

Dr. Anatolij V. Perelmuter

Experience:

- 10/1999 - present: Chair, Department of Structural analysis, SCAD Soft, Kiev
03/1992 - 10/1999: Head, Laboratory of Technical norms and codes, Ukrainian Research Institute of Steel Constructions, Kiev
10/1983 - 03/1992: Chair, Department of steel structures reliability, Ukrainian Research Institute of Steel Constructions, Kiev
06/1967 - 10/1983: Senior researches, Department of Numerical Analysis, Central Research Institute of Steel Constructions, Moscow
06/1964 - 06/1967: Pprojects chef engineer, Ukrainian Design Institute of Steel Constructions, Kiev
05/1959 - 06/1964: Heaf of group, Ukrainian Design Institute of Steel Constructions, Kiev
10/1958 - 05/1959: Senior engineer, Ukrainian Design Institute of Steel Constructions, Kiev
12/1957 - 10/1958: Engineer, Ukrainian Design Institute of Steel Constructions, Kiev

Education:

- 09/1950 - 06/1955: Kiev Technical University of Civil Engineering and Architecture. Speciality (Buildings Engineering)
09/1964–12/1966 Post graduate course of Central Institute of Structures, Moscow (Structural Mechanic).

Academic degrees:

- 12/1966: Candidate Science (PhD), Central Institute of Structures (Moscow, Russia). Speciality – Structural Mechanic
12/1987: Doctor of Technical Science, Central Institute of Structures (Moscow, Russia). Speciality – Structural Mechanic
09/1990: Professor of Steel Structures Department, Kyiv Institute of Civil Engineering (KICE) now National Univesity of Construction and Architecture
11/2008: Foreign Member of Russian Academy of Architecture and Construction Sciences

Research interests:

Nonlinear problems in structural mechanics, theory of equilibrium stability, problems of safety and reliability of structural constructions, technical assessment of structures in operation, methodology of computer-aided engineering

Selected Publications

Books:

- Principles of analysis of cable-bar systems — Moscow: Stroyzdat, 1969. — 190 p (in Russian) .
Basics of theory of systems with unilateral constraints — Moscow: CINISA of the USSR State Committee for Construction, 1969 — 127 p.(in Russian).
Ustroje pretowo-ciegnowe. — Warszawa: Arkadi,1972 —138 s. (in Polish) .
On the estimation of survivability of load-carrying structures // Metal structures: Works of the school of Professor N.S. Streletsky — Moskow: Moskow state building uneverisity publishing, 1995 — P. 62–68 (in Russian).
Numerical Structural Analysis: Methods, Models and Pitfalls— Berlin-Heidelberg: Springer-Verlag, 2003 — 600 p. (with V.I. Slivker)
The selected problems of reliability and safety of building designs — Moscow: Publ. House of Educ. Civil Eng. Institutions, 3-th edit, 2007.— 256 p. (in Russian)

- Behaviour management of building structures — Moscow: Publ. House of Educ. Civil Eng. Institutions (2-th edit) 2011. — 184 p.
- Structural models of buildings and their possible analysis.— Moskow.: SCAD Soft publ, ASV and DMK-Press, 2011, 4-th edit — 736 p. (with V.I. Slivker, in Russian).
- Stability of structural equilibrium and related problems — Moskow: SCAD Soft publ., 2011— In 3 Volumes: 704+672+400 p.(with V.I. Slivker)
- Handbook of Mechanical Stability in Engineering — New Jersey-London-Shanghai-Beijing-Singapore-Hong Kong-New Delhi: World Santific Publ., 2013 — In 3 Volumes: 601+587+401 p.(with V.I. Slivker)
- The structural mechanics. Computer technologists and modelling — Moscow: SCAD Soft publ. & Publ. House of Educ. Civil Eng. Institutions, 2014.— 911 p. (with V.A. Bazhenov and O.V. Shishov, in Russian)
- Essays on history of metal structures.— Moscow: SCAD Soft publ. & Publ. House of Educ. Civil Eng. Institutions, 2-th edit, 2015.— 256 p. (in Russian)
- Analysis of Structures With Changing Design Model — Moscow: SCAD Soft publ. & Publ. House of Educ. Civil Eng. Institutions, 2015 — 148 p. (with O.V. Kabantsev, in Russian).
- Talking's about the structural mechanics — Moscow: SCAD Soft publ. & Publ. House of Educ. Civil Eng. Institutions, 2-th edit, 2016.— 304 p. (in Russian)

