

**3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during the last five year**

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<b>Calendar Year 2020</b>		
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## Preamble

Srinivas Institute of Technology, renowned for its knowledge and innovation, has consistently upheld a dedication to scholarly excellence. As we embark on the journey of evaluating the scholarly accomplishments of our esteemed faculty, it becomes imperative to delve into essential metrics that showcase their academic influence and research expertise. This section aims to provide a comprehensive overview of the scholarly contributions of our faculty members over the past five years. It focuses on the quantification of academic output, including the number of books and chapters in edited volumes/books published, as well as the number of papers published in national and international conference proceedings by each teacher. These metrics serve as indicators of the institution's commitment to research and knowledge dissemination, highlighting the intellectual engagement of our faculty members in their respective fields.

Srinivas Institute of Technology has been at the forefront of fostering knowledge and innovation through a series of remarkable conferences organized across various departments. These conferences, namely ICRICS (International Conference on Recent Innovations in Computer Science), RTIMES (International Conference on Recent Trends in Mechanical Engineering Sciences), ICTIR (International Conference on Technology for Industry 4.0 Revolution), and the International Conference on Sustainable Innovative Strategies for Business Development in the Current Scenario, have been instrumental in enriching the academic landscape for both our esteemed faculty and eager students. These conferences have served as vibrant platforms for the exchange of ideas, the exploration of cutting-edge trends, and the dissemination of knowledge.

Faculty members have had the opportunity to engage with peers and experts from around the world, gaining valuable insights to enhance their teaching and research endeavors. Simultaneously, our students have been exposed to the latest advancements in their respective fields, fostering a culture of innovation and academic growth. This initiative mirrors our steadfast dedication to educational excellence and the advancement of knowledge, underlining our vision to maintain a prominent position in academic accomplishments and research contributions.

# Summary Sheet

Summary of Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five year

Sl. No.	Name	Title of the book/chapters published	Title of the paper	Title of the proceedings of the conference	Name of the conference	National / International	Calendar Year of publication	ISBN number of the proceeding	Affiliating Institute at the time of publication	Name of the publisher
1	Ramakrishna N Hegadde	-	Exergy Analysis of Cotton seed and Simarouba oil blend on a four stroke single cylinder Diesel Engine	National Conference on Emerging Trends, Simulation & Manufacturing- Key components of Make in India Initiative	National Conference on Emerging Trends, Simulation & Manufacturing- Key components of Make in India Initiative	National	2020	-	Srinivas Institute of Technology, Valachil, Mangaluru	M S Ramiah Institute of Technology
2	Deepak Raj P. Y.	-	Autonomous Flight Vehicle incorporating Artificial Intelligence	2020 International Conference on Computational Performance Evaluation (ComPE)	2020 International Conference on Computational Performance Evaluation (ComPE)	International	2020	978-1-7281-6645-2	Srinivas Institute of Technology, Valachil, Mangaluru	IEEE

3	Deepa k Raj P. Y.	-	Post Covid - 19 impacts on aviation and aircraft manufact uring industry	Institute for Scientific and Engineerin g Research	International Conference on Global Economy in buisness Management, Social science and Humanity Perspective (GEMSH - 20)	Intern ationa l	2020	-	Sriniv as Institu te of Techn ology, Valac hil, Mang aluru	ISE R Expl ore
4	Jagad eesh B	-	Exergy Analysis of Cotton seed and Simarou ba oil blend on a four stroke single cylinder Diesel Engine	National Conferenc e on Emerging Trends, Simulation & Manufact uring- Key componen ts of Make in India Initiative	National Conference on Emerging Trends, Simulation & Manufacturin g- Key components of Make in India Initiative”	Natio nal	2020	-	Sriniv as Institu te of Techn ology, Valac hil, Mang aluru	M S Ram aiah Insti tute of Tech nolo gy
5	Caroli ne D’Sou za	-	Kaavi Kalé: The Indigeno us Architect ural Ornamen tation Techniqu e of the Konkan Coast.	Internation al Conferenc e on Traditiona l Building, Architectu re and Urbanism: Architectu re and Communit y	International Conference on Traditional Building, Architecture and Urbanism: Architecture and Community	Intern ationa l	2020	ISS N - 2660 - 5821	Sriniv as Institu te of Techn ology, Valac hil, Mang aluru	Univ ersid ad Polit ecni cia De Mad rid Scho ol of Arhc itect ure (ET

										SA M),
6	Caroline D'Souza	-	Viewing the City of Mangaluru as a Historic Urban Landscape and Understanding its Values.	Time and Evolution	1 <sup>st</sup> International LDE- Heritage Conference on Heritage and the Sustainable Development Goals, Centre for Global Heritage and Sustainable Development , The Netherlands	International	2020	13(15):9 78-94 - 6366 - 356-4	Srinivas Institute of Technology, Valahil, Mangaluru	Building Knowledge, TU Delft
7	Zeeshan HK	-	Biomimetic Architecture: An Innovative Approach to Attain Sustainability	2nd International Conference On "Sustainable Urban Development, Resource Conservation and Food Security"	2nd International Conference On "Sustainable Urban Development , Resource Conservation and Food Security"	International	2020	ISS N:29 59-3921	Srinivas Institute of Technology, Valahil, Mangaluru	Bear y Envi ro Arch itect ure Desi gn Scho ol, Man galo re
8	Zeeshan HK	-	Comparison of Cost of Building Material & Techniques for A Small House in	2nd International Conference On "Sustainable Urban Development, Resource	2nd International Conference On "Sustainable Urban Development , Resource Conservation	International	2020	ISS N:29 59-3921	Srinivas Institute of Technology, Valahil, Mangaluru	Bear y Envi ro Arch itect ure Desi gn Scho

