ANALYTICAL ALGEBICAL VIBRANT ANALYSIS

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Abstract

An overview is presented on the current status of main mathematical computation methods for the multiloop corrections to single-scale observables in quantum field theory and the associated mathematical number and function spaces and algebras. At present, massless single-scale quantities can be calculated analytically in QCD to 4-loop order and single mass and double mass quantities to 3-loop order, while zero-scale quantities have been calculated to 5-loop order. The precision requirements of the planned measurements, particularly at the FCC-ee, form important challenges to theory, and will need important extensions of the presently known methods. Researchers often deal with the synthesis of the kinematic structure of a robotic manipulator to determine the optimal manipulator for a given task. This approach can lower the cost of the manipulator and allow it to achieve poses that might be unreachable by universal manipulators in an existing constrained environment. Numerical methods are broadly used to find the optimum design but they often require an estimated initial kinematic structure as input, especially if local-optimum-search algorithms are used. This paper presents four different algorithms for such an estimation using the standard Denavit-Hartenberg convention. Two of the algorithms are able to reach a given position and the other two can reach both position and orientation using Bezier splines approximation and vector algebra. The results are demonstrated with three chosen example poses and are evaluated by measuring manipulability and the total link length of the final kinematic structures.

I. INTRODUCTION

The results of the micro-ALGEBRA analyses indicate that the investigated objects could be categorized in two main groups: The objects of the 1st group (11 objects) are made of copper-silver alloys in which copper content varies within 30-60 wt\% while silver content varies within 25-40 wt\%.

Examination of trace elements contents in the investigated objects reveal that objects with the base of copper-silver alloys (i.e., objects of the 1st group) were all fabricated from the same raw materials, while objects with the base of nearly pure copper (i.e., objects of the 2nd group) were fabricated from different mineral materials with either no arsenic content or with varying arsenic contents of more than 1.5 wt\%.**(Tripathi et al., 2020)**

Three different cases were investigated: (i) qualitative analysis of 2D spectral maps having algebra spectra with a high number of counts per algebra in the full range of measured X-ray energies collected in ALGEBRA + XRF mode excitation, (ii) qualitative and semi-quantitative analysis of 2D spectral maps having algebra spectra with medium to low counts per algebra collected in ALGEBRA mode, and (iii) qualitative and quantitative analysis of 2D spectral maps having medium to low statistics per algebra obtained in ALGEBRA mode. We demonstrated that high statistics spectra that would contain enough information for qualitative and/or quantitative analysis of major, minor and even trace elements can be deduced using multivariate analysis methods even from low-statistics individual algebra spectra collected during 2D scanning of objects under investigation.**(Jisha & Monoth, 2020)**

However, the cellular iron pathways and the mechanisms of the pathogenic role of iron in PD are not well understood, mainly due to the lack of quantitative analytical techniques for iron quantification with subcellular resolution. In the control (Co)**(Chanteraud et al., 2021)** SNc, oligodendroglial and astroglial cells hold the highest cellular iron concentration whereas in PD, the iron concentration was increased in most cell types in the substantia nigra except for astroglial cells and ferritin-positive oligodendroglial cells**.(Afanasiev et al., 2021)**

The research included 770 authors in 1999, organization 258, countries 44. The paper focuses on gaps between above data.

II. DATA AND METHODS

The data was taken on 10 October 2021. The source used was Web of Science. The time period was set between 1999- present. The research was based on Algebra so we searched and kept the title" Algebra Technique".
Based on the research the topic was very important to be researched though very less research was done on actual topic. The number of authors 268, countries 81, 4 organization and 0 **citations.**
After the evaluation of the data, we came to know the pie could be new research by today and have been explored a lot in the field if it was actually researched on genie basis that is few authors have worked on single research.

