Kratek povzetek vsebine

V uvodu bomo na kratko opisali načine iskanja lastnih vrednosti in lastnih vektorjev. V 2. poglavju bomo definirali lastne vrednosti in lastne vektorje, nato pa si bomo pogledali algoritem na primeru. V 3. poglavju sledi dokaz tega algoritma. V 4. poglavju bomo obravnavali razširitev algoritma za iskanje posplošenih lastnih vektorjev. Algoritem bomo preizkusili tudi na primeru. V 5. poglavju sledi prikaz algoritma na še enem primeru. V 6. poglavju pa si lahko preberete nekaj zaključnih pripomb.

Literatura

[1] W. A. McWorter, Jr. in L. Y. Meyers. Computing eigenvalues and eigenvectors without determinants, Math. Mag. 71, No.1, str. 24–33, 1998. Dostopno na naslovu: http://www.jstor.org/pss/2691340

[2] Sheldon Axler, Down with determinants, *Amer. Math. Monthly* **102** (1995), str. 139–154.

[3] Albert A. Bennett, Construction of a rational canonical form for a linear transformation, *Amer. Math. Monthly* **38** (1931), str. 377–383.

[4] F. S. Cater, An elementary development of the Jordan canonical form, *Amer. Math. Monthly* **69** (1962), str. 391–393.

[5] F. S. Cater, *Lectures on Real and Complex Vector Spaces*, Saunders, Philadelphia, PA, 1966.

[6] A. M. Danilevskii, On the numerical solution of the secular equation (Russian), *Matem. Sb. (Rec. Math.)*, vol. 2, 44 (1937), str. 159–162.

[7] D. K. Faddeev and V. N. Faddeeva, *Computational Methods of Linear Algebra* (Russian), Fizmatgiz, Moscow, 1960; angl. prevod: W. H. Freeman, San Francisco, CA, 1963.

[8] G. Kowalewski, *Einführung in die Determinantentheorie*, 3rd ed., Walter de Gruyter, Berlin, 1942; ponatis Dover Pubs., New York, NY, 1948. See esp. str. 298–314.

[9] G. Kowalewski, Natürliche Normalformen linearer Transformationen, *Ber. Sächs. Ges. d. Wissenschaften*, Math - Phys. Kl., vol. 69 (1917), str. 325–335.

[10] A. N. Krylov, On the numerical solution of the equation which in technical questions determines the oscillation frequencies of material systems (Russian), *Izv. Akad. Nauk SSR, Otdel. Mat. i Estest. Nauk*, (1931), str. 491–539.

[11] O. May, Who Killed determinants?, talk given at MAA session on Jan. 28, 1966; abstract in Amer. Math. Monthly 73 (1966), str. 440. Na volju tudi filmski posnetek.

[12] W. A. McWorter, Jr., An algorithm for the characteristic polynomial, Math. Mag. 56 (1983), str. 168–175.

[13] E. Nering, *Linear Algebra and Matrix Theory*, Wiley, New York, NY, 1963; 2nd ed., 1970.