			Malur, Kolar, Karnatak a	Conservati on and Food Security"	and Food Security"					ol, Man galo re
9	Ambi ka G. Mally a	Femin ism and Gende r Disco urse- A Revisi oning	Book Chapter- Culture, P atriarchy amd Religion with Referenc e to Indian Feminis m: Autobiog raphical Musings of Sara Aboobac kar	-	-	Natio nal	2020	978- 81- 269- 3133 -0	Sriniv as Institu te of Techn ology, Valac hil, Mang aluru	Atla ntic Publ isher s and Distr ibut ors Pvt Ltd
10	Shrini vasa Mayy a D	-	An overview of manufac turing culture in micro and small scale industrie s and use of computer assisted knowled ge manage ment in producti	AIP Conferenc e proceedin gs .	eTIME-2019 International Conference on Emerging Trends in Mechanical Engineering	Intern ationa l	2020	978- 0- 7354 - 1995 -7	Sriniv as Institu te of Techn ology, Valac hil, Mang aluru	AIP Publ ishin g

			on process							
11	Shrinivasa Mayyad	-	Compensatory Consumption- An undefined consumption paradox	Proceedings of 7th Asia Pacific International Conference	7th Asia Pacific International Conference on Changing Business Practices in Current Environment	International	2020	978-81-928925-5-9	Srinivas Institute of Technology, Valac hil, Mangaluru	Sydenham Institute of Management Studies
12	Jayaram Thumbe	-	Experimental Investigation On Combustion and Emission Characteristics of Single Cylinder Diesel Engine Modified with Fuel Injector geometry	ICAMES 2K20- Proceeding book	2nd International Conference on Advances in Mechanical Engineering Sciences ICAMES 2K20	International	2020	978-93-89107-80-7	Srinivas Institute of Technology, Valac hil, Mangaluru	P.E.S. College of Engineering (PE SCE), Mandya
13	Sathyaprakash	-	An overview of manufacturing culture in micro and small scale industries	AIP Conference proceedings .	eTIME-2019 International Conference on Emerging Trends in Mechanical Engineering	International	2020	978-0-7354-1995-7	Srinivas Institute of Technology, Valac hil, Mangaluru	AIP Publishing

			s and use of computer assisted knowledge management in production process							
14	Venkatesh Rao S N	-	Experimental Investigation On Combustion and Emission Characteristics of Single Cylinder Diesel Engine Modified with Fuel Injector geometry	Second International Conference in Advances in Mechanical Engineering Sciences	ICAMES 2K20	International	2020	978-93-89107-80-7	Srinivas Institute of Technology, Valachil, Mangaluru	P.E. S. College of Engineering (PE SCE), Mandya
15	Vasudha Bhat P	-	Experimental Investigation On Combustion and Emission Characteristics of Single Cylinder Diesel Engine Modified	Second International Conference in Advances in Mechanical Engineering Sciences	ICAMES 2K20	International	2020	978-93-89107-80-7	Srinivas Institute of Technology, Valachil, Mangaluru	P.E. S. College of Engineering (PE SCE), Mandya

			with Fuel Injector geometry							
16	Share efraju J. Ukku nd	Quant um Mech anics and Quant um Comp utatio n : Pillars of future techn ology	-	-	-	Intern ationa l	2020	978- 62- 0055 - 074- 3	Sriniv as Institu te of Techn ology, Valac hil, Mang aluru	Lap Lam bert
17	Vinay a B. Korad oor	Quant um Mech anics and Quant um Comp utatio n : Pillars of future techn ology	-	-	-	Intern ationa l	2020	978- 62- 0055 - 074- 3	Sriniv as Institu te of Techn ology, Valac hil, Mang aluru	Lap Lam bert
18	Sultha n Mohy uddin	Quant um Mech anics and Quant um Comp	-	-	-	Intern ationa l	2020	978- 62- 0055 - 074- 3	Sriniv as Institu te of Techn ology, Valac hil,	Lap Lam bert

  
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# Exergy Analysis of Cotton seed and Simarouba oil blend on a four stroke single cylinder Diesel engine

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**ABSTRACT**—The decreasing petroleum resources has led to the search for alternative fuels which is renewable and sustainable. Given the bleak energy resources available which could hardly last for another 20- 50 years it is very necessary to find out an alternative liquid fuel like biodiesel to the conventional fuel. In this investigation, an attempt was made to blend cotton seed and Simarouba oils in equal quantity, produced from the seeds of cotton seed and Simarouba respectively. Biodiesel resulting out of cotton seed and Simarouba oil blend was further subjected to esterification and trans-esterification process. Production optimization of biodiesel was done using heterogeneous ( $MgPO_4$ ) as catalyst and the various properties of this blend are evaluated to explore its suitability as an alternate fuel. Characterization and subsequent comparison of various properties with ASTM prescribed standards suggested that the proposed blend B<sub>50-50</sub> is a potential candidate to qualify as an alternate fuel for a CI engine. Further, the exergy analysis based on the performance of C.I engine using equal proportions of Cotton seed and Simarouba oil (B<sub>50-50</sub>) biodiesel, blending with diesel in various blending ratios (B10, B20) has been evaluated.

