



Republic of the Philippines
SURIGAO DEL SUR STATE UNIVERSITY- MAIN CAMPUS
COLLEGE OF ARTS AND SCIENCES
Tandag City, Surigao del Sur



APPROVAL SHEET

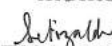
This research entitled "**SOME FORMS OF REGULAR GENEALIZED WEAKLY (RGW) CONTINUOUS FUNCTIONS**" by Precious Jane Fiesta Lapura and Helen Moso Rara is exposed and submitted by JAY P. ARLIGUE and MARIA CRISTINA B. BANDOY as a requirement for the degree in Bachelor of Science in Mathematics and is hereby recommend for approval and acceptance.


JESSA D. CABATCHETE

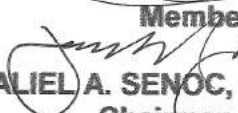
Adviser

Approved as a requirement for the degree of Bachelor of Science in Mathematics by the Oral Examination panel with a rating of **Very Satisfactory.**


JESSA D. CABATCHETE
Member



STEVEN L. ELIZALDE
Member


LOLITA A. CLIMACO
Member


GAMALIEL A. SENOC, Ph.D.
Chairman

Accepted in partial fulfillment of the requirements for the degree of
BACHELOR OF SCIENCE IN MATHEMATICS.

October 2017


ROMEO A. PATAN, Ed. D.
Dean, College of Arts and Sciences



Republic of the Philippines
SURIGAO DEL SUR STATE UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
Tandag City, Surigao del Sur



APPROVAL SHEET

This research entitled " **MATRICES FORMULA FOR PADOVAN AND PERRIN SEQUENCE** " by Kritsana Sokhuma is exposed and submitted by **SHARMAINE M. CLARIT** and **ELOISA JANE A. CASTAÑARES** as a requirement for the degree in Bachelor of Science in Mathematics and is hereby recommended for approval and acceptance.


STEVEN L. ELIZALDE
Adviser

Approved as a requirement for the degree of Bachelor of Science in Mathematics by the Oral examination panel with a rating of **SATISFACTORY**.


JESSA D. CABATCHETE
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LOLITA A. CLIMACO
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STEVEN L. ELIZALDE
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GAMALIEL A. SENOC, Ph.D.
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Accepted in partial fulfilment of the requirements for the degree of **BACHELOR OF SCIENCE IN MATHEMATICS**.

October 2017


ROMEO A. PATAN, Ed.D.
Dean, CAS



Republic of the Philippines
SURIGAO DEL SUR STATE UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
Tandag City, Surigao del Sur




APPROVAL SHEET

This research entitled " α^m - **CLOSED SETS IN TOPOLOGICAL SPACES**
– **AN EXPOSITION**" by Milby Mathew and R. Parimelazhagan is exposed and
submitted by **JONELL A. PADONGAO** and **CYROSE Q. DELLAVA** as a
requirement for the degree in Bachelor of Science in Mathematics and is hereby
recommended for approval and acceptance.


JESSA D. CABATCHETE

Adviser

Approved as a requirement for the Degree of Bachelor of Science in
Mathematics by the Oral examination panel with a rating of **VERY**
SATISFACTORY.


JESSA D. CABATCHETE
Member


STEVEN L. ELIZALDE
Member


LOLITA A. CLIMACO
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GAMALIEL A. SENOC, Ph.D.
Chairman

Accepted in partial fulfillment of the requirements for the degree of **BACHELOR**
OF SCIENCE IN MATHEMATICS.

October 2017


ROMEO A. PATAN, Ed.D.
Dean



SURIGAO DEL SUR STATE UNIVERSITY
Tandag City, Surigao del Sur

COLLEGE OF ARTS AND SCIENCES



ABSTRACT

Title : **On Soft Topological Spaces**

Researchers : **Glydel O. Denola, Melba A. Mangata and Rofamy L. Gato**

Degree : **Bachelor of Science in Mathematics**

Institution : **Surigao del Sur State University-Main Campus**

Adviser : **Ms. Jessa D. Cabatchete**

Date : **March 2017**

Regarding this study, we introduce soft topological spaces which are defined over an initial universe with a fixed set of parameters. The notions of soft open sets, soft closed sets, soft closure, soft interior points, soft neighborhood of a point and soft separation axioms are introduced and their basic properties are investigated. It is shown that a soft topological space gives a parameterized family of topological spaces. Furthermore, with the help of an example it is established that the converse does not hold. The soft subspaces of a soft topological space are defined and inherent concepts as well as the characterization of soft open and soft closed sets in soft sub spaces are investigated.



