



Professor A. N. Guz

Professor, Director, Academician

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Short Biography:

A.N.Guz was born January 29, 1939 in Ichnia of Chernigov region of Ukraine and graduated from the Mechanics and Mathematics Department of Kiev State University in 1961. He is working at the Institute of

Mechanics of the NASU (National Academy of Sciences of Ukraine) since 1960, receiving an appointment as Head of the Department of Dynamics and Stability of Continuum Media (1967) and serving as Director of the Institute of Mechanics of the NASU (from 1976 until present).

He received the Candidate of Sciences degree (1962) and the Doctor of Sciences degree (1965). He was named Professor (1969).

He is Academician of the NASU (1978), Member of the Academia Europaea (1992), Fellow of the New York Academy of Sciences (1997), Fellow of the World Innovation Foundation (2001), Member of the European Academy of Sciences (2002).

His principal scientific results have been obtained in mechanics of deformable solids and related problems of continuum mechanics: the three-dimensional theory of stability of deformable bodies, the theory of propagation and diffraction of elastic waves in multi-connected bodies and bodies with initial stresses, stress concentration around holes in shells, mechanics of composites materials and structural members utilizing them, aerohydroelasticity, non-classical problems of fracture mechanics, rock mechanics, dynamics of viscous compressible liquid, contact problems, mechanics of nanocomposites and non-destructive methods of stress determination.

He is the author or co-author of 63 books (including 15 solo) and more than 900 scientific papers (including more than 400 solo).

He has trained 36 Doctors and about 100 Candidates of Sciences.

Awards (Prizes): Medal BLAISE PASCAL of the European Academy of Sciences (2007), Medal LIFETIME ACHIEVEMENT of the ICCEF (Int. Conf. on Comput. & Exper. Eng. and Sciences) (2012), DIPLOMA di MERITO con MEDALIA D'ORO of the European Scientific-Industrial Chamber (2013), Order "HONOR" of the Kremlin Fund (Russia) (2007), State Prize of USSR (1985), State Prizes of Ukraine (1979, 1988), V.I.Vernadsky GOLD MEDAL of the National Academy of Sciences of Ukraine (2014), Prize of the National Academy of Sciences of Ukraine (1979, 1983, 2000, 2014), Lenin Komsomol Prize for young scientists (1967), Lenin Komsomol of Ukraine Prize for young scientists (1973).

He serves in the editorial boards of several international scientific journals and is the editor-in-chief of the international scientific journal *Prikladnaya Mekhanika* (since 1976). He is the Chairman of the National Committee of Ukraine of Theoretical and Applied Mechanics (since 1993).

Multi-volume collective fundamental books: *Methods of Shells Theory* in five volumes (1980-1982), *Mechanics of Composites Materials and Structural Members* in three volumes (1982-1983), *Three-Dimensional Problems of the Theory of Elasticity and Plasticity* in six volumes (1984-1986), *Mechanics of Coupled Fields in Constructive Members* in five volumes (1987-1989), *Non-Classical Problems of Fracture Mechanics* in four volumes (1990-1994), *Mechanics of Composites* in twelve volumes (1993-2003), *Advances of Mechanics* in six volumes (2005-2012) were supervised and co-authored by Prof. A.N. Guz.

Some main scientific results of A.N.GUZ were presented (in English) in book "SERIES "Classics of World Science", vol.11, Olexander M GUZ" (TIMPANI, Ukraine, 2006, 521p.). This book is Vol. 11 of series "Classics of World Science" publishing by Austria, Czech Re-public, Slovakia and Ukraine

□ PERSONAL DATA:

Born in Ukraine, January 29, 1939

Nationality: Ukrainian

Citizenship: Ukraine

□ ACADEMIC DEGREES:

1956-1961, Kiev University, Mechanics (Diploma with Distinction)

1962, Candidate of Sciences (PhD), Institute of Mechanics

1965, Doctor of Sciences (the second doctorate degree), Institute of Mechanics

1969, Professor, Institute of Mechanics

□ EMPLOYMENT:

1960-1967, Engineer, Postgraduate Student, Senior Scientist, Institute of Mechanics

1967- present, Head of the Department of Dynamics and Stability Continuum Media, Institute of Mechanics

1976- present, Director of the Timoshenko Institute of Mechanics

□ PUBLICATIONS:

61 monographs (including 15 solo)

about 900 scientific papers (including 400 solo)

