
Systematic approach to qualification thesis preparation in a technical university

© A.I. Gavrilov

Bauman Moscow State Technical University, Moscow, 105005, Russia

The research explores effective methods of qualification thesis preparation on engineering topics. Considerable attention is paid to general design issues, as well as concepts of engineering analysis in particular. We develop a systematic approach to research and engineering design, give recommendations for presenting research materials and consider evaluation criteria for graduation work in an engineering university. The materials presented may be useful both for diploma work supervisors and graduate students.

Keywords: *engineering analysis, scientific research, diploma thesis preparation, technical creativity, engineering training techniques.*

REFERENCES

- [1] Dixon J.R. *Design Engineering: Inventiveness Analysis and Decision Making*. McGraw-Hill, 1966. (Russ. ed.: Kovalenko E.G. Proektirovanie sistem: izobretatel'stvo, analiz i prinyatie resheniy. Moscow, Mir Publ., 1969. 440 p.).
- [2] Pupkov K.A., Gavrilov A.I., Zverev V.Yu., et al. *Metody robustnogo, neuro-nechetkogo i adaptivnogo upravleniya*. N.D. Egupov, ed. [Methods of robust, neuro-fuzzy and adaptive control]. Moscow, Bauman MSTU Publ., 2001, 774 p.
- [3] Kuzin F.A. *Metodika napisaniya, pravila oformleniya i poryadok zashchity: Prakticheskoe posobie dlya aspirantov i soiskatelei uchenoi stepeni*. Kand. Diss. [Methods of writing, design rules and defense of a thesis: A practical guide for graduate students and candidates for a degree. PhD Diss.]. Moscow, Os' 89 Publ., 2006, 224 p.
- [4] Volchkevich I.L. *Ocherki istorii Moskovskogo vysshego tekhnicheskogo uchilishcha* [Essays on the history of the Moscow Higher Technical School]. Moscow, Mashinostroenie Publ., 2000, 240 p.

Gavrilov A.G., Ph. D. (Eng.), Dr. Sci. (Phil.) in DeMontfort University, Assoc. Professor of the Automatic Control Systems Department in Bauman Moscow State Technical University, winner of the "The best Bauman MSTU Lecturer in 2012/2013 academic year" competition in the nomination "Degree and course work preparation". Author of more than 40 scientific publications. Research interests include control theory, system analysis, digital information processing, image recognition, process automation, methods of teaching in an engineering university. e-mail: alexgavrilov@mail.ru
