

THE 28TH INTERNATIONAL CONFERENCE OF
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ABSTRACT BOOKLET

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Yilmaz SIMSEK & Mustafa ALKAN

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About The Jangjeon Mathematical Society (JMS)

The Jangjeon Mathematical Society (JMS), born in historic Hapcheon, seeks to carry on Hapcheon's proud tradition of excellent scholarship coupled with unquestionable moral fidelity. Loyal to its Hapcheon heritage, JMS strives to maintain individual excellence, faithfulness to responsibility, and development of talents and abilities while adhering to core values of contributing to world peace and prosperity.

JMS was founded in 1996 by Doctor Taekyun Kim to fulfill the aforementioned values through free discussion and cooperation amongst voluntarily participating scholars motivated by a common concern for the general welfare of mankind. This ideal of free and open discussion is mirrored by societys name, Jangjeon, which rendered in pure Korean, meaning Geul-Baat, the place of studies. With this significant symbolism in mind, Dr. Kim selected his birthplace, Jangjeon, as the title of this society. Since ancient times, Hapcheon has served as the training round of many scholars who carried on the teachings of the great Korean scholars, Namyoung Jo Sik, and were renowned for their utmost moral character and honor. The Hapcheon tradition of excellence may still be seen in its profound influence on many modern scholars. The geographical attributes of Hapcheon serve as fitting symbols of its metaphysical properties, The Hwang River, flowing serenely past suggests a steadfastness of virtue, unshaken by secular concerns, infusing energy into all living things. Nearby stands the towering Hwang-mae Mountain whose sheer slopes represent the unwavering fidelity of Hapcheon's scholars. There are many great scholars who are the members of JMS such as Dr. Seog-Hoon Rim (Managing Editor, Kyungpook University), Dr. Hari M. Srivastava (Editor-in-Chief and Past President of JMS; University of Victoria, Canada), Dr. Alexander Shtern (Assistant Chief-in-Editors, Moscow State University), Dr. Krassimir Atanassov (Editor-in-Chief, Bulgarian Academy), Dr. Lee Chae Jang (Assistant-Managing Editor, Kunkook University), Dr. Hongkyung Pak (Adjustor, Daegu Haany University), Dr. Taekyun Kim (Founding Editor) etc. The 28th Congress of The Jangjeon Mathematical Society will be held at Sherwood Club Kemer Hotel, Antalya -TURKEY. In conclusion, we are really appreciative of participants in The 28th Congress of The Jangjeon Mathematical Society and do hope that all participants, understanding the meaning of Jangjeon, enjoy this conference and work together for the development of world.

We hope that all participants have free and active Jangjeon meaning "Geul-baat" (place of studies) and meaningful discussions with other participants throughout the conference. Organising Committees of the of the 28th International Conference of The Jangjeon Mathematical Society (ICJMS2015).

FOREWORD

Dear distinguish participants of the 28th International Conference of The Jangjeon Mathematical Society (ICJMS2015). On behalf of the Scientific and Organising Committees, I would like to welcome you all to Antalya, pretty city, for ICJMS2015 conference. It is my proud privilege to extend my deepest gratitude best wishes for the 28th ICJMS2015 conference which is organized by Akdeniz University Mathematics Department at Sherwood Club Kemer Hotel, ANTALYA-TURKEY during 15-19 May 2015. Firstly I am going to give a few words about historic and pretty spectacular Antalya city, which was first settled about the 200 BC by the Attalid Dynasty of Pergamon. After that, it was subdued by the Romans, which rule saw Antalya thrive, including the construction of several new monuments. These are the Hadrian's Gate which is given in conference poster and also in the cover page of Abstract Book. The city has changed hands several times, including to the Byzantine Empire in 1207 and an expanding Ottoman Empire in 1391. Ottoman rule brought relative peace and stability for the next five-hundred years (see for detail http://en.wikipedia.org/wiki/Antalya). I hope you will spend nice time at not only touristic city, but also historical city.