**Keywords:** Trans-esterification, cotton seed oil, simarouba oil, blend, biodiesel, exergy

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## 1. INTRODUCTION

Petroleum based fuels are fast depleting due to their limited availability coupled with increasing demand. They are also major contributors of air pollutants. To cope up the increasing energy demand, majority of the developing countries import crude oil apart from their indigenous production. This puts extra burden on their home economy. Hence, it is utmost important that the options for substitution of petroleum fuels be explored to control the burden of import bill. There are limited reserves of the fossil fuels and the world has already faced the energy crisis of seventies concerning uncertainties in their supply. Fossil fuels are currently the dominant global source of CO<sub>2</sub> emissions and their combustion is stronger threat to clean environment. Increasing industrialization, growing energy demand, limited reserves of fossil fuels and increasing environmental pollution have jointly necessitating the exploring of some alternative to the conventional liquid fuels, vegetable oils have been considered as appropriate alternatives to the conventional liquid fuels, vegetable oils have been considered as appropriate alternative due to their prevalent fuel properties. It was thought of as feasible option quite earlier. However, despite the technical feasibility, vegetable oils as fuel could not get acceptance, as they were more expensive than petroleum fuels. This led to the retardation in scientific efforts to investigate the further acceptability of vegetable oils as alternate fuels. Later, due to numerous factors as stated

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## Abstract

### Document Sections

- I. Introduction
- II. Methodology
- III. Mathematical model



## Abstract:

The integration of Artificial Intelligence with the aircraft or an Unmanned Ariel Vehicles that could automate the task of manual flight and navigation would be considered a milestone in the field of Aeronautics. The idea of an autonomous flight vehicle isn't novel. It has been cited into various papers decades ago. In the subject of prior art, though, there have been a very few advancement in the development of such technology. The major challenge encountered by the individuals involved in the development of such a system was the integration of multidisciplinary domains specifically with the backgrounds of Computer Science and Aeronautics. The research work will contribute to the advancement in

# Autonomous Flight Vehicle incorporating Artificial Intelligence

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**Abstract** - The integration of Artificial Intelligence with the aircraft or an Unmanned Aerial Vehicles that could automate the task of manual flight and navigation would be considered a milestone in the field of Aeronautics. The idea of an autonomous flight vehicle isn't novel. It has been cited into various papers decades ago. In the subject of prior art, though, there have been a very few advancement in the development of such technology. The major challenge encountered by the individuals involved in the development of such a system was the integration of multidisciplinary domains specifically with the backgrounds of Computer Science and Aeronautics. The research work will contribute to the advancement in the incorporation of Artificial Intelligence to achieve a simulated autonomous flight vehicle.

**Keywords** - autonomous, flight, vehicle, artificial intelligence, AI, microcontroller, flight controller, robotic operating system, ROS, Micro Air Vehicle Link, MAV-Link

## I. INTRODUCTION

Artificial Intelligence is the upcoming technology that simplifies the labor intensive tasks performed by the humans by assisting and automating the intricate processes; also while doing so, it keeps on improving its performance by constantly upgrading its dataset and adapting new and more efficient techniques to reduce the uncertainty, thus applying the principle of Machine Learning.

The research work of Autonomous Flight Vehicle incorporating AI has been developed on the basis of previous work initiating the formulation of algorithms that would help in control and path planning [6]. The algorithms formulated, then should be checked for compatibility with the on-board sensors without the requirement of GPS which can be simulated [4]. The simulated/real time model of the flight vehicle has to create the shortest path to reach the target and avoiding the obstacles on the way. This requires Vision based

navigation with the help of sensing devices such as Cameras or LIDAR [5] and for the avoidance of obstacles while following the original path, Dubins path planning [2], [3] has been implemented. In order to keep track of the path followed by the vehicle, the algorithm for a particle filter [1] must be included. The vehicle is then tested multiple times, and the data from each trial is stored as training dataset. Initially, the performance of the vehicle won't be precise but with the numerous trials conducted and the data being stored, which will create multiple layers of neural networks [8] and hence the performance of the vehicle will improve in all aspects i.e. state estimation, path planning and obstacle avoidance.

The authors of this paper address multiple issues occurring during the development of an autonomous flight vehicle with AI. Firstly, we have developed a flow chart, based on the research of former literature publications and prior art survey, which lays the basic procedure onto the simulation and construction of the flight vehicle. Secondly the paper provides the algorithms used for the development of the Autonomous Flight Vehicle integrated with AI. And finally, the work provides an elaborative knowledge of both the fields of interest i.e. from the flight vehicle prospective and the computing of the microcontrollers and flight controllers thus fulfilling the objective of the research work.

The objective of the research work and the problem that is being addressed in this paper is elaborated in the Section II. In order to achieve the objective, several steps are to be followed. The most important of them is the Flight Vehicle. Section III defines the Mathematical model of the flight vehicle which must be integrated with the Flight Kinematics for the specific type of model that is being used. To integrate the AI system with the flight vehicle, we have developed a hierarchical stepwise procedure as mentioned in Section IV must be followed. To start with the hierarchy, first of all, an environment has to be created where the vehicle is trained multiple times to acquire precise data of the flight and

# Post COVID-19 Impacts on Aviation and Aircraft Manufacturing Industry

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<sup>[1][2]</sup> Department of Aeronautical Engineering, Srinivas Institute of Technology, Mangalore, India

**Abstract**—COVID-19 pandemic has affected a lot of business worldwide. The major one of them is the Aviation industry and the chain of businesses related to it. A lot of studies have been done to predict the effects and demonstrate the likely outcome of the pandemic on Aviation and related sectors. These predictions are based on the previous similar global disasters such as 9/11 terrorist attack, 2008 Global recession, previous pandemics/epidemics such as SARS, MERS, Ebola, etc. and their impacts and recovery of the Industry. This type of pandemic has never been experienced after the globalization. This research focuses on the effects of the pandemic on the industry by factoring in the people's opinion on air travel based on the survey conducted on a diverse set of audience along with the previous similar global impacts and the projections reported by the International agencies such as IATA and ICAO.