Republic of the Philippines
SURIGAO DEL SUR STATE UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
Tandag City, Surigao del Sur



APPROVAL SHEET

This thesis entitled **"ON SOFT TOPOLOGICAL SPACES"** by Naim Cagman et.al is exposed and submitted by **GLYDEL O. DENOLA, MELBA A. MANGATA** and **ROFAMY L. GATO** as a requirement for the degree in Bachelor of Science in Mathematics and is hereby recommended for approval and acceptance.


JESSA D. CABATCHETE
Adviser

Approved as a requirement for the degree of Bachelor of Science in Mathematics by the Oral Examination panel with a rating of **EXCELLENT**.


GAMALIEL A. SENOC, Ph.D.
Member


JESSA D. CABATCHETE
Member


ROMEO A. PATAN, Ed. D.
Chairman

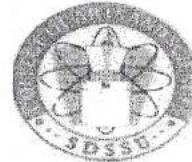
Accepted in partial fulfillment of the requirements for the degree of **BACHELOR OF SCIENCE IN MATHEMATICS.**

March, 2017

ROMEO A. PATAN, Ed.D.
Dean, College of Arts and Sciences



Republic of the Philippines
Caraga Administrative Region
Commission on Higher Education
SURIGAO DEL SUR STATE UNIVERSITY
Main Campus, Tandag City
College of Arts and Sciences



REQUEST FOR ORAL DEFENSE

November 22, 2016

DR. ROMEO A. PATAN

Dean, College of Arts and Sciences
Surigao Del Sur State University
Main Campus, Tandag City, Philippines

Sir:

Greetings!

May we have the honor to request the approval of the Office of the Dean of the College of Arts and Sciences to allow the undersigned to present their special problem entitled, "AN EXPOSITION TO SOLVE EXACT DIFFERENTIAL EQUATION USING REVISED METHOD" for oral defense on November 23, 2016 9:01 AM.

Attached here is the problem manuscript of the researchers for your office reference.

We are hoping for your approval, thank you.


The Researchers:


REGNER G. PORTILLO


JERRIC M. MADELO



GILBERT M. TABANG Jr.

NOTED:


GAMALIEL A. SENOC, Ph.D.
Professor


JESSA D. CABATCHETE
Adviser

RECOMMENDING APPROVAL:


ROMEO A. PATAN, Ed.D.
Dean, CAS

APPROVED:

GERRY B. ESTRADA, Ph.D.
Vice – Presedent of Academic Affairs



ABSTRACT

Title : **CONNECTIVITY: SOME CHARACTERIZATION OF A GRAPH**

Researchers : **Bendoy, Bryan Rey R.**
Rebuyon, Rustom J.

Degree : **Bachelor of Science in Mathematics**

Institution : **Surigao Del Sur State University**

Adviser : **Ms. Jessa D. Cabatchete**

Date : **November 5, 2018**

This study is an original article inspired from the book of Graph Theory with Applications, authored by J. A. Bondy and U. S. R. Murty. This study is focused on extending the existing 2 – *connected* theorem into 3 – *connected*. Also this study provided a generalization on an existing corollary in connectivity that in a connected graph any two vertices of a graph lie on a common cycle. And thirdly is a characterization of a complete graph.

As to that, the researchers proved in their first theorem which is an extension of a 2 – *connected* graph to 3 – *connected* graph, such that if a graph G is 3 – *connected* then any two vertices of G is also joined by 3 internally – *disjoint paths* connecting any two vertices of G say u and v . The second proposition is a generalization on an existing corollary in connectivity that if G is




APPROVAL SHEET


This thesis entitled "**CONNECTIVITY: SOME CHARACTERIZATION OF A GRAPH**" is exposed and submitted by **BRYAN REY R. BENDOY** and **RUSTOM J. REBUYON** as a requirement for the degree in Bachelor of Science in Mathematics and hereby for approval and acceptance.

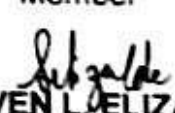

JESSA D. CABATCHETE
Adviser


Approved as a requirement for the Degree of Bachelor of Science in Mathematics by the Oral Examiners panel with the rating of **VERY SATISFACTORY.**


JESSA D. CABATCHETE
Member


LOLITA C. VICENTE
Member


GAMALIEL A. SENOC Ph. D.
Member


STEVEN L. ELIZALDE
Member


ROMEO A. PATAN Ed. D.
Chairman

Accepted in partial fulfillment of the requirements for the degree of
BACHELOR OF SCIENCE IN MATHEMATICS.