I also give a few words about Akdeniz University and Mathematics Department. Akdeniz University was founded in 1982, and incorporated the higher education institutions already established in Antalya, Burdur and Isparta. Akdeniz University is now taking rapid and determined steps towards becoming a world class university which is capable of making a significant contribution to the world of science with its current complement of 17 Faculties, 7 Institutes, 5 Schools, 13 Vocational Schools, and 39 Research and Application Centres (see for detail http://en.akdeniz.edu.tr/en/about-3/history).

Department of Mathematics was founded in 1990. Now there are 8 Professor, 4 Associated Professor, 7 Assistant Professor and 2 Lecturer, 4 Doctor, 6 assistant. Our department has also PhD and Master program.

Mathematics, which is the oldest of Science, has contributed fundamentally to the development of our world civilizations. Therefore, we can enter into the science and technology center using the mathematics and its branches. So Mathematics and its branches create the possibility of bridgework and communication between the Natural Sciences and the Engineering Sciences as well as the Economic and also Social Science. The aim of this conference is to bring to the fore the best of research and applications that will help our world humanity and society. Due to the valuable idea of the Jangjeon Mathematical Society, this conference welcomes speakers whose talk contents are mainly related to the following two subjects:

Pure and Computational and Applied Mathematics Statistics

Mathematical Physics

(related to p-adic Analysis, Umbral Algebra and Their Applications)

Analysis

Algebra
Linear and Multilinear Algebra
Clifford Algebras and Applications
Real and Complex Functions
Orthogonal Polynomials
Special numbers and Functions
Fractional Calculus and q-theory
Number theory and Combinatorics
Approximation Theory and Optimization
Integral Transformations, Equations and Operational Calculus
Partial Differential Equations
Geometry and Its Applications
Numerical Methods and Algorithms
Probability and Statistics and Their Applications
Scientific Computation
Mathematical Methods in Physics and in Engineering
Mathematical Geosciences

I summarize my speech, this conference has provided a novel opportunity for our distinguish participants to meet and share their scientific works and friendships in the above areas. I am delighted to note that all participants have free and active involvement and meaningful discussion with other participants during the conference. It is my great pleasure to thank main members of Jangjeon Mathematical Society, because they gave me this chance to organize this conference in Antalya again. It is my great pleasure to thank local organizing committee especially, Assoc. Prof. Dr. Mustafa ALKAN, Assoc. Prof. Dr. Melih GUNAY. It is my great pleasure to thank Administrators of Akdeniz University. And also I send my thanks to Prof.Dr. Abdullah Aziz ERGIN (Vice-Rector), Prof. Dr. Huseyin SUMBUL (Dean of faculty of Science), Prof.Dr. Veli KURT and the other members. Finally, I also send my thanks to Ömer TURNA (Sales manager of Turkish Airlines), Muhittin BOCEK (Mayor of municipality of Konyaaltı) and Ugur SERT (Manager of Karayol Mühendislik).

Consequently, I send my thanks to all distinguish invited speakers, and all participants. On behalf of the Scientific and Organising Committees

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The Similarity Invariants of Non-lightlike Curves in the Minkowski 3-space

Hakan Şimşek, Mustafa Özdemir

Abstract

In this paper, we firstly introduce the group of similarity transformations in the Minkowski-3 space. We describe geometric invariants of a non-lightlike curve according to the group of similarity transformations of the Minkowski 3-space. We show extension of fundamental theorem for non-lightlike curves under the group of similarity of the Minkowski 3-space. Besides, by using the similarity invariants, we construct the non-lightlike similar curves by means of the pseudo-spherical curves on S_1^2 and $H^2(-1)$.

2010 Mathematics Subject Classifications : 53A35, 53A55, 53B30.

Keywords : Lorentzian Similarity Geometry, Similarity invariants, Similarity Transformation, Non-lightlike Similar Curves.

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Matrices Over Hyperbolic Split Quaternions

Melek Erdoğdu, Mustafa Özdemir

Abstract

In this paper, we present some important properties of matrices over hyperbolic split quaternions. We examine hyperbolic split quaternion matrices by their split quaternion matrix representation.

2010 Mathematics Subject Classifications : 20G20, 11R52

Keywords :Split Quaternion, Hyperbolic Split Quaternion.

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