**ALGEBRAIC AND TOPOLOGICAL STRUCTURES OF**

**ROUGH SETS.**

**by**

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**ABSTRACT:** Ever since Pawlak introduced the concepts of rough sets it grabbed the attention of researchers from all fields of science and engineering. Particularly for algebraists it presented a gold mine to explore the algebraic and topological connections with rough set theory. The present talk deals with the connections of rough sets and corresponding algebras defined over rough sets, Topological structures.

Finally a sheaf representation for an information system in rough set frame work is also described.

**Curriculum vitae**

***Dr. M. PHANI KRISHNA KISHORE***

**QUALIFICATIONS:**

* Awarded **Ph.D** in Mathematics from Andhra University in December **2006.**
* Awarded **M.Phil** in Mathematics from the Andhra University in **August 1998** with **82%** of marks**.**
* **M.Sc** Mathematics from Andhra University with **Distinction** **(77.8%** of marks**)** during **1993-95.**

**TEACHING EXPERIENCE:**

* + Working as a Professor of Mathematics in the department of Information Technology, G .V.P College of engineering since June 2010.
  + Worked as an Associate Professor in Mathematics in the Department of Information Technology, G.V.P College of Engineering since December **2007.**
  + Worked as an Associate Professor in the Department of Mathematics, G.V.P College of Engineering since June **2007.**
  + Worked as an Assistant Professor (Senior Scale) in the Department of Mathematics, G.V.P College of Engineering since January 2005.
  + Worked as an Assistant Professor/Lecturer in the Department of Mathematics, G.V.P.College of Engineering from February **2000** to December 2004 .(Selected as an Assistant Professor at JNTU Selections in Feb 2003).
  + Worked as Lecturer in the Department of Mathematics, G.V.P.College for P.G Courses from September **1997** to January 2000.

**RESEARCH PUBLCATIONS / PRESENTATIONS:**

***International Journals:***

* **MPK KISHORE, VENUGOPAL IVS,** “*A novel encryption system based on complex bilinear transforms”* *IJCSI International Journal of Computer Science Issues, Vol. 8, Issue 5, No 2, September 2011, PP 298-302.(IMPACT FACTOR-0.2)*
* **MPK KISHORE, V LAKSHMIKANTHAM** “*Mean value theorem , Ultra Mittag-Leffler function and convergence of successive approximations for fractional differential equations”* **Non linear Studies**.Vol.15,No.3,pp.235-242, 2008.
* **Communicated** a paper titled “*Ω-Almost Boolean rings*” to The **South East Asian Bulletin of Mathematics**.

***National Journals:***

* **UM SWAMY, MPK KISHROE** “*On Prime Ideals of Almost Boolean Rings*” in the Proc. of A.P.Akademi of Sciences, Vol.8, No.4, 2004, pp 293-298.
* **UM SWAMY, GC RAO, MPK KISHORE** “*Algebraic Representation of Sheaves over Locally Boolean Spaces*” in the Proc. of A.P.Akademi of Sciences, Vol.8, No.4, 2004, pp 299-304.

***International Conferences:***

* **MPK KISHORE, S KANTI KIRAN, B BANGARU BHAVYA, S HARSHA CHAITANYA S “***A Novel encryption system based on Layered Cellular Automata***”**  proceedings of the **World Congress on Engineering-** 2011(,july 6th-8th )(**LONDON,UK)pp 500-505.**

***National Conferences:***

* **UM SWAMY, MPK KISHORE,** “*On Prime Ideals of Ω-Almost Boolean Rings*” XIV congress of A.P.Society for Mathematical Sciences, held at Gitam College of Engineering during 09th to11th September 2005.
* **UM SWAMY, MPK KISHORE** “*Algebraic Representation of Sheaves of algebras over Locally Boolean Spaces*” XII congress of A.P.Society for Mathematical Sciences, held at Osmaina University during 12th -14th Dec.2003.

