|  |  |  |  |
| --- | --- | --- | --- |
| **Title:** | Comparative Study of Different Root Location Methods Using MATLAB Programs | | |
| **Author(s) Name:** | Muhibul Haque Bhuyan | | |
| **Contact Email(s):** | muhibulhb@aiub.edu | | |
| **Published Journal Name:** | Proceedings of the 16th Mathematics Conference | | |
| **Type of Publication:** | Conference Proceedings | | |
| **Volume:** | - | Issue | - |
| **Publisher:** | Bangladesh Mathematical Society | | |
| **Publication Date:** | 17 December 2009 | | |
| **ISSN:** |  | | |
| **DOI:** | - | | |
| **URL:** | https://www.researchgate.net/publication/285392960\_Comparative\_Study\_of\_Different\_Root\_Location\_Methods\_Using\_MATLAB\_Program | | |
| **Other Related Info.:** | Place: BUET, organized by the Department of Mathematics, Bangladesh University of Engineering and Technology (BUET) and Bangladesh Mathematical Society, Dhaka, Bangladesh, 17-19 December 2009, p. 34. | | |
|  | | | |

|  |  |
| --- | --- |
| **Abstract:** |  |
| Abstract— In this paper, different numerical methods for root location have been studied by developing MATLAB programs. A mathematical problem from the electrical engineering field has been selected to find the root of a function. Roots are found for the same data set so that different root location methods can be compared. Comparison is shown in terms of the number of iterations required, execution time needed, percentage of approximate errors, and accuracy of the results. It has been observed that among these methods, the Newton-Raphson method is faster and produces more accurate results. This type of problem-solving by using MATLAB programs from the engineering discipline helps the students to enhance their skills in both theory and practice in the numerical analysis of different problems in their respective fields. | |