

Gurovich Viktor Ts.



Position: Senior Research Scientist
Department of Physics, Technion, Haifa, Israel

Period covered: 2002-present

I Scientific Work

Viktor Ts. Gurovich received the M.Sc. degree in physics and mathematics from the Kyrgyz University, Kirgizstan FSSU in 1961, the Ph.D. degree (1966) and the Doctor degree (1982) in physics and mathematics from the Moscow State University. From 1968 to 1971 he was with the Novosibirsk Physics Institute, Russia and from 1971 to 2002 he was with the Kyrgyz Academy of Science, Kirgizstan. Since 2002 has been with the Department of Physics, Technion, Haifa, Israel where is currently a Senior Research Scientist. His main research interests are related with cosmology, non-linear gravitation, plasma physics and relativistic gas.

II Conferences and educational activities

Conferences and Other External Scientific Work

Viktor Ts. Gurovich has been participating in numerous conferences in Kyrgyzstan, Russia, Israel, Germany, and Italy.

Work With Students

Over a long period of time Viktor Ts. Gurovich was a full professor at the Department of Physics, the Kyrgyz National University, Bishkek, Kyrgyzstan, where he has taught many general and special courses for undergraduate and graduate students.

Diploma thesis supervision

Viktor Ts. Gurovich has been supervising for the 10 Ph.D. diploma theses and numerous M. Sc. diploma theses.

Other Teaching Duties

Viktor Ts. Gurovich has managed scientific seminars at the Department of Physics, the Kyrgyz National University, Bishkek, Kyrgyzstan.

III Service activities

Within ICRANet

Repeated participation in workshops and meetings of ICRANet.
Foundation and management of ICRANet branch in the Kyrgyz Republic.
Outside ICRANet

Head of the Plasma Physics Laboratory at Kyrgyz Academy of Science.

IV 2007-2008 List of Publications

Grinenko, A; Gurovich, VT; Krasik, YE, Implosion in water medium and its possible application for the inertial confinement fusion target ignition, *Physics of plasmas* **14 (1)** 012701

Krasik, YE; Gleizer, S; Gurovich, V, et al, Plasma window characterization. *Journal of applied physics* **101 (5)** 053305

Gurovich, VT; Grinenko, A; Krasik, YE. Semianalytical solution of the problem of converging shock waves. *Phys Rev Lett* **99 (12)** 124503

Fedotov, A, Sheftman, D; Gurovich, VT, et al. Spectroscopic research of underwater electrical wire explosion. *Physics of plasmas* **15 (8)** 082704

Yarmolich, D; Vekselman, V; Gurovich, VT, et al, Energetic particle and photon emission during dense plasma formation at the ferroelectric surface. *PLASMA SOURCES SCIENCE & TECHNOLOGY* **17 (3)** 035002

Krasik, YE; Grinenko, A; Sayapin, A, et al, Underwater electrical wire explosion and its applications, *IEEE TRANSACTIONS ON PLASMA SCIENCE* **36 (2)** 423

Gleizer, JZ; Hadas, Y; Gurovich, VT, et al, High-current electron beam generation in a diode with a multicapillary dielectric cathode. *Journal of applied physics* **103 (4)** 043302

Yarmolich, D; Vekselman, V; Gurovich, VT, et al, Coulomb microexplosions of ferroelectric ceramics. *Phys Rev Lett* **100 (7)** 075004 Folomeev, V and Gurovich, V. Viscous dark fluid, *Phys Lett B* **661 (2-3)**

Viktor Ts. Gurovich received the M.Sc. degree in physics and mathematics from the Kyrgyz University, Kyrgyzstan, USSR in 1961. In 1966 he has been earned one of the world first Ph.D. Degree on relativistic astrophysics.

This thesis reviewed by Academician Y.B. Zeldovich includes some widely used results, particularly the problem black hole weak rotation cited in classical Landau and Lifshitz ``Classical Field Theory'' textbook.

Another cycle of Victor Ts. Gurovich works is related to the pioneer researches of Academician A. D. Saharov and the school of Academician V.L. Ginzburg on the vacuum polarization in strongly curved space-time.

On this basis, in 1969, V.Ts. Gurovich built the first cosmological Friedman model without singularity. The model included the basic properties Early Universe Theory that was built in the future (1970-2000). For these achievements and results obtained in cooperation with A.

Starobinsky, he has been honored with Doctor Degree (the highest academic degree in the soviet scientific hierarchy) in 1982. It was the first Doctor Degree on Early Universe in USSR.

From 1968 to 1971 he worked as scientific researcher at plasma laboratory at the Novosibirsk Institute of Nuclear Physics of the Siberian Division of the Academy of Science of the USSR. From 1971 to 2002 he worked as Scientific researcher, Senior scientific researcher and Head of Laboratory of Plasma theory at Kyrgyz Academy of Science, Bishkek, Kyrgyzstan. There he created a physics school on gravity, cosmology and plasma physics. Since 2002 has been with the Department of Physics, Technion, Haifa, Israel, where is currently a Senior Research Scientist. His main research interests are related with: Cosmology and astrophysics, non-linear gravitation, quantum effects near

cosmological singularities; Plasma physics, the theory of electric arc, propagation of electromagnetic waves through plasma; Relativistic gas mechanics; Impulse propagation along the nerve; Explosion physics.