# REYONO journal of interdisciplinary studies



St. Thomas College Kozhencherry Kerala, India-689641

## CONTENTS

| Narrating the Liberation Struggle in Zoë Wicomb's Novel David's Story Geoffrey V. Davis   | 03  |
|---|-----|
| Translating Past into Present: Wilson Harris and the Theatre of Memory  Monika Reif-Huelser   | 15  |
| 'Fantasy Echo'? Reflections on Republishing Early Modern Writing by<br>Malayalee Women in Contemporary Kerala<br>J.Devika   | 30  |
| Narrating Partition: A Study of Bhishma Sahini's <i>Tamas</i><br>Sreelatha P.   | 39  |
| An Application of NGP and APT to Vowel Harmony in Standard Kiswahili P. I. Iribemwangi  | 45  |
| Micro History: A Need for Paradigm Shift and Perceptible Change P. F. Gopakumar   | 61  |
| The Underutilised Treasure of Kerala's Indigenous Technology-<br>A case Study of Aranmula Metal Mirror<br>Oommen Zachariah  | 70  |
| A Study on the Impact of NAAC Accreditation on Quality Upgradation in Higher Education Ancy Jose and S. Kevin   | 75  |
| Alienation and Parent-Child Bonding of Single Adolescents in Relation to their Risk-taking Behaviour Jayasree P.  | 91  |
| Remarks on Similarity of Equilibrium Laws  K. Babu Joseph   | 96  |
| Mid-Latitude Ionospheric Response to Weak Geomagnetic<br>Storms-A Multi-instrumental Observation<br>K. Unnikrishnan, S. Kawamura, A. Saito, T. Yokoyama and S. Fukao  | 99  |
| (1 <i>E,</i> 2 <i>E</i> )-bis(furan-2-ylmethylidene)hydrazine P. S. Binil, M. R. Anoop, M. Sithambaresan, S. Suma, M. R. Sudarsanakumar and M. R. P. Kurup  | 128 |
| NNS Schiff's bases - Synthesis and spectral characterisation of Co(III) and Cd(II) and Zn(II) complexes of di-2-pyridyl ketone N(4), N(4) - (butane-1,4-diyl) thiosemicarbazone  Varughese Philip and M. R. Pratapachandrakurup | 132 |
| Non-invasive genotyping and genetic diversity of elephants: A study of 43 captive elephants  M. Balasundaran, E. A. Jayson, K. M. Jayahari, C.M. Brinda and K. Arathy   | 141 |
| v–T₀–Limit Point of a Set and its Implications<br>S.Balasubramanian and P.Aruna Swathi Vyjayanthi   | 151 |
| $g\delta$ s-Closed Function in Topological Spaces<br>S.S. Benchalli, and Umadevi I. Neeli   | 161 |

# Narrating the Liberation Struggle in Zoë Wicomb's Novel *David's Story*

## Geoffrey V. Davis

Department of English University of Aachen, 52056 Aachen, Germany E-mail: geoffrey.davis@web.de

#### **Abstract**

Zoë Wicomb's second work of fiction, *David's Story* (2000)— an ambitious novel of exceptional complexity—has been welcomed by critics as a significant contribution to the renewal of the South African novel. Thematically it concerns the neglected history of the *Griqua* and the Coloureds of South Africa; the relationship of past and present; the interaction between different population groups; the representation of the liberation struggle against apartheid and the role of women within it; as well as problems of social transition after the ending of apartheid. The work is a postmodern, historiographic metafiction characterised by the uncertainty of what is narrated, historical errors arising from the unreliable memory of the protagonist, shared authorship, and intense debate between the protagonist (David) and the unnamed female narrator. The novel invites the reader to address complex political, moral and literary questions relating to South African history, the nature of memory, redefinitions of identity, and the relationship of fiction and history.

## **Keywords**

South African novel, coloured, Griqua, liberation struggle, abuse of women, historiographic, metafiction, memory, identity.