Articles:

- The analysis of elastic systems with unilateral constraints as a problem of quadratic programming // Researches in theory of structures, Issue XV. — Moscow: Stroyizdat, 1967. — P. 208–212. (with V.N. Gordeev in Russian)
- On a characteristic curve of an elastic system. // Researches in theory of structures, Issue XXV. — Moscow: Stroyizdat, 1987. — P. 92-101. (with V.I. Slivker in Russian)
- The adaptability of plates // Strength of Materials, 1970, Vol. 2, No 6.— P. 544-547 (with L.G. Lantukh).
- The physical achievement of an optimal prestressed system of beams // International Applied Mechanics, 1970, Vol. 6, No 7.— P. 795-797.
- Peculiarities of algoritmization of the slope deflection method with additional constraints taken into account // Rozin LA (ed) Finite elements method and structural mechanics: Proceedings of Leningrad Polytechnical Institute, No 349 — Leningrad: 1976. — P. 28–36 (with V.I. Slivker in Russian).
- On implementation of complex kinematical conditions in the slope deflection analysis of discrete systems // Rozin LA (ed) Finite elements method and analysis of structures: Proceedings of Leningrad Polytechnical Institute, No 363 — Leningrad: 1979 — P. 26–39 (with V.I. Slivker in Russian).
- Stress analysis of coiled multilayer high-pressure vessels in the elastoplastic stage // Strength of Materials, 1979, Vol. 11, No 7.— P. 778 – 783 (with V.N. Gordeev and M.A. Mikitarenko).
- Structural characteristics of bar system survivability // Fracture Mechanics: Successed and Problems. Collection of Abstracts. Part II. — Lviv: 1993, p. 546–547 (with V.N. Gordeev).
- Design of tubular towers for wind power units // Tubular Structures VII, Edited by Farkas and Jamai. — Rotterdam: Balkema, 1996. — P. 53–58 (with M.A. Mikitarenko).
- Structural Analisis with Lay-outs Changed During the Action of Load // Engineering Mechanics, vol.3, No 4, 1996.— P. 245–251 (with M.A. Mikitarenko and S.G. Burygin).
- Safe fatigue life of steel towers, under the action of wind vibrations // Proceeding of the 2nd European & African Conference on Wind Engineering. Genova, Italy, June 22-26, 1997 - SGE Ditoriali, Padova, 1997. — Vol.2. — P. 1891–1897 (with M.A. Mikitarenko).
- Wind energy converter towers: An experience and prognostication // Journal of Constructional Steel Research, 1998, vol.46, Iss. 1–3. — P. 16–17 (with M.A. Mikitarenko).
- Safe fatigue life of steel towers, under the action of wind vibrations // Journal of Wind Engineering and Industrial Aerodynamics, Vol.74–76, № 1–3 — P. 1091–1100 (with M.A. Mikitarenko).
- Vibration Safety of the Personnel in Multi-storey Buildings under Wind Load // Proceedings 2nd East European Conference on Wind Engineering, 7–11 September 1998, Prague, Czech Republic. Vol.2. — P. 455–462 (with M.A. Mikitarenko).

