

REFERENCES

- [1] Balbi, J. H. , *Généralisation de la méthode de la moyenne*. Int. J. Non-linear, Mech., 8, 313-324, (1973).
- [2] Bogoliubov, N. N. and Mitropolsky, Y. S. , *Asymptotic Methods in the theory of non-linear oscillations*. Gordon and Breach, New York, 1961.
- [3] Bolotin, V. V. , *The dynamic stability of elastic systems*. Holden-Day, Inc. , San Francisco, 1964.
- [4] Cartwright, M. L. and Littlewood, J. E. , *On the non-linear differential equations of second order*. Ann. Math., 48, 472-494, (1947).
- [5] Cesari, L. , *Existence theorems for periodic solutions of non-linear lipschitzian differential equations*. Contribution to the Theory of Non-linear Oscillations, 5, 115-175, (1960).
- [6] Cesari, L. and Hale, J. K. , *A new sufficient condition for periodic solutions of weakly non-linear differential systems*. Proc. Am., Math. Soc., 8, 757-764, (1957).
- [7] Choy-Tak-Taam, *On the solutions of non-linear differential equation* I. J. of Math. and Mech., 6, 287-300, (1957).
- [8] Coddington, E. A. and Levinson, N. , *Theory of ordinary differential equations*. McGraw-Hill Book Company, New York, 1955.
- [9] Cole, F. T., *Nonlinear transformations in action angle variable*. " Tech. Note TM—179, National accelerator laboratory" Batavia I 11., 287-300, U. S. A., (1969).
- [10] Cunningham, W. J. , *Introduction to non-linear analysis*. McGraw-Hill, New-York, 1958.
- [11] Elnaggar, A. M. , (i)- *Harmonic and sub-harmonic oscillations as solutions to physical systems governed by quasi-linear differential equations $\ddot{x} + k_1x + k_2f(t)x^n = 0$* . Acad. J. of Sciences, 3, 7-17, (1983).
(ii)- *Existence and determination of super-harmonic synchronization*

as solution of a quasi-linear physical system. Indian Journal of Pure and Applied Mathematics 16(2), 139-142, (1985).

- [12] Elnaggar, A. M. and Alhanadwah, A. A. , *Parametric excitation of sub-harmonic oscillations.* Int. J. of Theoretical Physics, 36(8), 1921-1940, (1997).
- [13] Elnaggar, A. M. and El-Bassiouny, A. F. , *Principal parametric resonances of two-degree of freedom systems with quadratic and cubic non- linearities.* Bulletin of the Faculty of Science, Assiut University, 24 (2-c), 25-40, (1995).
- [14] Elnaggar, A. M. and El-Bouhy, T. , *Harmonic and sub-harmonic solutions of a weakly non-linear conservative differential equations with coefficient varying a periodically.* Proc. Math. Phys. Soc. Egypt, (52), 11-17, (1981).
- [15] Elnaggar, A. M. and El-diriny, M. A. , *Response of two internal resonant oscillators subjected to combined quadratic parametric and external excitation.* Bulletin of the Faculty of Science, Assiut University, 24 (2-c), 85-102, (1995).
- [16] Elnaggar, A. M. and Hamd-Allah, G. M. , *Determination of harmonic and sub- harmonic synchronization of weakly non-linear conservative physical system.* Bull. Fac. Sci., Assiut Uni., 10(1), 115-129, (1981).
- [17] Elnaggar, A. M. and Hamd-Allah, G. M. , *Analytical studies for even sub-harmonic synchronization of a weakly non-linear conservative physical system.* Kyungpook Mathematical Journal 22(2), 203-213, (1982).
- [18] Elnaggar, A. M. and Khalil, K. M. , *Existence and localization of harmonic and sub-harmonic solutions of second order non-linear differential equation.* Int. Conference on Math., Nuclear Phys. and Applications in the 21st century, Cairo, (2003).(to appear)
- [19] Evan-Iwanowski, R. M. , *Resonance oscillation in Mechanical systems.* Elsevier-New York, 1976.
- [20] Faraday, M. , *On a peculiar class of acoustical figures and on certain forms assumed by a group of particles upon vibrating elastic surfaces.* Phil. Trans. Roy. Soc. London, (20), (1831).
- [21] Haag, J. , *Oscillatory motion.* Wad worth , 1962

