M.B 704, Akure, Ondo State of Nigeria [pobabatola@yahoo.com]

This paper discusses Semi-implicit Hybrid Runge- Kutta Scheme for numerical solution of Stiff Ordinary Differential equation of the form $y = f(x, y),\ a \leq x \leq b$ .Its derivation adopts Taylor and binomial series expansion, while it analysis of its stability uses the well known. A-stability test model equation. Both theoretical and experimental results show that the scheme is A-stable. Numerical results compared favorably with existing Euler's method.

Keywords: A- Stable, accurate, semi-implicit, hybrid, local truncation error

=:=

Increasing the participation and performance of girls in mathematics in Africa

Nana Ama Kum Browne

CSAG, Environmental and Geographical Science Dept. University of Cape Town, Private Bag X3, Rondebosch, 7701, South Africa [nbrowne@csag.uct.ac.za]

Most societies in Africa normally see a woman to be dependent on a man; the sole duty of a woman therefore is confined to work related to the family and house chores. In some cases minor jobs that will not really take away time and attention from home are taken. There is always a challenge for women from such societies to get out of this mentality and aspires to higher ambitions. A stigma of irresponsibility is normally attached to few women who, by dint of their work, were able to elevate themselves above this societal mantle of submissiveness. At higher level of education and particularly in mathematics, women are disproportionately outnumbered in Africa. One way to help increase the participation and performance of girls is teaching the subject with interesting activities. Teaching is the most effective means to share with people what one have achieved. The need of encouraging young women in higher education is in the increase nowadays. The emphasis of this encouragement should be directed at girls at the basic level to build their interest in mathematics.

=:=

The first experience of Eduardo Mondlane University on teaching mathematics via distance education

Nilsa Adelaide Issufo Enoque Pondja Cherinda

Centre of Distance Education ,Eduardo Mondlane University-,Av. Paulo Samuel Nkamkomba nº 203-3ºAndar [Nilsa.cherinda@uem.mz]

The present communication aims to register and to present the first experience of the Eduardo Mondlane University (EMU), Mozambique, on teaching mathematics via distance education, as well as to establish an exchange of ideas with experienced and professional people in the field of teaching of mathematics, in order to improve this process and modality of teaching. Distance education at EMU is offered by a virtual platform named aulanet. With this platform we deliver learning materials and interact with students, including the realization of assessment and exams. The process occurs totally at distance, being compulsory physical presence of students only for confirmation of their identity at the time of examination. Beyond the interaction through the platform, we also use the communication package SKYPE for synchronized and unsynchronized tutorials and television sessions. This course recently launched is a result of collaboration between our Centre of Distance Education, the Faculty of Economy and the ICT-Centre of EMU. Presently the course involves 77 students, located in eight of the then provinces of the country, although initially it was planed for 4 provinces only. Perspective for the next year 2009 is to increase the enrolment up to 500 students. Some constraints faced up to now are linked with the fact that a considerable part of students have weak or no experience in using computer and managing Internet.

HAART resistance: A real or false alarm?

Esther Chigidi ,E.M. Lungu*

Department of Mathematics, Faculty of Science, University of Botswana, Private Bag 0022,Gaborone, Botswana.[chigidirami@yahoo.com]

We Formulate an HIV?AIDS deterministic model which incorporates differential infectivity and disease progression for treatment-naive, treatment experienced and HAART Resistance HIV/AIDS infectives. To illustrate our model, we have applied it to estimate the adult HIV prevalence, the HIV population, the number if new infective and the number of AIDS deaths in Botswana for the period 1984-2012.It is found that while the problem of HAART Resistance is an increasing problem in Botswana, it will take between ten and thirty years for the WHO 5% threshold for transmitted resistance to be reached if the treatment rate is between0.02 and0.1 per annum. The conditions for the HIV/BURDEN to be reached and for the persistence of the HIV/AIDS epidemic have been derived as functions of the reproduction numbers of the HAART susceptible and the HAART Resistant infectives. The results in this study suggest that while the HAART Program has yielded positive results for Botswana, the need for surveillance of HAART Resistance cannot be under estimated.

*Keywords:*HIV/AIDS , HAART , treatment-naive, treatment-experienced, HAART resistance

Math education: title: "African girls and Mathematics competitions

Nouzha el Yacoubi

Department of Mathematics, Faculty of Sciences University Mohamed V Rabat, PO Box 1014, Rabat Morocco[nelyacoubi@fsr.ac.ma]

In this Presentation we will give a brief survey on pan African Mathematics Olympiads (pamo) and we will concentrate our attention on the participation of African girls in pamo, the means set up by some African countries to let the African girls be competitive and interested by mathematics, like the competition: MISS MATHEMATIQUES in Ivory Coast and recently in Benin.