The research basically analyzed the research on different parameter as laid in research and discussion

III. RESEARCH AND DISCUSSION

A. AUTHORS AND CO-AUTHORS

The authors included in the year 1999 with most publication were przyvylowiz, wiz and caligaro,t . The least contribution was by the authors aobi, y and arta,s. The most interacted authors had contributed almost 21 documents which is 23.987% of the total research in 1999. The citations were being the maximum for the authors were 194 i.e 5.667% of the total (456). The authors included in year 2021 was 2.941% of the total authors are actually researching on the topic. For the lowest fraction it 17.64% the authors were least involved.
The gap here we analyzed that only 2-3% authors actually took interest on major publication , In 2021 citation till no are 0.
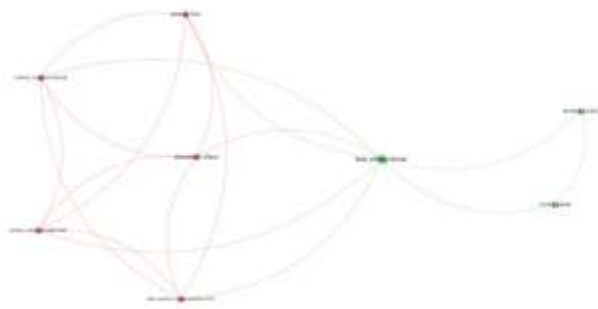

Fig1: Year 1999

Fig2: Year 2021

B. COUNTRIES

The countries involved in the research was Belgium, France, Norway and Oman , Germany 2021 and 1999 were top publishers**.** The research done by these countries in 1999 were approx. 45.9876% and 20.00% in 2021.
The total link strength was 1999 in 89.00% and lowest in 2021 was 80.00% with the least interested and collaborated ones country. The country didn't want to collab with another country became the major drawbacks for its involvement in research on algebra.
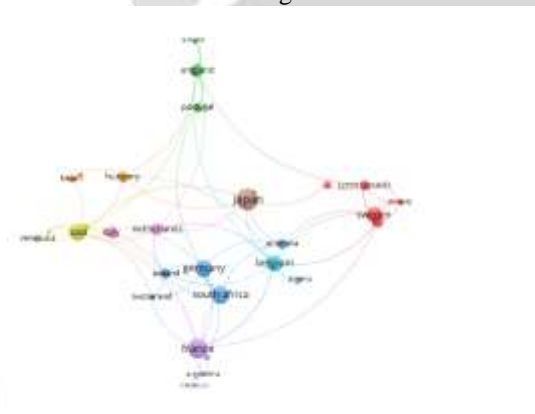

Fig1: Year 1999

Fig2: Year 2021

C. Organisation and Citation:

The organization involved in 1999 were natl accelerator having total 76.8% documents. The rind inst technol have 10.98% of the total publication**.** Only 11 organization collaborated for research. Only 4 organization 0.98% of total involved actually researched for this.
The organization didn't come up for research in 2021 till now as least interactive authors percentage is 100% while comparing with the data of 1999 it was around 56%**.**
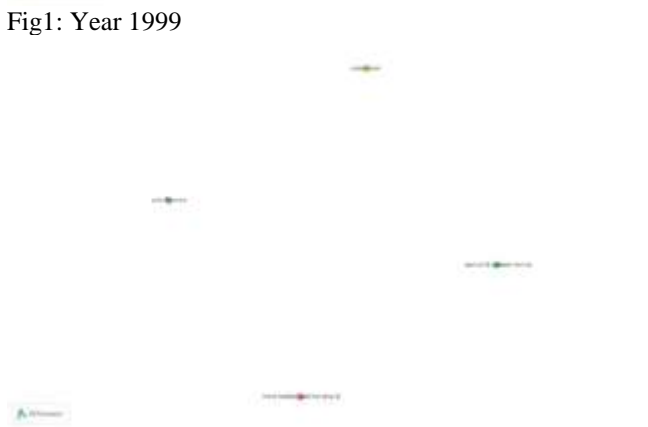
Fig1: Year 1999

Fig2: Year 2021

The citations were around 56% -- 246 citations for particular documents. The citations for the sources were around 45% in 1999. The citation for documents in 2021 were 0.98% till now and for sources in 2021 till now no citations. So, this year the sources are contributing the least.

Fig 1: Year 1999

IV. CONCLUSION

1. The authors involved in 1999 were 771 i.e 20.36% of all authors. The authors in 2021 were 2.941%
2. The countries involved in 2021 were 44 i.e 67% of all authors. The countries in 2021 were 20%.
3. The organizations involved in 1999 were 11 i.e 76.8% while in 2021 no organization was included.
4. The citation was around 56% in 1999 and in 2021 0.98%.
5. The gaps included were: a) The authors were not ready to collaborate.
   b) The topic of research i.e Algebra was concentrated the least.
   c) No involvement of Organization in year 2021.
   d) The countries involvement also got reduced by the year 2021 as in 1999.

V. References

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