# Translating Past into Present: Wilson Harris and the Theatre of Memory

## Monika Reif-Huelser

Department of Literature
English and American Literatures
University of Konstanz, Fach D 161, Germany
E-mail: monika.reif-huelser@uni-konstanz.de

### **Abstract**

Language and music possess resources which one has to sense as coming not only from within oneself, but from outside, from the land itself, from the rivers, from the forests. And also from those persons and those cultures that existed in that landscape and have left their trace. Strongly influenced by the physical experience of space in Guyana, the land provides the matrix from which Harris's creative imagination and aesthetic forms emerge. "A great magical web born of the music of the elements," he calls the structural principle of his writing. This is how one might respond to the events told in *The Guyana Quartet*, four successive novels about Guyana, a name derived from an Amerindian root word which means "lands of waters."

## **Keywords**

Postcolonial theory, bone-flute, dramatist approach, interpretive theory of culture, theatre of memory, magical realist fiction, radical imagination, unfinished Genesis of imagination, inevitability of the unknowable, the untranslatable, the ungraspable, the pre-Columbian past that feeds the Guyanese present

## 'Fantasy Echo'? Reflections on Republishing Early Modern Writing by Malayalee Women in Contemporary Kerala

## J.Devika

Centre for Development Studies Thiruvananthapuram, Kerala E-mail: devika@cds.ac.in

### **Abstract**

The recovery project has been central to feminist knowledge. In India, of feminist literary studies and history in India has indeed been far more attentive to both the impossibility of retrieving a pristine past, and to the prospect that doing this uncritically may indeed mask the very possibility of writing histories of subaltern women. In this paper I would like to reflect more upon the above possibility--of engaging in 'recovery' effort that is more nuanced and critical-- by examining critically my own effort in this direction . I want to do this because gaining distance in time does help one to gain a measure of self-reflexivity, which may yield insights of broader significance.

## **Keywords**

Feminist knowledge, women's writing, self-reflexivity, feminist anthologies.

# Narrating Partition: A Study of Bhisham Sahni's *Tamas*

## Sreelatha P.

Department of Hindi Sree Sankaracharya University of Sanskrit (Ettumanoor Regional Centre), Kerala E-mail:ssurcetm@gmail.com

## **Abstract**

Bhisham Sahni has been hailed as one of the most prominent partition writers in Hindi. The Sahithya Academy Award winner novel *Tamas*, published in 1973 highlights the darkness of communal violence and riots, the handy work of vested political interests, implemented by the involvement of the innocent. The novel vividly narrates how people are forced into bloody clashes and are subjected to a series of traumatic situations. It is a narrative of engineered social conflicts and the instant reactions and strategies of the people. Communal relations and the riotscape, including urban and rural areas, and the daily life described in the novel are remarkable.

## **Keywords**

Tamas, riotscape, communal relations, urbanscape.

## An Application of NGP and APT to Vowel Harmony in Standard Kiswahili

## P. I. Iribemwangi

Department of Linguistics and Languages University of Nairobi, Kenya E-mail: iribe@uonbi.ac.ke

### **Abstract**

Kiswahili is not classified as a harmonic language. However, this paper argues that the language exhibits some harmonic tendencies in so far as vowels are concerned. Consequently, the paper discusses vowel harmony as evident in Standard Kiswahili. The paper applies a segmental and a suprasegmental theory. The discussion proves that vowel harmony in Standard Kiswahili is both a segmental and a suprasegmental property. The two theories used are the natural generative phonological theory and autosegmental phonological theory. The corpus used is drawn from verbs and demonstratives.

## **Keywords**

Vowel harmony, natural generative phonology, autosegmental phonological theory, Kiswahili, phonology, phonological processes.

# Micro History: A Need for Paradigm Shift and Perceptible Change

## P. F. Gopakumar

Department of History
University College, Thiruvananthapuram, Kerala
E-mail: gopanvision@gmail.com

## **Abstract**

This article avers that historians at best endeavour to recover and represent the past. The past so recovered is incomplete and value added. The historian indulges in acts of omission and exclusion. This leads to the emergence of alternative histories. The rise of micro-history as an acceptable area of study marks a shift in emphasis, a downplaying of the national or centralist perspective. Micro-history is first and foremost an ideology combining both a methodological and a conceptual framework. It is regarded as the only dimension in which totality could be discovered. The author warns historians to guard themselves against the temptation of falling prey to the heresy of elevating regional glories as a result of their specialisation in certain periods and areas. Micro-history and mainstream histories should be understood as complementary rather than contradictory. However, the existing micro histories have serious methodological problems. Many works were conceived as local versions of macro-histories, with emphasis on national or major regional events, rulers or ruling houses, major historical monuments in the area and so on. The author analyses various aspects of this theme in his paper.