Life skills-based mathematics teaching approach: being responsive to an african woman's method of learning

Gertrude Kgomotso Garegae

Department of mathematics and science education university of Botswana, P.O Box 70053, Gaborone, Botswana.[garegaek@mopipi.ub.bw]

A disproportionate participation of girls and boys in mathematics and mathematics related career is well documented. Reasons for girls' less participation is attributed to a number of factors including traditional teaching styles that are incongruent to girls' learning styles. For instance, mathematics teaching in Botswana is characterized by an abstract, dry teacher-centered teaching style which ignores learners' contexts, and this approach is blamed for girls' poor performance and attrition from the subject. Whereas boys relate class tasks to their immediate world, e.g. construction of wire cares, girls fail to relate these tasks to their immediate environment and thus find them boring and meaningless. This theoretical paper argues for an alternative delivery approach—life skills focused teaching—that can harness girls' interest in mathematics. In this approach, gender differences in leaning styles are not only recognized, but girls' cultural world is acknowledged in a mathematics class. As a result, they are given an opportunity to understand themselves better, thus combining knowledge, attitude and skills into a complete whole. It is argued that through this approach to teaching mathematics girls will of only be aware of but will harness positive aspects of their behavioral, normative and control beliefs. Examples from upper primary and secondary school syllabi will be used to show how classroom teaching can contextualize school mathematics.

Stability and persistence of synchronization manifolds for diffusively coupled lattice oscillators with time lag

Josephine Wairimu Kagunda

University of Nairobi, School of Mathematics, Department of Applied Mathematics, P.O. BOX 30197-00100 NAIROBI, KENYA[jwndirangu@gmail.com]

There are two areas of mathematical importance in the study of invariant manifolds generated by dynamical systems, namely; stability and persistence of invariant manifolds.

To study these areas one needs the concept on Normal Hyperbolicity. This requires that the tangent bundle of the phase space, restricted to the manifold splits into three sub-bundles, one of which is the tangent bundle of the manifold and the linearized flow either expands (contracts) the other bundles at a rate greater than any expansion (contraction) in the tangent bundle. In this study we propose to apply the concept on normal Hyperbolicity for semiflows in Banach spaces generated by a system of diffusively coupled lattice oscillators with a time lag.

Educational issues affecting female's mathematics learning in the context of HIV/AIDS

Lorraine Kgosimore

Mathematics Department, Ledumang Senior Secondary School, P.O Box 21161, Bontleng, Gaborone, Botswana.
[lorrainekgosimore@rocketmail;cmlorrainekgantumo@yahoo.com]

Studies have shown that female's enrollment in Mathematics and related courses is very low compared with their male counterparts. Several reasons have been advanced as why this scenario exists in many societies. Recent trends in HIV/AIDS epidemic have also shown that girls and women are the most affected section of the general population. Despite the high prevalence of HIV/AIDS in the environment in which many schools operate, it does not appear that there are schools in Africa that have institutionalized a consistent response. The big question now is "How would severity of the HIV/AIDS epidemic among girls and women affect their Mathematics learning?". The study attempts to address the specific questions such as: (i) What role does the education sector play in the prevention of HIV/AIDS among girls and young women, which promotes HIV free setting in learning environment? (ii) What mechanisms are in place to guide HIV/AIDS orphaned children in realizing their full potential in the leaning of Mathematics? (iii) What is the role of a society or community in the fight against HIV/AIDS among girls and young women? This paper identifies the relationships between educational Issues, female learning in Mathematics and HIV/AIDS and is envisaged to contribute to public policy on intervention programs relevant to learning environment

Rational homotopy groups of function spaces

Rugare kwashira,J.B Gatsinzi*

University of Botswana, Faculty of Science, Department of Mathematics, P. Bag 00704, Gaborone, Botswana[rkwashira@gmail.com]

Given a map $f : X \to Y$ between simply connected topological spaces, $f_* : L(V) \to L(W)$ ITS Quillen model and $U(f_*) : TV \to TW$, we show that $\pi_*(\mathrm{map}(X,Y,;f))\Theta Q \cong \mathrm{Ext}_{TV}(Q, L(W))$. If Y is coformal and $\pi_*(\Omega Y)\Theta Q$ finite dimensional then $\pi_*(\mathrm{map}(X,Y,;f))\Theta Q$ AND $\pi_*(\mathrm{map}(X,Y,;f))$ are both finite dimensional.

