divided differences: history

Newton: Newton form (see Fraser27, KowalewskiA17))

Ampere26: fonctions interpolaires

Cauchy40: refinement formula for first-order dvd's

Morgan42: first use of 'divided difference'?

Genocchi69: Genocchi-Hermite formula

Frobenius71: representation by contour integral; definition and convergence analysis of Newton form with infinitely many centers, hence Hermite interpolation as a very special case.

Hermite78: Hermite interpolation, Genocchi-Hermite formula.

Schwarz81: mean-value formula

Stieltjes82: limit of $\Delta(t_0,\ldots,t_n)f$ as $t_0,\ldots,t_n \to a$.

Hopf26: characterization of functions whose n-th divided differences are bounded by some constant (e.g., above, below, above and below); also $\Delta(t_0,\ldots,t_n) - \Delta(s_0,\ldots,s_n) = \sum_{j=0}^{n}(t_j - s_j)\Delta(t_0,\ldots,t_j,s_j,\ldots,s_n)$; etc.

Popoviciu33: Leibniz rule; general refinement formula; n-convexity.

Chakalov38: explicit formula for $\Delta(t_0,\ldots,t_n)$ using the partial fraction expansion of $1/\prod_{j=0}^{n}(\cdot - t_j)$.

Opitz64: $(\Delta(t_i,\ldots,t_j)f : i,j = 1,\ldots,n) = f(\Delta(t_i,\ldots,t_j)()^1 : i,j = 1,\ldots,n)$.

24nov04