**Index Terms**— COVID-19, Air Travel, Aviation, Aircraft Manufacturer, pandemic, IATA

## I. INTRODUCTION

On December 31, 2019 a new strain of Coronavirus called SARS-CoV-2 was identified in Wuhan, China. Soon after that, it was declared an epidemic by the WHO. Travel restrictions were imposed on China and the flights going in and out of China were grounded. Similar situation followed in the neighboring countries. Weeks later, WHO declared a pandemic and the entire world was on lockdown with most of the countries practicing strict travel restrictions. This meant that majority of the passenger flights were grounded. Only the flights carrying the essential cargo were allowed to stay in operation.

As non-essential goods and services had been stopped along with the travel and tourism restrictions, the aviation industry was the hardest hit by this pandemic in this age of globalization. In March of 2020, IATA had reported 38% decline in the air travel in comparison to previous year. Several studies have simulated the recovery period based on the previous global disasters disrupting the air travel. The novel approach adopted for this research is the global survey conducted of 200 people from diverse backgrounds and their opinion to pursue air travel after the pandemic is declared under control by the trusted sources such as WHO and the respective governments and referencing this to the previous studies to predict the effects and recovery of the aviation industry including the aircraft manufacturing, and related other supply chains.

This research was conducted in parallel to the other predicted models of the passenger air traffic during the pandemic and its effects on aviation [1], for which the basis of projections are the previous regional epidemics, global disasters, etc. including the updated reports published by authorized organizations such as IATA and UNWTO. The passenger air traffic is determined based on the travel

restrictions imposed by different countries and other disease control measures taken worldwide [2] [4]. These restrictive measures will affect the airlines across the globe and the employment that is directly or indirectly dependent on it [3]. The closely related industry to aviation is the tourism industry. UNWTO predicted the financial loss of 20-30 % in the end of March 2020 even if the travel restrictions are lifted in July [7]. As this type of situation is novel, there are no previous studies to justify these projections. Although the previous global circumstances can be studied to roughly estimate the effects and recovery. Such incidents include the 9/11 terrorist attack, global financial crisis, SARS and MERS outbreaks. After the 9/11, financially the stocks of the airlines and the aircraft manufacturers dropped drastically. Although, they were back to the previous normal level within two weeks and the companies didn't see any job loss [5] [9]. SARS followed the 9/11 attack, and that had a very minute effect on airline industry. Air Travel had dropped by just 0.4 % during this time on a global scale. While the global financial crisis has seen 4 % drop in air travel [7].

All of these incidents didn't have a significant impact on either the airline industry or the aircraft manufacturing industry. COVID-19 outbreak is much more different and at the time of writing this paper, the world had already experienced some sort of lockdown and strict travel restrictions for about 3 months. The impact of such measures will be huge and the predictions of the future recovery of the airline industry and aircraft manufacturers is much more difficult and complicated. The main driving factor towards the recovery will be the human factor i.e. people's willingness to travel via air and the period after the situation is under control. Hence this survey of 200 people from diverse background and different regions will help in this process.

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**ABSTRACT**—The decreasing petroleum resources has led to the search for alternative fuels which is renewable and sustainable. Given the bleak energy resources available which could hardly last for another 20- 50 years it is very necessary to find out an alternative liquid fuel like biodiesel to the conventional fuel. In this investigation, an attempt was made to blend cotton seed and Simarouba oils in equal quantity, produced from the seeds of cotton seed and Simarouba respectively. Biodiesel resulting out of cotton seed and Simarouba oil blend was further subjected to esterification and trans-esterification process. Production optimization of biodiesel was done using heterogeneous ( $MgPO_4$ ) as catalyst and the various properties of this blend are evaluated to explore its suitability as an alternate fuel. Characterization and subsequent comparison of various properties with ASTM prescribed standards suggested that the proposed blend B<sub>50-50</sub> is a potential candidate to qualify as an alternate fuel for a CI engine. Further, the exergy analysis based on the performance of C.I engine using equal proportions of Cotton seed and Simarouba oil (B<sub>50-50</sub>) biodiesel, blending with diesel in various blending ratios (B10, B20) has been evaluated.