□ ADVANCED TEACHING ACTIVITIES:

- Supervisor of 36 Doctor of Sciences theses (the second doctorate degree)

- Supervisor of about 100 Candidate of Sciences (PhD) theses

□ MEMBERSHIPS (ACADEMIES):

1978, Academician of the National Academy of Sciences of Ukraine

1992, Member of the Academia Europaea

1997, Fellow of the New York Academy of Sciences

2001, Fellow of the World Innovation Foundation

2002, Member of the European Academy of Sciences

□ AWARDS (PRIZES):

1985, State Prize of USSR

1967, Lenin Komsomol Prize for Young Scientists

1979, 1988, State Prize of Ukraine

1973, Lenin Komsomol of Ukraine Prize for Young Scientists

1979, 1983, 2000, Prize of the National Academy of Sciences of Ukraine

2007, Medal BLAISE PASKAL of the European Academy of Sciences

2012, Medal LIFETIME ACHIEVEMENT of the ICCEF (Int. Conf. on Comput. & Exper. Eng. and Sciences)

□ ADDITIONAL INFORMATION (PUBLICATIONS):

Multi-volume collective fundamental books: Methods for Shells Theory in five volumes (1980-82), Mechanics of Composite Materials and Structural Members in three volumes (1982-83), Three-Dimensional Problems of the Theory of Elasticity and Plasticity in six volumes (1984-86), Mechanics of Coupled Fields in Structural Members in five volumes (1987-89), Nonclassical Problems of Fracture Mechanics in four volumes (1990-94), Mechanics of Composites in twelve volumes (1993-2003), Advances of Mechanics in six volumes (2005-2012) were supervised and co-authored by Prof. A.N. Guz.

Some main scientific results of A.N.Guz were presented (in English) in the book series "Classics of World Science", vol.11, Olexander M Guz" (TIMPANI, Ukraine, 2006, 521 p.). This book is Vol.11 of series "Classics of World Science" publishing by Austria, Czech Republic, Slovakia and Ukraine.

Selected Publications: List of monographs of Prof. A.N.Guz

1. Spherical bottoms weakened by holes. Naukova Dumka, Kiev, 1970, 324 p,

Co-authors I.S.Chernyshenko, K.I.Shnerenko

2. Stability of three-dimensional deformed bodies. Naukova Dumka, Kiev, 1971, 276p.

3. Diffraction of elastic waves in multi-connected bodies. Naukova Dumka, Kiev, 1972, 256p.

Co-author V.T.Golovchan.

