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Minimax Approximations and the Remez Algorithm The directory libs/math/minimax contains a command line driven program for the generation of minimax approximations using the Remez algorithm. Both polynomial and rational approximations are supported, although the latter are tricky to converge: it is not uncommon for convergence of rational forms to fail.
RATIONAL MINIMAX APPROXIMATION VIA ADAPTIVE
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Barycentric-Remez algorithms for best polynomial ...

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DSP Lecture 17: FIR filter design (Chebyshev)

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Remez: Key to Understanding Several Puzzles

34b: Numerical Algorithms I - Richard Buckland UNSW Runge function Optimality and Approximation with Policy Gradient Methods in Markov Decision Processes Lec-21 Computer Aided Design of Filters Zap Q-learning with Nonlinear Function Approximation *ADA Lecture 12: Approximation Algorithms (18/12/27)* **Session 8A - Constant Girth Approximation for Directed Graphs in Subquadratic Time** Minimax Approximation And Remez Algorithm
Minimax Approximation and Remez Algorithm Sherif A. Tawfik July 24, 2005 Minimax approximation seeks the polynomial of degreenthat approxi- mates the given function in the given interval such that the absolute maxi- mum error is minimized. The error is defined here as the difference between the function and the polynomial.

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Minimax Approximations and the Remez Algorithm - 1.49.0
The second algorithm of Remez can be used to compute the minimax approximation to a function, f(x), by a linear combination of functions, CQi(X>)"o) which form a Chebyshev system The only restriction on the function to be approximated is that it be continuous

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Remez algorithm. The theory on minimax approximation presented in this thesis applies not only to minimax approximation by polynomials of some xed degree, but is more general and considers approximation by generalized polynomials. A generalized polynomial pis a function of the form p(x) = Xn i=1 c ig i(x); where c 1;:::;c n are scalars and g 1;:::;g

Finding best minimax approximations with the Remez algorithm
this concludes Minimax approximation. However the task of constructing a minimax polynomial is not trivial. For a given function f, Remez algorithm is an e cient iterative algorithm that constructs a minimax polynomial However as simple as they are, polynomials on their own don’t capture all the classes of functions we want to approximate[10].

FUNCTION APPROXIMATION AND THE REMEZ ALGORITHM
A minimax approximation algorithm (or L∞ approximation or uniform approximation) is a method to find an approximation of a mathematical function that minimizes maximum error. For example, given a function. f. {\displaystyle f} defined on the interval. [a , b] {\displaystyle [a,b]} and a degree bound. n.

Minimax approximation algorithm - Wikipedia
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THE REMEZ ALGORITHM FOR TRIGONOMETRIC APPROXIMATION OF ...
The Remez algorithm or Remez exchange algorithm, published by Evgeny Yakovlevich Remez in 1934, is an iterative algorithm used to find simple approximations to functions, specifically, approximations by functions in a Chebyshev space that are the best in the uniform norm L∞ sense. A typical example of a Chebyshev space is the subspace of Chebyshev polynomials of order n in the space of real continuous functions on an interval, C. The polynomial of best approximation within a given subspace ...

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Nevertheless, implementations of the ra- tional Remez algorithm are available in some mathematical software packages: the Mathematica MiniMaxApproximation function, the Maple numapprox[minimax] rou- tine and the MATLAB Chebfun remez code. The Boost C++ libraries also contain an implementation.

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Remez Algorithm - File Exchange - MATLAB Central
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