**Keywords:** Trans-esterification, cotton seed oil, simarouba oil, blend, biodiesel, exergy

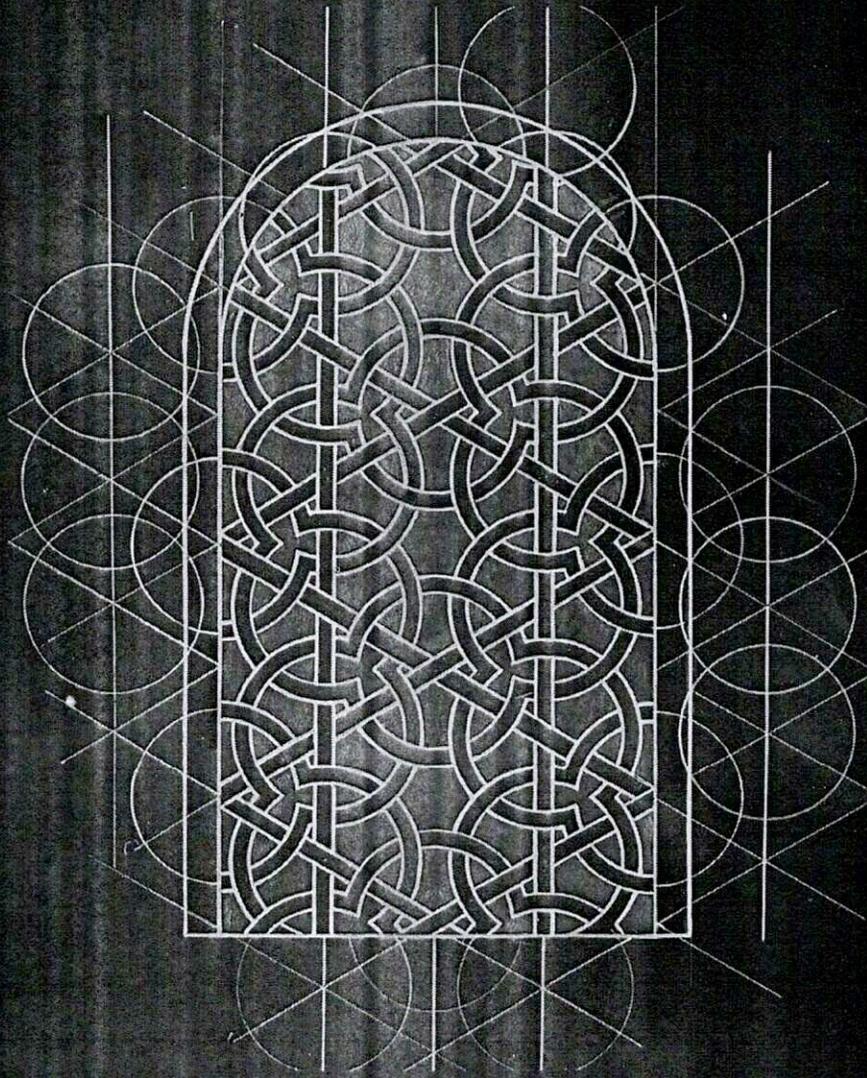
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## 1. INTRODUCTION

Petroleum based fuels are fast depleting due to their limited availability coupled with increasing demand. They are also major contributors of air pollutants. To cope up the increasing energy demand, majority of the developing countries import crude oil apart from their indigenous production. This puts extra burden on their home economy. Hence, it is utmost important that the options for substitution of petroleum fuels be explored to control the burden of import bill. There are limited reserves of the fossil fuels and the world has already faced the energy crisis of seventies concerning uncertainties in their supply. Fossil fuels are currently the dominant global source of CO<sub>2</sub> emissions and their combustion is stronger threat to clean environment. Increasing industrialization, growing energy demand, limited reserves of fossil fuels and increasing environmental pollution have jointly necessitating the exploring of some alternative to the conventional liquid fuels, vegetable oils have been considered as appropriate alternatives to the conventional liquid fuels, vegetable oils have been considered as appropriate alternative due to their prevalent fuel properties. It was thought of as feasible option quite earlier. However, despite the technical feasibility, vegetable oils as fuel could not get acceptance, as they were more expensive than petroleum fuels. This led to the retardation in scientific efforts to investigate the further acceptability of vegetable oils as alternate fuels. Later, due to numerous factors as stated

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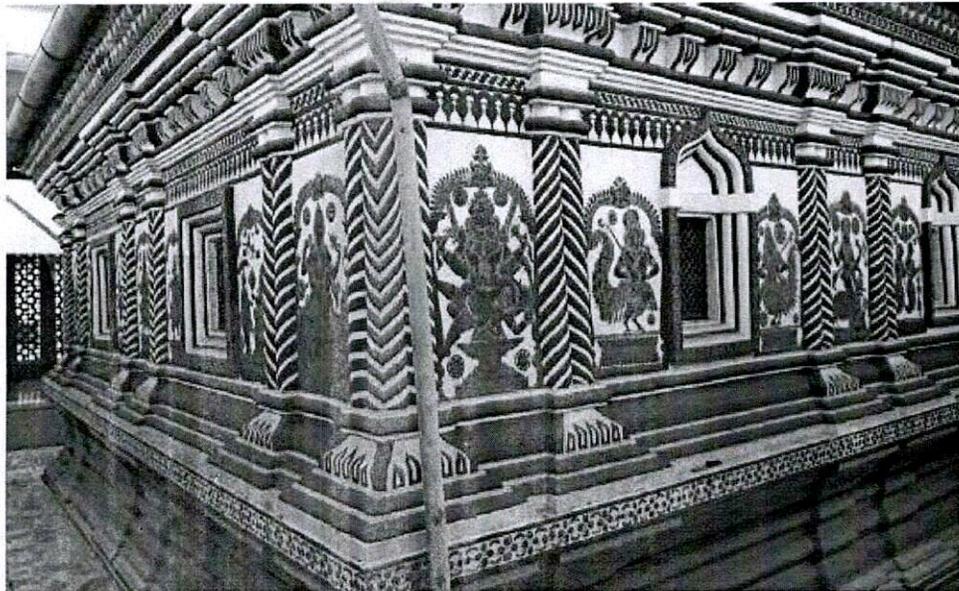
## **Kaavi Kalé: The Indigenous Architectural Ornamentation Technique of the Konkan Coast.**