4. Stability of elastic bodies under finite deformations. Naukova Dumka, Kiev, 1973, 272p.

5. Diffraction of Elastic Waves in Multiply Connected Bodies. FOREIGN TECHNOLOGY DIV WRIGHT – PATTERSON AFB, OHIO, 1973, 280 p. Co-author V.T.Golovchan.
6. Cylindrical shells weakened by holes. Naukova Dumka, Kiev, 1974, 272p.
Co-authors I.S.Chernyshenko, Val.N.Chekhov, Vic.N.Chekhov, K.I.Shnerenko
7. Foundations of ultrasonic non-destructive method of stresses determination in solid bodies. Naukova Dumka, Kiev, 1974, 108p. Co-authors O.I.Guscha, F.G.Makhort, V.K.Lebedev
8. Conical shells weakened by holes. Naukova Dumka, Kiev, 1976, 164p.
Co-authors P.Z.Lugovoy, N.A.Shulga
9. Waves in layer with initial stresses. Naukova Dumka, Kiev, 1976, 104p. Co-authors A.P.Zhuk, F.G.Makhort
10. Foundations of stability theory of mine workings. Naukova Dumka, Kiev, 1977, 204p.
11. Introduction in acoustoelasticity. Naukova Dumka, Kiev, 1977, 152p.
Co-authors F.G.Makhort, O.I.Guscha
12. Diffraction of elastic waves. Naukova Dumka, Kiev, 1978, 308p.
Co-authors V.D.Kubenko, M.A.Cherevko
13. Stability of elastic bodies under omni-directional compression. Naukova Dumka, Kiev, 1979, 144p.
14. Strength of rocket engine construction with solid-state propellant. Mashinostroenie, Moscow, 1980, 248p.
Co-authors A.G.Makarenkov, I.S.Chernyshenko
15. Three-dimensional stability theory of rods, plates and shells. Vyshcha Shkola, Kiev, 1980, 168p.
Co-author I.Yu.Babich
16. Methods of shells design. In 5 vol. V.1. Theory of thin shells weakened by holes. Naukova Dumka, Kiev, 1980, 636p. Co-authors I.S.Chernyshenko, Val.N.Chekhov, Vic.N.Chekhov, K.I.Shnerenko
17. Non-destructive testing of materials and constructions. Naukova Dumka, Kiev, 1981, 276p.
Co-authors M.E.Garf, S.V.Malashenko, A.O.Rasskazov and others
18. Failure and stability of thin bodies with cracks. Naukova Dumka, Kiev, 1981, 184p.
Co-authors M.Sh. Dyshel', G.G.Kuliev, O.B.Milovanova
19. Perturbation method in spatial problems of elasticity theory. Vyshcha Shkola, Kiev, 1982, 350p.
Co-author Yu.N.Nemish
20. Methods of shells design. In 5 vol. V.5. Theory of non-stationary hydroelasticity of shells. Naukova Dumka, Kiev, 1982, 400p. Co-author V.D.Kubenko
21. Mechanics of composite materials and constructions. In 3 vol. V.1. Mechanics of materials. Naukova Dumka, Kiev, 1982, 368p. Co-authors L.P.Khoroshun, G.A.Vanin and others
22. Mechanics of composite materials and constructions. In 3 vol. V.2. Mechanics of constructions. Naukova Dumka, Kiev, 1983, 464p. Co-authors Ya.M.Grigorenko, I.Yu.Babich and others
23. Mechanics of composite materials and constructions. In 3 vol. V.3. Applied investigations. Naukova Dumka, Kiev, 1983, 264p. Co-authors I.V.Ignatov, A.G.Girchenko and others
24. Mechanics of brittle fracture of materials with initial stresses. Naukova Dumka, Kiev, 1983, 296p.
25. Experimental investigations of thin-walled constructions. Naukova Dumka, Kiev, 1984, 240p.
Co-authors V.A.Zarutsky, I.Ya.Amiro and others
26. Hydroelasticity of shells systems. Vyshcha Shkola, Kiev, 1984, 208p.
Co-authors V.D.Kubenko, A.E.Babaev
27. Spatial problems of elasticity and plasticity theory. In 6 vol. V.2. Static of elastic bodies with non-canonical form. Naukova Dumka, Kiev, 1984, 280p. Co-author Yu.N.Nemish
28. Spatial problems of elasticity and plasticity theory. In 6 vol. V.4. Three-dimensional stability theory of deformed bodies. Naukova Dumka, Kiev, 1985, 280p. Co-author I.Yu.Babich