=:=

Modeling drug resistance in malaria

Theresia Marijani

DST/NRF Centre of Excellence in Epidemiological Modeling and Analysis (SACEMA), Faculty of Science, Stellenbosch University, c/o STIAS, 19 Jonkershoekweg, Stellenbosch 7600 . South Africa[tmarijani@yahoo.co.uk]

The model for the spread of malaria is presented which include two different strains namely a sensitive and a resistant strain in both human and mosquito populations. The model is analyzed for its stability inn terms of the reproduction number. We obtained two reproduction numbers arising from sensitive strain (R_{w*}) and the resistant strain (R_{r*}).The analysis shows that if $R_{w*} < 1$ and $R_{r*} < 1$ the disease free equilibrium is locally asymptotically stable. We have used the center manifold theory to determine the stability of the endemic equilibrium point when R_0 is close to unit. We shall show that there is a forward bifurcation when only sensitive strain exist, and that the endemic equilibrium point is locally asymptotically stable whenever $R_{w*} > 1$ .Furthermore, we shall show that when only resistant strain exist, and that the model exhibits backward bifurcation .The presence of backward bifurcation complicates the treatments control program since now there is a stable endemic state for $R_{r*} < 1$ .Some numerical simulations have been done and the findings show the role of strain dominance and implications with regards to malaria dynamics. We shall find that resistant strain dominance implies the higher prevalence of the malaria disease. The eradication of both drug –sensitive and drug-resistant malaria can be achieved if $R_{w*} < 1$ and $R_{r*} < 1$ .We also observed that, reducing contact rates together with increased use of pesticides can reduce the malaria burden

An investigation into problems faced by the rural girl child in secondary education in bullima district

Senelani Dorothy Musekwa

Applied Maths department, faculty of applied science, national university of science and technology, P.O AC 939 ascot, Bulawayo, Zimbabwe.[sdhmusekwa@gmail.com]

This research study focuses on the access to and progression in secondary education of a rural girl child in Bulilima district. The study essentially target rural girls in secondary schools from Form One to A- level. Data on the perceptions of the community, parents and schools, about the girl child was analyzed. The study was conducted in two phases. The initial phase (Phase I) endeavored to explore the factors that impact on the progression of the rural girl child in secondary education. Gender related issues were examined in terms of the effect of socio – cultural, economic and political factors that influence decisions taken on the education of the rural girl child. Perceptions of rural communities, parents, teachers and students, both girls and boys, were explored. In particular, the study investigated cultural and traditional expectations about the role of a rural girl child in society. Economic issues affecting the girl child and policy decisions that might disadvantage rural girls in secondary schools were also investigated. Documentation of problems facing the rural girl child in Bulilima district was highlighted. Contributions of communities in solving the problems of the girl child education were noted. Proposals for intervention in secondary education for girls were brought forth to make appropriate interventions in Phase II of the study.

HIV and malaria co-infection: How do they co-exist? A mathematical analysis

Betty Nannyonga,J.Y.T. Mugisha .L.S. Luboobi*

Department of Mathematics, Faculty of science, Makerere University, P.O. Box 7062 Kampala
[bnk@math.mak.ac.ug]

For over a decade, the department of Mathematics at Makerere University has used mathematical models to study numerous infectious diseases such as HIV/AIDS, malaria, tuberculosis, etc. Currently we are developing numerous models to study co-infections of malaria with other infectious diseases and so far have obtained interesting results. I will present some of the models and the results. An example of a mathematical application to biology, we have designed a mathematical model for the dynamics of malaria and HIV co-infection with protective measures against both diseases. We have used the model to determine the threshold of the diseases, the control and basic reproduction numbers for which the disease can be eliminated. IT is noted that HIV prevalence has higher effect on malaria endemicity than the effect on malaria on the HIV endemicity, and varying the transmission probability of malaria and mosquito has effect in dynamics of infection and endemicity. The higher the rate, the higher the endemicity. It is also concluded that in case of co-infection in a given region, the prevalence if malaria affects the prevalence of HIV cases in that region. This proves that for the interaction to take place, one of the diseases must be at low endemicity while the other high. It is observed that effective protection against both diseases can reduce the reproduction number to almost zero, however, protecting against HIV/AIDS, when the influence of some behavioral changes are not directed to lessen risky sexual activity, does not have a positive effect on the co- infection.

Trends in a first-level module at UNISA

Van Hoepen Willemien

Department of Decision Sciences in the School of Economic Sciences in the College of Economic and Management Sciences at the University of South Africa (Unisa), PO Box 392, Unisa, South Africa, 0003 P.O Box 392, Unisa, South Africa, 0003[vhoepwa@unisa.ac.za]

The University of South Africa (Unisa) is a distance learning institution with a very large and mostly African student population. In the Department of Decision Sciences we teach the application of mathematics and statistics to real-life problems in industry, commerce and finance. As part of the curriculum, students are taught the basic mathematical skills required in our field of study in a first level module.

In this presentation we shall focus on demographic trends and some correlations with achievement that we have experienced in this module over the last five and a half years.

On the nilradical of lie triple algebras

Patricia Lucie Zoungrana

Department of Mathematics, University of Ouagadougou, Burkina Faso. 01 BP 1412 Ouagadougou 01 Burkina Faso[pati@univ-ouaga.bf]

The aim of the paper is to study the properties of the concept of nilradical of lie triple algebras as a generalization of the concept of nilradical of lie triple systems and lie algebras.