Diamond- α tangent lines of time scales parametrized regular curves

C. DINU

ABSTRACT.

We introduce the notion of Δ -regular, ∇ -regular and \Diamond_{α} -regular curve, as a generalization of the "classical" regular curve. For each type of curve, we discuss the concept of tangent line on time scales.

REFERENCES

- [1] Agarwal, R. P. and Bohner, M., Basic calculus on time scales and some of its applications, Results Math., 35 (1-2) (1999), 3-22
- [2] Bohner, M. and Guseinov, G., Partial differentiation on time scales, Dynam. Systems Appl., 13 (3-4) (2004), 351–379
- [3] Bohner, M. and Guseinov, G. Sh., Line integrals and Green's formula on time scales, J. Math. Anal. Appl., 326 (2) (2007), 1124-1141
- [4] Bohner, M. and Peterson, A., Dynamic Equations on Time Scales. An Introduction with Applications, Birkhäuser Boston, Inc., Boston, MA, 2001
- [5] Dinu, C., Hermite-Hadamard inequality on time scales, J. Inequal. Appl., 2008, Art. ID 287947, (2008), 24 pp.
- [6] Guseinov, G. Sh. and Özyilmaz, E., Tangent lines of generalized regular curves parametrized by time scales, Turkish J. Math., 25 (4) (2001), 553–562
- [7] Hilger, S., Analysis on measure chains a unified approach to continuous and discrete calculus, Results Math., 35 (1-2) (1990), 18–56
- [8] Rogers, J. W., Jr. and Sheng, Q., Notes on the diamond- α dynamic derivative on time scales, J. Math. Anal. Appl., 326 (1) (2007), 228–241
- [9] Sheng, Q., Fadag, M., Henderson J. and Davis, J. M., An exploration of combined dynamic derivatives on time scales and their applications, Nonlinear Anal. Real World Appl., 7 (3) (2006), 395–413

UNIVERSITY OF CRAIOVA
DEPARTMENT OF MATHEMATICS
AL. I. CUZA 13, 200585 CRAIOVA, ROMANIA
E-mail address: c.dinu@yahoo.com