NOVEMBER 2018


ROMEO A. PATAN, Ed.D.
Dean, College of Arts and Sciences



ABSTRACT

Title : HERONIAN MEAN LABELING OF GRAPH – AN EXPOSITION

Authors : Claris Joy A. Malinao and Mary-ann P. Leopoldo

Degree : Bachelor of Science in Mathematics

Institution : Surigao del Sur State University

Adviser : Ms. Jessa D. Cabatchete

Date : November 2018

This study is an exposition of the article authored entitled Heronian Mean Labeling of Graph by S.S Sandhya, E. Ebin Raja Merly and S.D Deepa. This was conducted by using some relevant references and materials necessary to accurately and effectively define and illustrate terminologies used. The purpose of this study is to define Heronian Mean Labeling and investigate the Heronian mean labeling of the graphs P_n , C_n , $P_n \odot K_1$, T_n , Q_n . Nevertheless this study focused only on the first part of the article. This study was exposed in Surigao del Sur State University – Main Campus, Rosario, Tandag City during the first semester of the Academic Year 2018-2019

This study introduced the Heronian Mean Labeling of graphs P_n , $P_n \odot K_1$, T_n , Q_n . Based on the findings, it has been concluded that the graph will not be determined using only the given equation it needs to use the labeling function



APPROVAL SHEET

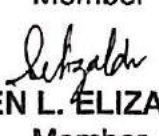
The research entitled “**Heronian Mean Labeling of Graph**” is prepared and submitted by **Claris Joy A. Malinao** and **Mary ann P. Leopoldo** as a requirement for the degree in Bachelor of Science in Mathematics and is hereby recommend for approval and acceptance.

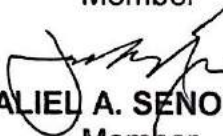

JESSA D. CABATCHETE
Adviser


Approved as a requirement for the degree in Bachelor of Science in Mathematics by the Oral Examination panel with a rating of **PASSED.**


JESSA D. CABATCHETE
Member


LOLITA C. VICENTE
Member


STEVEN L. ELIZALDE
Member


GAMALIEL A. SENOC, Ph. D.
Member


ROMEO A. PATAN, Ed. D.
Chairman

Accepted in partial fulfillment of the requirements for the degree of
BACHELOR OF SCIENCE IN MATHEMATICS.

November 2018


ROMEO A. PATAN, Ed. D.
Dean, College of Arts and Sciences



Title : Generating Topology on Graphs by Operations on Graphs

Researchers : Kenneth B. Rivera and Shella Jane B. Legaspo

Degree : Bachelor of Science in Mathematics

School : Surigao del Sur State University

Adviser : Ms. Jessa D. Cabatchete

Date : October 2018

ABSTRACT

This study is an exposition of an article authored entitled "Generating Topology on Graphs by Operations on Graphs" by M. Shokry, and it focus to create a topological space on the comb graph. Expository research used information gathered from the researched and published journal to identify names of significant figures and definition of terms itel. By use of edge contraction and edge deletion operations on graphs, then getting the neighborhoods of the two fixed vertices on the comb graph the topology will create. Getting the neighborhoods on the graph after contracting edge is called the M-contractible neighborhoods and L-deleting neighborhoods for edge deletion respectively. Determining the set of base on the two neighborhoods and getting the all possible unions on the base is the way to create a topology. It is focus only on two operations of graph namely; edge contraction and edge deletion, since edge contraction and vertex deletion derives a similar results.



ABSTRACT

Title: An Exposition of Graceful Labeling of Some Classes of Spider
Graphs

Researchers: Valencia, Khristine Phrisna C.
Suarez, Laurene Jade S.

Degree: Bachelor of Science in Mathematics

Institution: Surigao Del Sur State University – Main Campus

Adviser: Jessa D. Cabatchete

Date: November 4, 2018

This exposition is based on the article “Graceful Labeling of Some Classes of Spider Graphs with Three Legs Greater Than One” by Jampachon et al. A graceful labeling of a graph is known for its bijection $f : V(T) \rightarrow \{0, 1, 2, \dots, n\}$ such that $\{|f(u) - f(v)| : \{u, v\} \text{ is an edge of } T\} = \{1, 2, \dots, n\}$. The first section of the article was exposed by the researchers and provided detailed examples so that knowing what a graceful graph would be easily comprehended and retained throughout the study. By following