**BOOKS:**

* Co-authored a text book titled “ **A Text book on Engineering Mathematics-I**”

Published by Excel publishers, New Delhi, during November 2010 and has been prescribed as a text book for I semester B.Tech., Mathematics-I course **JNTU-K, R10** curriculum.

* Co-authored a text book titled “ **A Text book on Engineering Mathematics-II**”

Published by Excel publishers, New Delhi, during January 2011 and has been prescribed as a text book for II semester B.Tech., Mathematics-II course **JNTU-K, R10** curriculum.

**SEMINARS/SHORT TERM COURSES ATTENDED/CONDUCTED:**

* Attended a two day work shop on “Leadership in times of change” organized by Empowered learning systems Pvt Ltd., Pune, during August 11th -12th 2012.
* Delivered a lecture on “Mathematical applications to computer science and information technology” at a four day workshop titled Emerging trends in applications of mathematics to Engineering 2012(ETIMATE12) organized at GVPCOE(A) during 19th -22nd July 2012.
* Attended a one day workshop on **leadership skills** organized at GVPCOE(A) in association with TCS on 21-06-2012.
* Attended a work shop on Vedic sciences organized by I-SERVE in association with GVPCOE(A) on 21st November 2011.
* Acted as a member of the organizing team for the International conference “RAMSA-09” held during 19-21st December 2009.
* **Convener** for **FOCUS-09** conducted by department of Information Technology during 26th, 27th February 2009.
* Attended a series of lectures on “Bio-informatics and speech recognition” by

Prof.Roger Marshall,(Playmouth University) organized at G.V.P. College of

Engineering during 21st – 26th July **2008.**

* Attended the lectures by Prof Firdaus E. Udwadia on “**Analytical Dynamics-**

**A new approach**” organized by G.V.P.College of Engineering during 29th to 3rd

April **2007.**

* Attended a national seminar at Andhra University on “Recent trends in Algebra and applications” **NSRTAA-2006** during Dec29th – 31st **2006.**
* Attended the lectures by Prof V. Lakshmi Kantham on “**NONLINEAR**

**ANALYSIS**” organized by G.V.P.College of Engineering during 11th to 20th

October **2006**

* Attended the Quality Improvement Programme on “Improved teaching methodologies” organized by **TTTI** Chennai at G.V.P College of Engineering during, 08th -13th July **2003**.
* Attended a National Level Seminar on “**Algebra and applications**” held at Andhra University during 30th August-1st September **2002.**

**PROJECTS/Research guidance:**

* Guiding two student for **Ph.D** of JNT University, Kakinada.
* Guiding **one** **M.Phil** student of Dravidian University.
* Guided five **M.Tech** projects upto 2011.

**ADMINISTRATIVE RESPONSIBILITIES:**

* **Member secretary** for the Academic council of GVPCOE under Autonomous status.
* **Nodal officer, academic activities, TEQIP-II, S.C-1.2**

**COURSES TAKENUP:**

* Database management systems, Theory of Computation, Discrete Structures and Graph Theory, Information Security , Probability and Statistics, Complex Analysis, Mathematical methods, Operations Research, Mathematics-I, Mathematics-II etc., at undergraduate level;
* Information security (M.Tech.), System simulation (M.C.A), Real Analysis, Numerical Analysis, Coding theory & Cryptography (M.Sc) at Post Graduate level.

**ACADEMIC BACKGROUND:**

* B.Sc (M.P.C) with **87%** (Stood first in the College) at V.K.R College, Gannavaram, Krishna Dt., (1990-93).
* Intermediate with **73.5%** at V.K.R College, Gannavaram (1988-90).
* S.S.C with 82**%** (Stood first in the School) at Z.P.P.H.School, Edupugallu Krishna Dt.,(1986-87).

**PERSONAL INFORMATION:**

Date of Birth: 15th June 1973.

Father’s Name: M.Parvateesam.

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