- As to optimization of the risk level // Proceedings of 6th international conference “Modern building materials, structures and techniques”. Vilnius-1999, Vol. III. — P. 163–168.
- Wear and Reliability of Steel Structures // Paton Welding Journal, 2000, No 9-10
- Using multiple design models // Modern building, Materials, Structures and Techniques // Abstracts 7th International Conference. — Vilnius: «Technika», 2001. — P. 272–273. (Full paper on enclosed CD-ROM).
- The Problem of Interpretations of the Stability Analysis Results // ECCM-2001. 2nd European Conference on Computational Mechanics. Solid, Structures and Coupler Problems in Engineering. Cracow, Poland, June 26-29, 2001.— Abstracts, Vol. 2. — Kraków: Vesalius, 2001. — P. 998–999. (Full paper on enclosed CD-ROM) (with V.I. Slivker).
- On an error of a mysterious nature that happens in software when analyzing mechanical systems for buckling // Proceedings of the 15th Nordic Seminar on Computational Mechanics, 18-19 October, 2002, Aalborg, Denmark.— Aalborg University, 2002.— P. 229-232 (with V.I. Slivker).
- Problems of computational mechanics related to finite element analysis of structural constructions // 15th International conference on computer methods in mechanics. CMM-2003. Gliwice/Wisla, June 3-6, 2003. Short Papers.— Gliwice: 2003.— 39-40 (with S.Yu. Fialko).
- Problems in matching finite elements having different dimensionalities // 15th International conference on computer methods in mechanics. CMM-2003. Gliwice/Wisla, June 3-6, 2003. Short Papers.— Gliwice: 2003.— 285-286 (with V.I. Slivker).
- Problems of computational mechanics relate to finite-element analysis of structural constructions // International Journal for Computational Civil and Structural Engineering, 2005, Vol. 1(2).— P. 72-86 (with S.Yu. Fialko).
- On partial safety factors for buckling stability // Structural mechanics and analysis of structures, 2007, No.6.— P. 37-39 (with V.I. Slivker, in Russian).
- Mistakes and paradoxes in solutions of spatial, geometrically nonlinear problems and equilibrium stability problems // 6th International conference on computation of shells & spatial structures. IASS-IACM 2008. Proceedings: Extended Abstracts.— Cornell University, Ithaca, NY: 2008.— Full text in CD-ROM (with V.I. Slivker).
- Checking calculation of the collapsed covering of the “Transvaal’ Park” building // Space structures of buildings and constructions. Collected works. Issue 11.— M.: 2008.— P. 100-107 (in Russian).
- Designing bolted end-plate connections in compliance with Eurocode and Ukrainian codes consistency and contradictions // Modern Building Materials, Structures and Techniques. Selected papers. Vol/ II/— Vilnius Technika, 2010.— P. 733-743 (with E.Z. Kriksunov, I.S. Gavrilenko and V.V. Yurchenko)..
- Modeling Transition in Design Model when Analyzing Specific Behaviors of Structures // Procedia Engineering, 2013, Vol 57.— P. 479 – 488 (with O.V. Kabantsev).
- Parametric Optimization of Steel Shell Towers of High-Power Wind Turbines // Procedia Engineering, 2013. Vol.57.— P. 895 – 905 (with V.V. Yurchenko).
- The role of paradoxes in design model correctness // Vestnik of Tomsk State University of Architecture and Building. 2013, №1(1) . —P. 27-35 (with L.S. Lyakhovich).
- Stability check of structures analyzed with consideration on erection stages // International Journal for Computational Civil and Structural Engineering, 2014. Vol. 11, No 4.— P. 22- 28.
- Issues on estimation of building structure vulnerability // Magazine of Civil Engineering, 2014, No. 5 P. 113-122 (with S.F. Pichugin).
- Optimization of the overload-protection degree // Engineering Optimization IV — London: Taylor & Francis Group, 2014. — P. 529–532 (with T.Yu. Veriuzhska).
- Some Questions on Optimal Structural Design of Building Structures // Aktualne Problemy Konstrukcji Metalowych. — Gdansk: Politechnika Gdanska, 2014 — P. 178-181 (with L.S. Lyakhovich).
- On the Issue of Structural Analysis of Spatial Systems from Thin-Walled Bars with Open Profiles // Metal Constructions, 2014, Vol. 20, № 3— C. 179-190 (with V.V. Yurchenko).
- Accounting for the elements stiffness change in the course erection and operation // Magazine of Civil Engineering, 2015, No. 1 — P. 5-14 (with O.V. Kabantsev)
- Structural reliability requirements // Vestnik TSUAB. 2015, NN 1/2 — P. 36-50.

Synthesis problems in the theory of structures (brief historical review) // Vestnik TSUAB, 2016, NN 1/2 — P. 33-57.

Personal data:

Date of birth: 1 April 1933

Citizenship: Ukraine

Permanent residence: Ukraine

Marital status: widower, 1 sons, 2 grand daughters

Hobby: History of sciences, old books.