29. Spatial problems of elasticity and plasticity theory. In 6 vol. V.5. Dynamics of elastic bodies. Naukova Dumka, Kiev, 1986, 286p. Co-authors V.T.Golovchan, V.D.Kubenko, N.A.Shulga and others
30. Foundations of three-dimensional stability theory of deformed bodies. Vyshcha Shkola, Kiev, 1986, 512p.
31. Elastic waves in bodies with initial stresses. In 2 vol. V.1. General problems. Naukova Dumka, Kiev, 1986, 374p.
32. Elastic waves in bodies with initial stresses. In 2 vol. V.2. Propagation regularities. Naukova Dumka, Kiev, 1986, 536p.
33. Mechanics of coupled fields in constructions. In 5 vol. V.3. Acoustoelectromagnetoelasticity. Naukova Dumka, Kiev, 1988, 288p. Co-author F.G.Makhort
34. Technological stresses and strains in composite materials. Vyshcha Shkola, Kiev, 1988, 270p. Co-authors V.T.Tomashevsky, N.A.Shulga, V.S.Yakovlev
35. Method of perturbation of surface form in mechanics of continuum. Vyshcha Shkola, Kiev, 1989, 352p. Co-author Yu.N.Nemish
36. Failure mechanics of composite materials under compression. Naukova Dumka, Kiev, 1990, 630p.
37. Dynamics of bodies connected with media. Naukova Dumka, Kiev, 1991, 392p. Co-authors S.Markus, L.Pust, V.D.Kubenko and others
38. Non-classical problems of fracture mechanics. In 4 vol. V.2. Brittle fracture of materials with initial stresses. Naukova Dumka, Kiev, 1991, 288p.
39. Dynamics and stability of laminated composite materials. Naukova Dumka, Kiev, 1992, 368p. Co-authors S.Markus, I.Kabelka, I.Yu.Babich and others
40. Non-classical problems of fracture mechanics. In 4 vol. V.4, B.1. Fracture and stability of materials with cracks. Naukova Dumka, Kiev, 1992, 454p. Co-authors M.Sh.Dyshel', V.M.Nazarenko
41. Mechanics of composites. In 12 vol. V.1. Statics of materials. Naukova Dumka, Kiev, 1993, 454p. Co-authors V.T.Golovchan, Yu.V.Kohanenko, V.N.Kusch
42. Mechanics of composites. In 12 vol. V.2. Dynamics and stability of materials. Naukova Dumka, Kiev, 1993, 430p. Co-authors I.Yu.Babich, N.A.Shulga, A.S.Kosmodamiansky
43. Non-classical problems of fracture mechanics. In 4 vol. V.4, B.2. Brittle fracture of materials under dynamical loading. Naukova Dumka, Kiev, 1994, 240p. Co-author V.V.Zozulya
44. Mechanics of composites. In 12 vol. V.4. Mechanics of materials with curved structures. Naukova Dumka, Kiev, 1995, 320p. Co-authors S.D.Akbarov, E.A.Movsumov, S.M.Mustafaev
45. Contact problems for elastic bodies with initial stresses. Vyshcha Shkola, Kiev, 1995, 304p. Co-authors S.Yu.Babich, V.B.Rudnitsky
46. Mechanics of composites. In 12 vol. V.5. Fracture mechanics. "A.C.K.", Kiev, 1996, 340p. Co-authors A.A.Kaminsky, V.M.Nazarenko, I.A.Guz and others
47. Mechanics of composites. In 12 vol. V.6. Technological stresses and strains in materials. "A.C.K.", Kiev, 1997, 396p. Co-authors N.A.Shulga, V.T.Tomashevskii and others
48. Mechanics of composites. In 12 vol. V.7. Stress concentration. "A.C.K.", Kiev, 1998, 387p. Co-authors A.S.Kosmodamiansky, V.P.Shevchenko
49. Dynamics of compressible viscous fluid. "A.C.K.", Kiev, 1998, 350p.
50. Fundamentals of the Three-Dimensional Theory of Stability of Deformable Bodies. Springer-Verlag, 1999, 556p.
51. Mechanics of Curved Composites. Kluwer Academic Publishers, 2000, 464p. Co-author S.D.Akbarov
52. Mechanics of composites. In 12 vol. V.10. Stability of members of structures. "A.C.K.", Kiev, 2001, 376 p. Co-authors I.Ju.Babich, D.V.Babich, I.A.Guz and others

53. Mechanics of composites. In 12 vol. V.12. Applied investigations. "A.C.K.", Kiev, 2004, 400p.
Co-authors L.P.Khoroshun, M.I.Mikhailova, D.V.Babich, and others
54. Contact problems for elastic bodies with initial (residual) stresses. "Melnik", Khmel'nitsky, 2004, 692p.
Co-author V.B.Rudnitsky
55. Elastic waves in bodies with initial (residual) stresses. "A.C.K.", Kiev, 2004, 672p.
56. Fundamentals of the contact interaction of elastic bodies with initial (residual) stresses. "Melnik", Khmel'nitsky, 2006, 710p. Co-author V.B.Rudnitsky
57. Statics and dynamics of the elastic grounds with initial (residual) stresses. Kremenchug, "Press-line", 2007, 796 p. Co-authors S.Yu.Babich, Yu.P.Glukhov.
58. Fundamentals of the compressive fracture mechanics of composites. In 2 vols. V.1. Fracture in structure of materials. "Litera", 2008, 592p.
59. Fundamentals of the compressive fracture mechanics of composites. In 2 vols. V.2. Related mechanisms of fracture. "Litera", 2008, 736p.
60. Dynamics of compressible viscous fluid. Cambridge Scientific Publishers, 2009, 428p.
61. Introduction to mechanics of nanocomposites. "Academperiodika", 2010, 398p. Co-author J.J.Rushchitsky, I.A.Guz
62. Analysis of estimate systems of scientific publications. Kiev. Institute of mechanics, 2013, 274 p.
Co-author J.J.Rushchitsky
63. Short introduction to mechanics of nanocomposites. Scientific & Academic Publishing, USA, 2013, 281 p.
Co-author J.J.Rushchitsky