ISSN - 2660 - 5821, e - ISSN - 2660 - 583X

### **Abstract:**

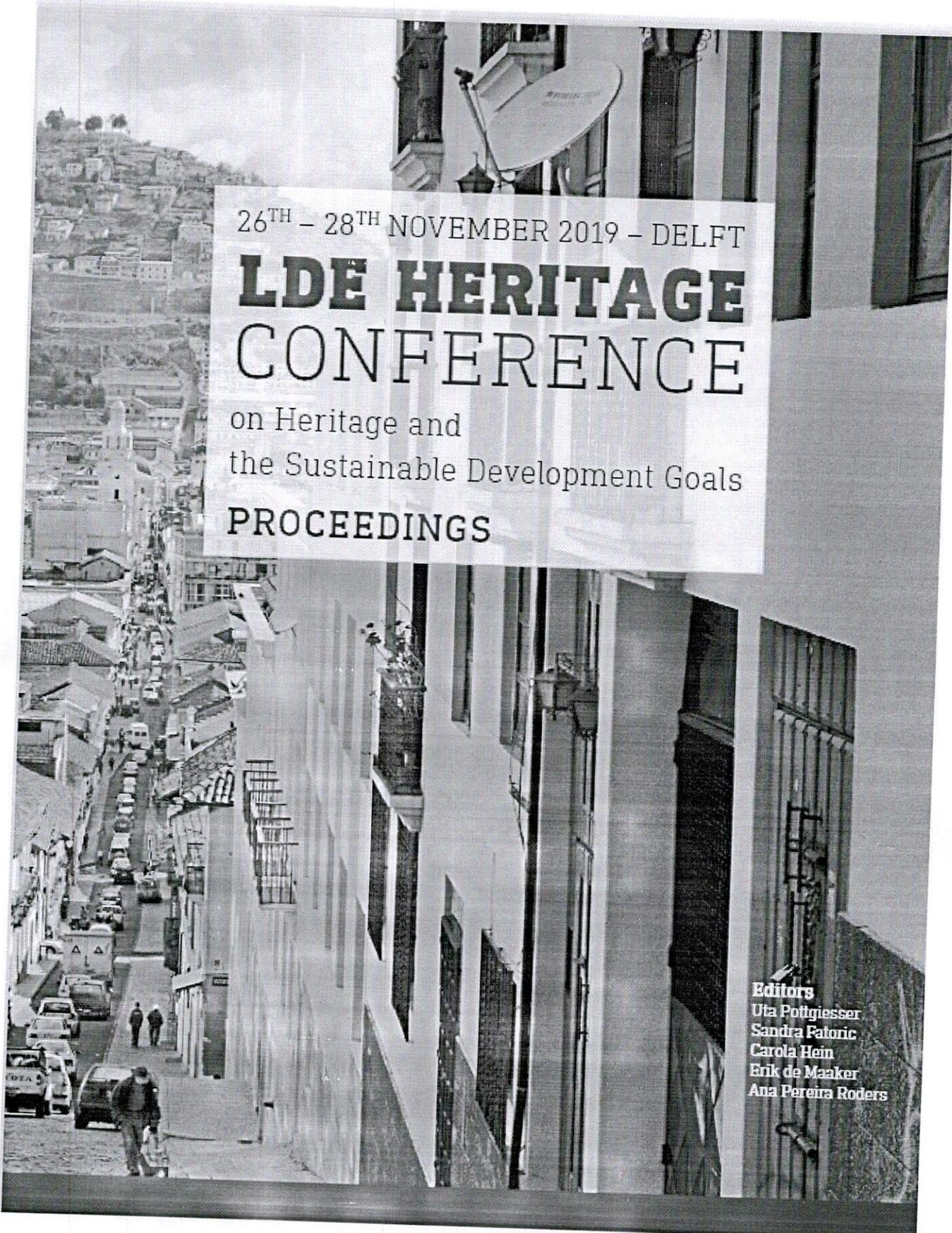
At the foothills of the formidable Western Ghats lays a coastal strip of land which forms a part of the extended coastline found along the West Coast of India. The unique culture of the Konkan coastal landscape lends itself to the building ornamentation style in the form of Kaavi Kalé. Kaavi/Kavé here means 'Red Oxide' and Kalé means 'Art Form'. It is fundamentally an incised lime plaster work executed on an architectural surface that has been finished with red oxide to form elaborate murals and motifs inspired by the unique folklore of Dravidian culture. Although predominantly found in Hindu temples, this secular art form has also been seen in churches, a mosque, Jain temples, folk deity temples and domestic architecture as well. This paper aims at presenting the history of the art form, the execution techniques, a brief iconographic study and probable methods of conservation via accounts of extensive primary surveys and experiments on site and a study of secondary sources.

*Rama Mandir, Honnavar, Karnataka, India. Source: Author*



### **Key Words:**

West Coast of India · Laterite · Incised Plaster Work · Red Oxide · Shell Lime · Sacred Art



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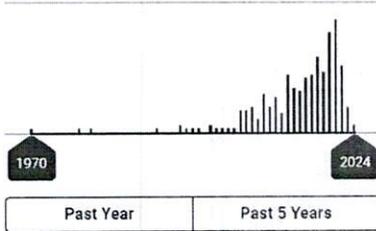
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## Viewing the City of Mangaluru as a Historic Urban Landscape and Understanding its Values.

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Caroline D'Souza

Srinivas Institute of Technology, Department of Architecture, Valachil, Mangaluru, Karnataka, India

### Abstract.

India with its peninsular location subjected to monsoon winds made it an apt location for annual cyclic trade through marine routes leading to the establishment of several ports all along its drawn out coastline. Mangaluru, an active port along the Konkan Coast by the Arabian Sea has observed recorded international trade activities take place from the beginning of the 1st millennia. Traditionally the port town of Mangaluru belongs to the cultural landscape of Tulunadu which rolls off the Western Ghats towards the Arabian Sea in the West, resulting in a complex web of tributaries which feed the farmlands of the landscape. The geographical characteristics and the proximity to various other principal trading and defence ports, garnered the interest of many a contemporary kingdoms over the course of the centuries. The resultant intertwined web of cultures helped the landscape evolve into an intricate urban ecology, unique to this port town. This paper aims at establishing the significance of the historic urban landscape of Mangaluru via study of its natural and historic layering from primary and secondary sources and the values in this layered heterogeneous town that form its core.