## **Keywords**

Deconstructionism, hypothesis, marginalising, subaltern histories, black histories, micro history, little histories, microstoria, microhistoire, generalisation, annales scholars, regionalism, mainstream histories, methodological innovations, oral evidence, nationalist historiography, folklore, national history, historical reality.

# The Underutilised Treasure of Kerala's Indigenous Technology-A Case Study of Aranmula Metal Mirror

## Oommen Zachariah

Department of Economics
St.Thomas College, Kozhenchery, Kerala
E-mail: oommenzshaji@gmail.com

## **Abstract**

The Indian handicraft industry is highly labour intensive, cottage based, decentralised, eco-friendly, sustainable and has high potential for foreign exchange earnings. Aranmula metal mirror has enormous potential because of its low cost of production and low capital investment. It has been of great enticement for the foreign tourists coming to Kerala. The mirror has a lot of ritualistic significance. The technology used in this industry has been handed over from generation to generation and now only few families are engaged in this occupation. The withering of this industry means the desertion of an ancient indigenous technology the state possesses. The study is an attempt to identify the constraints in developing this industry and to put forward measures for its development. The type of research was exploratory and descriptive. The primary data was collected from the producing units in Aranmula by census method. Unlike other handicraft units, the Aranmula metal mirror industry is not facing problems like indigent designs, low quality materials, inefficient market approaches, competition and exploitation from machine made urban craft units. But the lack of interest of new generation in traditional crafts is posing a problem in its future development. Therefore the Aranmula metal mirror industry is to be protected with government support in providing training in indigenous crafts so that the access to domestic and global markets can be maintained and flourished.

## **Keywords**

Handicraft, artisan, metal mirror, profitability.

# A Study on the Impact of NAAC Accreditation on **Quality Upgradation in Higher Education**

## Ancy Jose<sup>1</sup> and S. Kevin<sup>2</sup>

<sup>1</sup>Nagindas Khandwala College of Commerce, Arts and Management Studies, Mumbai <sup>2</sup>TKM Institute of Management, Kollalm, Kerala E-mail: stephenkevin@rediffmail.com

### **Abstract**

National Assessment and Accreditation Council (NAAC) has been set up as an autonomous body to promote quality initiatives in the higher education sector. NAAC has been engaged in assessment and accreditation of universities and colleges throughout the country since its inception. It adopts a systematic procedure for monitoring the quality standards in institutions of higher education. The expected outcomes are quality sustenance and quality enhancement in the higher education sector. This study evaluates the impact of NAAC activities on quality upgradation in accredited institutions in the state of Maharashtra. The implementation of the Peer Team Recommendations, post accreditation changes in academic activities, attitudes and facilities, the effectiveness and impact of IQAC (Internal Quality Assurance Cell) on the quality front, etc are some of the issues examined in the study. The findings of the study are useful in streamlining the functioning of NAAC as well as in promoting quality in the higher education sector.

## **Keywords**

NAAC, Peer Team Report, accreditation, post accreditation changes, Internal Quality Assurance Cell.

## Alienation and Parent-Child Bonding of Single Adolescents in Relation to their Risk-taking Behaviour

## Jayasree P.

School of Pedagogical Sciences Mahatma Gandhi University, Kottayam, Kerala E-mail: jayarose009@gmail.com

## **Abstract**

The present study has been conducted on a sample of 237 single adolescents. Alienation Scale, Parent-Child Bonding Scale and A Verbal Measure of Risk Taking were used to collect data. Results revealed significant influence of alienation and parent-child bonding on risk-taking behaviour of single adolescents.

## **Keywords**

Alienation, parent-child bonding, risk-taking behaviour.

## Remarks on Similarity of Equilibrium Laws

## K. Babu Joseph

Viswajyothi College of Engineering and Technology Vazhakulam,Muvattupuzha, Kerala E-mail: bb.jsph@gmail.com

### **Abstract**

It is pointed out that the concept of equilibrium introduced in Newtonian mechanics has a natural interpretation in terms of a state of rest or state of balance in a dynamic situation. As examples, we present Kirchoff's Laws in an electric network, Traffic Flow, and Economy under ideal conditions.