- [22] Hale, J. K. , *Sufficient conditions for the existence of periodic solutions of systems of weakly non-linear first and second order differential equations*. J. Math., Mech., (1958).
- [23] Hale, J. K. , *Oscillations in non-linear systems*. McGraw Hill, New York, 1963.
- [24] Hale, J. K. , *Ordinary differential equations*. Wiley-Interscience , New- York, 1969.
- [25] Hayashi, C. , *Non-linear oscillations in physical systems*. McGraw Hill, New York, 1964.
- [26] Ibrahim, R. A. , (i)- *Parametric vibration*. part III, Current Problems (1), The Shock. Vib. Digest. 10 (3), (1978a). (ii)- *Parametric vibration*. part IV, Current Problems (2), The Shock. Vib. Digest. 10 (4), (1978b).
- [27] Ibrahim, R. A. and Baar, A. D. S. ,(i)- *Parametric vibration*. part I: Mechanics of Linear Problems. The Shock. Vib. Digest. 10 (1), (1978a). (ii)- *Parametric vibration*. part II: Mechanics of Linear Problems. The Shock. Vib. Digest. 10 (2), (1978b).
- [28] Kryloff, N. and Bogoliouboff, N. , *Introduction to non-linear mechanics*. Princeton University Press, Princeton, 1949.
- [29] Lefschetz, S. , (i)- *Existence of periodic solutions for certain differential equations*. Proc. Nat. Ac. Sci. U.S.A, 29, (1943). (ii)- *Differential equations(Geometric Theory)*.Interscience Publishers, New York, (1957).
- [30] Levinson, N. , *On the existence of periodic solutions for second order differential equations with forcing term*. J. Math. Phys., 22, (1943).
- [31] Maccari, A. , *Multiple resonant or non-resonant parametric excitations for nonlinear oscillators*. J. of Sound and Vibration, 242(5), 855-866, (2001).
- [32] Malkin, I. G. , *Some problems in the theory of non-linear oscillations*. GITTL, Moscow, 1956.
- [33] McLachan, N. W. ,*Theory and application of Mathieu functions*. Oxford University Press, New York, 1947.

- [34] Mehri, B. and Shadman, D. , *On the existence of periodic solutions of a certain class of second order nonlinear differential equation*. Mathematical Inequalities & Applications, 1(3), 431-436, (1998).
- [35] Meirovitch, L. , *Elements of vibration analysis*. McGraw-Hill Book Company, 1986.
- [36] Melde, F. , *Über ervegung stehender welleneines fadenformigen körpers*. Ann. Phys. Chem.(109), (1859).
- [37] Minorsky, N. , *Non-linear oscillations*. Van Nostrund, Princeton 1962.
- [38] Moser, J. , *Stabilitsverhalten kanonischer differenzialgleichung system*. Göttingen, Germany, Nachr. Akad. Wissenschaften, 2A, (1955).
- [39] Nayfeh, A. H. , *Introduction to perturbation techniques*. New York, Wiley-Interscience, 1981.
- [40] Nayfeh, A. H. and Mook, D. T. , *Non-linear oscillations*. John-Wiley & Sons, New York, 1979.
- [41] Nemytskii, V. V. and Stepanov, V. V. , *Qualitative theory of differential equations*. Princeton Mathematics series, Princeton University Press, Princeton, N. J. , 1960.
- [42] Peter Girg, *Existence of periodic solutions for a semi-linear ordinary differential equation*. Electronic Journal of Differential Equation, 1998(31), 1-10, (1998).
- [43] Poincaré, H. , (i)- *Les méthodes nouvelles de la mécanique ce'leste*. Gauthier-Villars, Paris, (1892). (ii)- *Œuvres, Vol.1*. Gauthier-Villars, Paris, (1928).
- [44] Pun, L. , *Initial conditioned solutions of a second order non-linear conservative differential equation with a periodically varying coefficient*. J. of Franklin Institute, 295(3), 193-216, (1973).
- [45] Qaisi, M. I. , *Analytical solutions of the forced Duffing's oscillator*. J. of Sound and Vibration, 194 (4), 513-520, (1996).
- [46] Sansone, G. and Conti, R. , *Nonlinear differential equations*. Pergamon Press reprint, 1964.

- [47] Schmidt, G. , *Parametric oscillation*. VEB, Deutscher Verlag der Wissenschaften, Berlin, 1975.
- [48] Schmidt, G. and Tondl, A. , *Non-linear vibrations*. Akademie-Verlag, Berlin, 1986.
- [49] Schmitt, B. , *Sur l'existence et la localisation des solutions périodique des systèmes différentiels périodique, application à l'équation de duffing*. Int. J. of Non-linear Mechanics, 7, 199-205, (1972).
- [50] Seifert, H. , *Closed integral curves in 3-space and isotopic two-dimensional deformations*. Proc. of the Amer. Math. Society, 1, 287-302, (1950).
- [51] Semler, C. , Gentleman, W. C. and Païdoussis, M. P. , *Numerical solutions of second order implicit non-linear ordinary differential equations*. J. of Sound and Vibration, 195(4), 553-574, (1996).
- [52] Stephenson, A. , *On a class of forced oscillations*. J. Math. , 37, (1906).
- [53] Stoker, J. J. , *Non-linear vibrations in mechanical and electrical systems*. Wiley-Interscience , New York, 1965.
- [54] Strutt, M. J. O. , *On the maintenance of vibrations by forces of double frequency and on the propagation of waves through a medium endowed with a periodic structure*. Phil. May. , 24, (1887).
- [55] Tomas, J. and Tondl, A. , *On the existence of sub-ultraharmonic resonance of a single-mass non-linear system excited by periodic force*. Non-linear vibration problem, 8, 11-21, (1966).
- [56] Tondl, A. , *Some problems of rotor dynamics*. London: Chapman & Hall, 1965.
- [57] Urabe, M. , *Numerical determination of periodic solutions of non linear system*. J. Sci. , of the Hiroshima University SA, 20, (1956).
- [58] Urabe, M. , *On the existence of periodic solutions of certain non-linear differential equations*. Math. Japonice, 2, (1941).
- [59] Urabe, M. and Reiter, A. , *Numerical computation of non-linear forced oscillations by Galerkin's procedure*. J. Math. Anal. Appl., 14, 107-140, (1966).