**Keywords:** Historic Urban Landscape, Port Town, Tulunadu, Mangaluru.

Caroline D'Souza  
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Srinivas Institute of Technology, Valachil, Arkula Proper, Karnataka 574143  
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## BIOMIMETIC ARCHITECTURE: AN INNOVATIVE APPROACH TO ATTAIN SUSTAINABILITY IN A BUILT ENVIRONMENT

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### Abstract

Architecture has always inserted itself into and interacted with the natural environment. Biomimetics is an applied science that infers motivation for answering human issues through the investigation of common plans from nature. Biomimetics has been used in design for many years. It is the fastest-growing research in the area of architecture. This is because of the innovative and problem-solving approach to achieving sustainability in design. However, the application of biomimetic design to achieve sustainability requires a proper understanding of the relationship between biology and environmental science. The review of achievements using biomimetic architecture could make understanding the relationship between biomimetic ecosystems and the built environment easier and therefore contribute to environmental sustainability. This paper elaborates on the different approaches to attaining sustainability through different literature studies and case-based analytical studies. Finally, the paper summarizes and concludes that these varied approaches have different outcomes in terms of sustainability.

**Keywords:** *Sustainable Architecture, Biomimetic Architecture, Built Environment, Ecosystem.*

### I. Introduction

Biomimetics is an applied science that acquires inspiration for the solution of built environment problems through the study of Flora and Fauna or the whole ecosystem. This is because of both the way that it is a helpful wellspring of conceivable new advancement and on account of the potential it offers to make an increasingly maintainable assembled condition [1]. Biomimetics or the entire ecosystem are copied as a design base. It is the fastest-developing exploration in the field of architecture. The functional information of biomimetics as a design approach is very cagey.

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# Feminism and Gender Discourse

A Revisioning



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## Culture, Patriarchy and Religion with Reference to Indian Feminism: Autobiographical Musings of Sarah Aboobacker

Ambika G. Mallya

The connections between and among women are the most feared, the most problematic, and the most potentially transforming force on the planet.

—Adrienne Rich

The term “feminism” was first coined in 1837, by Charles Fourier, a Utopian Socialist and French philosopher; and “feminist” first appeared in France and the Netherlands in 1872. Depending on historical moment, culture and country, feminists around the world have had different causes and goals. Feminist theory, which emerged from feminist movements, aims to understand the nature of gender inequality by examining women’s social roles and lived experience. The history of the modern Western feminist movements, divided into three “waves” dealt with different aspects of the feminist issues. If the First-wave feminism of the 19th century, focused particularly on women’s suffrage, the second-wave feminism (1960s-80s) with Carol Hanisch’s slogan “The Personal is Political” broadened the debate to include cultural inequalities, gender norms, and the role of women in society. And the third-wave feminism (1990s-2000s) is a continuation

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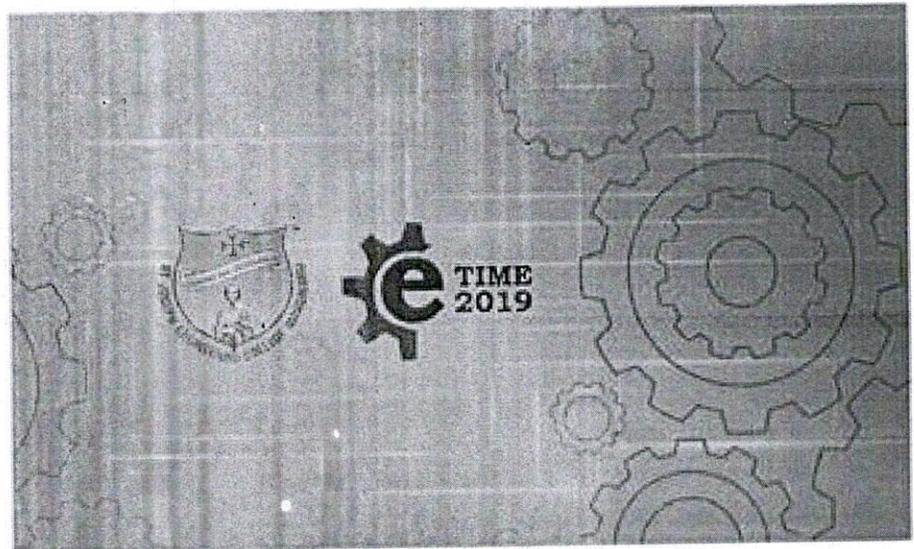
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**Compensatory Consumption- An undefined consumption paradox**  
Krupa Rai, Asst. Professor-Marketing & IB, K J Somaiya Institute of Management Studies & Research,  
Mumbai. E-mail: [krupa.r@somaiya.edu](mailto:krupa.r@somaiya.edu).  
Ajoy S Joseph, Head of the Department-MBA, Srinivas Institute of Technology, Mangalore,  
Shrinivasa Mayya. D, Principal, Srinivas Institute of Technology, Mangalore

**Abstract**

**Introduction:** In many cases, marketing about selling an identity, a lifestyle and ensuring people are kept dissatisfied with what they have, so that they continue to consume more – the newest, the bigger, and the better.