## **Keywords**

Newtonian mechanics, equilibrium, electric networks, traffic flow, economy.

## Mid-Latitude Ionospheric Response to Weak Geomagnetic Storms-A Multi-instrumental Observation

K. Unnikrishnan\* 1,2, S. Kawamura<sup>3</sup>, A. Saito<sup>4</sup>, T. Yokoyama<sup>5,6</sup> and S. Fukao<sup>7</sup>

Department of Physics

N S S Hindu College, Changanacherry, Kerala

School of Pure and Applied Physics

Mahatma Gandhi University, Kottayam, Kerala

Okinawa Subtropical Remote-Sensing Centre, National Institute of Information and Communications Technology, Okinawa 904-0411, Japan

Department of Geophysics, Kyoto University, Kyoto 606-8502, Japan

NASA Goddard Space Flight Center, Greenbelt, MD 20771, USA

University of Maryland, Baltimore County, Baltimore, MD 21250, USA

Research Institute for Sustainable Humanosphere,

Kyoto University, Kyoto 611 0011, Japan

E-mail: kaleekkalunni@gmail.com\*

#### **Abstract**

Multi-instrumental observation of ionospheric responses to two weak magnetic storms occurred during the period, 18-21 March 2002, was conducted using GPS network, MU radar, and ionosondes, over the mid latitude sector, and compared with the output generated by FLIP model. Latitudinal and temporal variations of GPS-TEC exhibit poleward expansion up to 35°N, during day time hours (around 1000-1300 JST), of 19 and 21 March after the SSCs. It is interesting to note that, although the second storm considered here is very weak, on 20 March after the SSC around mid night, MU radar observed that neutral wind increases rapidly upto 200 m/s, towards equator and simultaneously, a perturbation component of about 2 TECU is observed by GPS network, around 0100 JST of 21 March, which propagate from north to equator. Ionosondes also revealed that, after the second SSC, around 0200 JST on 21 March, F layer height increases at Wakkanai, and Kokubunji which propagates to Okinawa, exhibiting a latitudinal dispersion feature, showing the influence of equatorward neutral wind/propagating nature of a powerful wind surge. The equivalent neutral wind derived from FLIP model by including vibrationally excited nitrogen, N,\* and without its inclusion are almost identical and in good agreement with the MU radar neutral wind. The interplanetary -magnetosphere scenario of the initial and main phase of the two weak geomagnetic storms considered in the present study are quite different, which is reflected in the ionospheric responses to these events.

## **Keywords**

Weak geomagnetic storms, multi-instrumental analysis, mid-latitude ionosphere, FLIP-model

## (1E,2E)-bis(furan-2-ylmethylidene)hydrazine

P.S. Binil<sup>1</sup>, M. R. Anoop<sup>1</sup>, M. Sithambaresan<sup>2</sup>, S. Suma<sup>3\*</sup>, M. R. Sudarsanakumar<sup>4</sup> and M. R. P. Kurup<sup>2</sup>

<sup>1</sup>Department of Chemistry, S. N. College, Kollam, Kerala

<sup>2</sup>Department of Applied Chemistry

Cochin University of Science and Technology, Kochi, Kerala

<sup>3</sup>Department of Chemistry, S. N. College, Varkala, Kerala

<sup>4</sup>Department of Chemistry, M. G. College, Thiruvananthapuram, Kerala

E-mail: sumasncw@gmail.com

## **Abstract**

The structure of 1,2-bis((furan-2-yl) methylene) hydrazine,  $C_{10}H_8N_2O_2$ , has orthorhombic (*P*bca) symmetry. The furan rings in this compound are planar with the highest deviation of a carbon atom of 0.57(18) Å having the oxygen of the furan ring and one of the N of the hydrazine moiety in *Z* configuration with respect to C–C bond connecting the ring and the hydrazine moiety. The packing of these molecules involves no classical hydrogen bond interactions; however, the C–H… $\delta$  interactions which are highly directional packing motifs and some very weak  $\delta$ ··· $\delta$  interactions show major influence in the stabilization of the crystal lattice of this molecular system.

## **Keywords**

single-crystal, hydrazine.

