

Home (<http://ipindia.nic.in/index.htm>) About Us (<http://ipindia.nic.in/about-us.htm>) Who's Who (<http://ipindia.nic.in/whos-who-page.htm>)
 Policy & Programs (<http://ipindia.nic.in/policy-pages.htm>) Achievements (<http://ipindia.nic.in/achievements-page.htm>)
 RTI (<http://ipindia.nic.in/right-to-information.htm>) Feedback (<https://ipindiaonline.gov.in/feedback>) Sitemap (<http://ipindia.nic.in/itemap.htm>)
 Contact Us (<http://ipindia.nic.in/contact-us.htm>) Help Line (<http://ipindia.nic.in/helpline-page.htm>)

[Skip to Main Content](#)

<http://ipindia.nic.in/index.htm>

<http://ipindia.nic.in/inc>

Patent Search

Invention Title	UNIVERSAL FIXED POINT FINDER: A SYSTEM FOR ANALYZING FIXED POINT THEOREMS FOR GENERALIZED CONTRACTIVE MAPS ACROSS VARI METRIC SPACES
Publication Number	13/2024
Publication Date	29/03/2024
Publication Type	INA
Application Number	202441021516
Application Filing Date	21/03/2024
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	MECHANICAL ENGINEERING
Classification (IPC)	A63F0003000000, A63B0021055000, H03H0021000000, G09B0019020000, G09B0023020000

Inventor

Name	Address	Country	Nat
Dr. K. Rajakumar	Professor, Department of Mathematics, Dhanalakshmi Srinivasan University, Samayapuram, Tiruchirapalli, Tamilnadu, India, Pincode: 621112	India	Indi
Dr. M. Venkatachalapathy	Professor, Department of Mathematics, K. Ramakrishnan College of Engineering, Samayapuram, Tiruchirapalli, Tamilnadu, India, Pincode: 621112	India	Indi
Dr. P. Ramesh Reddy	Assistant Professor & HoD, Department of Mathematics, Madanapalle Institute of Technology & Science, Madanapalle, Annamayya District, Andhra Pradesh, India, Pincode-517325	India	Indi
Dr. Nellore Manoj Kumar	Independent Researcher, Founder & CEO, Infinite-Research Organization, B.O, 15-225, Gollapalem, Venkatagiri, Tirupati District, Andhra Pradesh, India, Pincode: 524132	India	Indi
Dr. K.V.L.N. Acharyulu	Associate Professor, Department of Mathematics, Bapatla Engineering College, Bapatla, Andhra Pradesh, India, Pincode: 522102	India	Indi
Dr. P. Srilatha	Associate Professor, Department of Mathematics, Institute of Aeronautical Engineering (A), Hyderabad, Telangana, India, Pincode: 500043	India	Indi

Applicant

Name	Address	Country	Nat
Dr. K. Rajakumar	Professor, Department of Mathematics, Dhanalakshmi Srinivasan University, Samayapuram, Tiruchirapalli, Tamilnadu, India, Pincode: 621112	India	Indi
Dr. M. Venkatachalapathy	Professor, Department of Mathematics, K. Ramakrishnan College of Engineering, Samayapuram, Tiruchirapalli, Tamilnadu, India, Pincode: 621112	India	Indi
Dr. P. Ramesh Reddy	Assistant Professor & HoD, Department of Mathematics, Madanapalle Institute of Technology & Science, Madanapalle, Annamayya District, Andhra Pradesh, India, Pincode-517325	India	Indi
Dr. Nellore Manoj Kumar	Independent Researcher, Founder & CEO, Infinite-Research Organization, B.O, 15-225, Gollapalem, Venkatagiri, Tirupati District, Andhra Pradesh, India, Pincode: 524132	India	Indi
Dr. K.V.L.N. Acharyulu	Associate Professor, Department of Mathematics, Bapatla Engineering College, Bapatla, Andhra Pradesh, India, Pincode: 522102	India	Indi
Dr. P. Srilatha	Associate Professor, Department of Mathematics, Institute of Aeronautical Engineering (A), Hyderabad, Telangana, India, Pincode: 500043	India	Indi

Abstract:

The Universal Fixed Point Finder represents a groundbreaking system designed to analyze fixed point theorems for generalized contractive maps across diverse metric spaces. Leveraging a combination of theoretical insights and computational methodologies, the system offers a comprehensive suite of tools for exploring the existence, uniqueness, and convergence properties of fixed points in complex mathematical mappings. Its adaptability and versatility enable researchers to investigate fixed point phenomena across an array of metric spaces, from Euclidean geometries to infinite-dimensional Banach spaces. By bridging the gap between theoretical mathematics and practical applications, Universal Fixed Point Finder facilitates interdisciplinary collaborations and unlocks new avenues for innovation in fields such as optimization, control theory, economics, and beyond.

Complete Specification

Description: The proposed system, the Universal Fixed Point Finder, resides within the domain of mathematical analysis and computational mathematics. It aims to explore and analyze fixed point theorems, specifically tailored for generalized contractive maps, within a diverse array of metric spaces. By delving into this field, the system endeavors to uncover the underlying principles governing the existence and uniqueness of fixed points across different metric spaces, providing invaluable insights into the dynamics of these maps. Through its innovative approach, the Universal Fixed Point Finder seeks to bridge theoretical frameworks with practical applications, facilitating advancements in fields such as optimization, control theory, and numerical analysis. Its versatility allows for the examination of fixed point properties in various contexts, fostering a deeper understanding of mathematical structures and their real-world implications. In essence, this system represents a significant contribution to the ongoing exploration of fixed point theorems, offering a unified framework for analysis and discovery in mathematical research and application.

Background of the invention:

The Universal Fixed Point Finder represents a culmination of decades of research and development in the field of mathematical analysis, particularly focusing on fixed point theorems and their applications across diverse metric spaces. The concept of fixed points, originating in the late 19th century with the pioneering work of mathematicians like Henri Poincaré and Felix Hausdorff, has since become a fundamental notion in mathematics, permeating various branches from pure mathematics to applied science and engineering.

At its core, a fixed point of a function refers to a point in its domain that remains unchanged after the application of the function. The exploration of fixed points gained significant momentum with Banach's Fixed Point Theorem in the early 20th century, which provided a powerful tool for proving the existence and uniqueness of fixed points in complete metric spaces for certain classes of contraction mappings. This seminal result laid the groundwork for subsequent developments in the field, sparking a

[View Application Status](#)


Terms & conditions (<http://ipindia.gov.in/terms-conditions.htm>) Privacy Policy (<http://ipindia.gov.in/privacy-policy.htm>)

Copyright (<http://ipindia.gov.in/copyright.htm>) Hyperlinking Policy (<http://ipindia.gov.in/hyperlinking-policy.htm>)

Accessibility (<http://ipindia.gov.in/accessibility.htm>) Archive (<http://ipindia.gov.in/archive.htm>) Contact Us (<http://ipindia.gov.in/contact-us.htm>)

Help (<http://ipindia.gov.in/help.htm>)

Content Owned, updated and maintained by Intellectual Property India, All Rights Reserved.

Page last updated on: 26/06/2019