**Purpose:** The present study focuses on the consumption paradox caused due to the constant need for self-expansion through material possession. The objective of the present paper is to understand how the need for self-expansiveness among women leads to indulge in compensatory consumption which is paradoxical in nature.

**Methodology:** It is a primary research. A total of 368 respondents participated in the study.

**Findings:** The study states that the recurring need for acquiring materialistic satisfaction has an unresolved emotional underpinning. Therefore, the consumers' endeavour to shop more is a means to cope with an emotional need which most of the time is not related to material possession.

**Keywords:** *Consumption Paradox, material possession, self-expansion, self-threat*

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## Experimental Investigation on Combustion and Emission Characteristics of Single Cylinder Diesel Engine Modified with Fuel Injector Geometry

**Jayaram Thumbe**, Sriatvas Institute of Technology, Valachil, Mangaluru

**Venkatesh Rao**, Sriatvas Institute of Technology, Valachil, Mangaluru

**Vasudeva Bhat**, Sriatvas Institute of Technology, Valachil, Mangaluru

**Abstract:--**

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**Keywords:**

Emission Characteristics, Fuel injector geometry, Injector nozzle, CI engine combustion.

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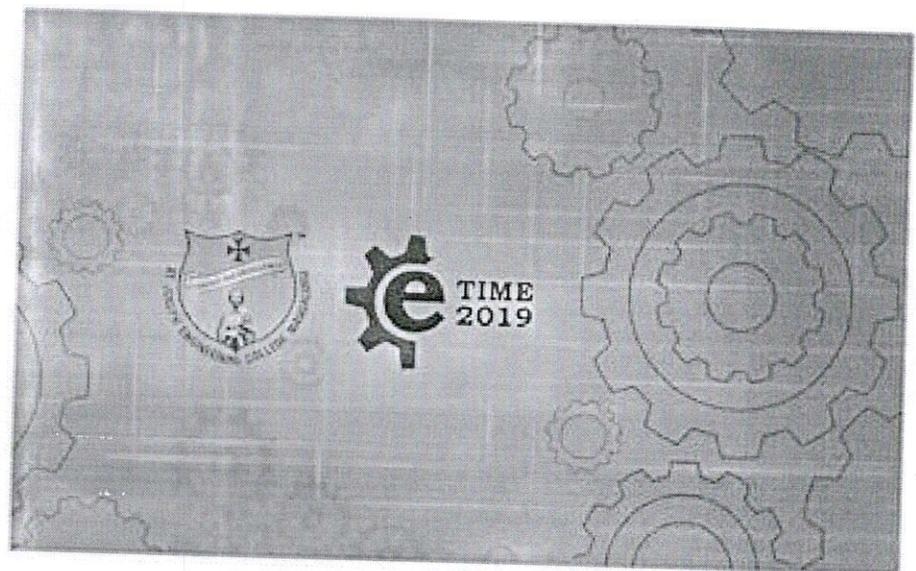
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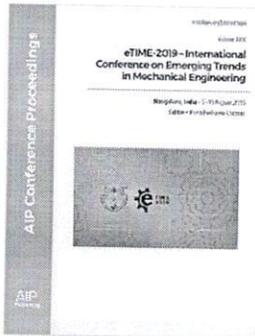
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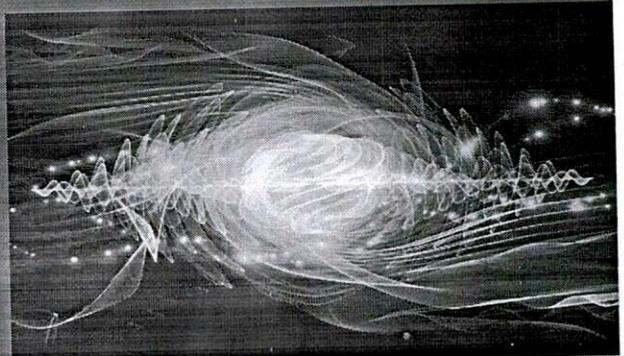
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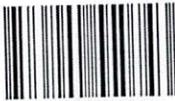


Shareefraza Ukkund  
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Sulthan Mohyuddin

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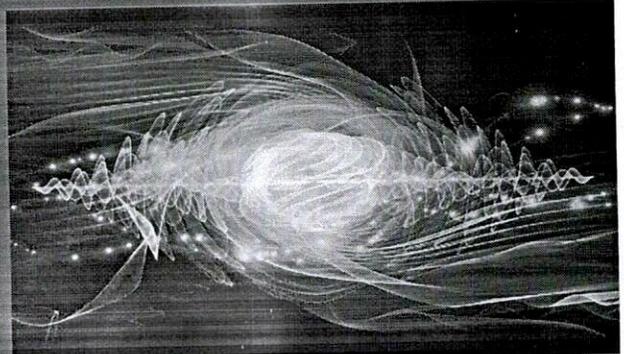


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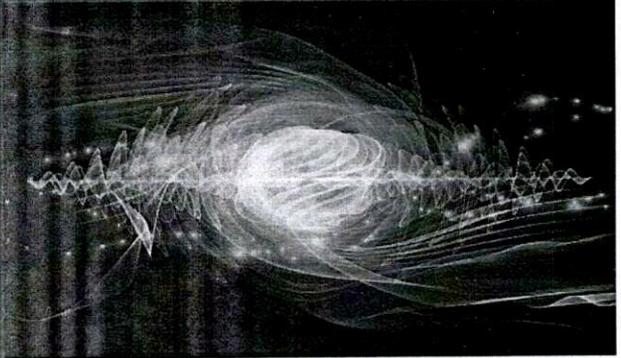


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