# NNS Schiff's bases - Synthesis and spectral characterisation of Co(III) and Cd(II) and Zn(II) complexes of di-2-pyridyl ketone N(4), N(4) - (butane-1,4-diyl) thiosemicarbazone

## Varughese Philip<sup>1</sup> and M.R. Pratapachandra Kurup<sup>2</sup>

<sup>1</sup>Department of Chemistry, St. Thomas College, Kozhencherry, Kerala <sup>2</sup>Department of Applied Chemistry, Cochin University of Science and Technology, Kochi, Kerala

E-mail: varuges@yahoo.co.in

#### **Abstract**

A series of complexes of Co(III), Zn(II) and Cd(II) were synthesised from di-2-pyridyl ketone N(4), N(4)-(butane-1,4-diyl) thiosemicarbazone. The complexes synthesised were subjected to elemental analyses were subjected to elemental analyses confined to the stochiometric ratio  $[ML_2]X$ , [M(HL)(L)]X and [ML]X for Co(III) Cd(II) and Zn(II) respectively where X=Cl,  $NO_3$ , SCN and L is the deprotonated ligand. These complexes were characterised by IR, NMR and electronic spectral studies and it was concluded that Co(III), Cd(II) complexes possesses an octahedral geometry and Zn(II), a square planar geometry.

## **Keywords**

Thiosemicarbazone, Co(III), Cd(II),Zn(II) complex.

# Non-invasive genotyping and genetic diversity of elephants: A study of 43 captive elephants

M. Balasundaran\*, E. A. Jayson, K. M. Jayahari, C. M. Brinda, K. Arathy

Kerala Forest Research Institute, Peechi, Thrissur, Kerala \* Tropical Institute of Ecological Sciences, Velloor, Kottayam. E-mail: bsundaran@rediffmail.com

### **Abstract**

DNA fingerprinting of 43 captive Asian elephants of Guruvayur temple using microsatellite markers and their genetic characterization was carried out after standardizing a non-invasive method of DNA extraction from dung samples. Polymerase chain reaction was carried out for amplifying three microsatellite loci, namely EMX 1, EMX 2 and EMX 3 using specific primers reported by Fernando for Asian elephants of Sri Lanka. Five alleles each were recorded for EMX 1 and EMX 2, while EMX 3 showed only two alleles. The geographic origins of only 27 animals were known. The genetic distance between the five populations grouped based on geographic origin namely South Indian, Bihar, Assam, Andaman and Nicobar Islands and that of unknown origin ranged from 0.0044 to 0.3595. UPGMA dendrogram constructed using genetic similarity coefficients showed that Bihar, Assam and unknown origin populations clustered into one group conforming to the geographic proximity of Bihar and Assam populations. The elephant populations from Andaman and Nicobar Islands and Assam origin showed the highest genetic distance while the elephants from Assam and those grouped as unknown origin showed the lowest genetic distance.

## **Keywords**

Eelephant, genetic diversity, non-invasive, microsatellite.

## v-T<sub>0</sub>-Limit Point of a Set and its Implications

## S. Balasubramanian¹ and P. Aruna Swathi Vyjayanthi²

<sup>1</sup>Department of Mathematics Government Arts College, Karur, Tamilnadu <sup>2</sup>Research Scholar, Dravidian University, Kuppam, Andhra Pradesh E-mail: mani55682@rediffmail.com

## **Abstract**

A new type of limit point is defined in a topological space X, and its characterisations are verified in this paper.

## **Keywords**

Limit point; T<sub>0</sub>-limit point of a set.

## $g\delta s$ -Closed Functions in Topological Spaces

## S. S. Benchalli<sup>1</sup> and Umadevi I. Neeli<sup>2</sup>

<sup>1</sup>Department of Mathematics Karnatak University, Dharwad, Karnataka <sup>2</sup>Department of Mathematics BVB College of Engineering and Technology, Hubli, Karnataka E-mail: u-neeli@yahoo.co.in

## **Abstract**

In this paper, the notion of  $g\delta s$ -closed and  $pg\delta s$ -closed and regular  $g\delta s$ -closed functions and their respective open functions in topological spaces are introduced and investigate some of their properties and characterisations.

## **Keywords**

Semi open function,  $g\delta s$ -open function,  $pg\delta s$ -open functon, regular  $g\delta s$ -open functon,  $g\delta s$ -continuous, semi- $g\delta s$ -continuous, irresolute, s-normal, s-regular.