

CURRICULUM VITAE (Professor Yurii N. Proshin)

1. Personal Data

Last name: *Proshin*, **Name:** *Yurii*; **Date of birth:** December 19, 1956; **Citizenship:** Russia
Post: Theoretical Physics Department, Kazan Federal University (KFU), Kremlevskaya, 18, Kazan 420008, Tatarstan, Russian Federation
Phone: 7(843)2337342; **Fax:** 7(843)2380994; **e-mail:** Yurii.Proshin@kpfu.ru
<http://kpfu.ru/Yurii.Proshin>

2. Education and Scientific Degree:

1974-9: **Graduate student** in the theoretical physics, Kazan State University (KSU), USSR;
1981-84: **Post-graduate student** in the theoretical physics, (supervisors: Prof. **B. Kochelaev** (KSU) and Prof. **M. Kaganov** (P.L. Kapitza Institute for Physical Problems, Moscow), USSR;
1988: **Candidate** of physical&mathematical sciences (KSU), equivalent to **PhD**;
1995: **Doctor** of physical&mathematical sciences (KSU), equivalent to habilitation degree

3. Employment History:

1979-81: **Research Associate**, KSU; 1984-85: **Engineer**, Kazan State Technological University (KSTU), Kazan, USSR; 1985-89: **Assistant Professor**, KSTU; 1989-98: **Associate Professor**, Theoretical Physics Department (TPD), KSU; 1998-present: **Professor**, TPD, KSU; 2005-present: **Head** of TPD, KSU- KFU, Kazan, Russia;

4. Other Academic Experience:

Visiting scientist at the P.L. Kapitza Institute for Physical Problems, (Moscow) {1984}; at the E.K. Zavoiskii Physical-Technical Institute of RAS (Kazan), {1991, 1994}; at the N.G. Chebotarev Research Institute of Mathematics and Mechanics, (Kazan) {1997, 2001, 2009}; at the Max Planck Institute for the Physics of Complex Systems, (Dresden) {2003; 2004}; at the Ruhr University (Bochum, Germany) {2018}; **Visiting Professor** at the Quantum Statistics Department in Mari-El State University, (Ioshkar-Ola) {1997-1998}

5. Principal Research Interests:

The theory of magnetic and transport phenomena in normal and superconducting metals, ferromagnets, their contacts and multilayers. Nonlinear dynamical systems.

Keywords: proximity effect, magnetic breakdown, superconductivity, magnetism

6. The organizational scientific activity:

{1996 - present time} One of **organizers** and **Executive Editor** of peer-reviewed journal "*Magnetic Resonance in Solids*." (<http://mrsej.kpfu.ru>) indexed by Web of Science and Scopus

7. 36 years experience in lecturing on the following subjects:

Quantum theory of solid state, Nonlinear systems and fractals, Theoretical mechanics, Quantum mechanics, Dynamic chaos, Elements of nonequilibrium thermodynamics and equilibrium processes, Numerical methods and mathematical simulation in theoretical physics, Computing methods in physics, Visualization and Modeling in Physics, etc.

8. Publications and scientific metrics:

Papers in reviewed journals: **107** (2 *reviews*, + **6** *monographs*); **Conferences:** more than **170** contributions (**18** *invited* talks and **3** *invited* lectures); **The copyright certificates:** **2**.

H-index: 13; **ResearcherID** B-9278-2013; **Scopus Author ID:** 35597391200;

Scholar Google <https://scholar.google.com/citations?user=YrPzN8IAAAAJ&hl=en&oi=ao>

9. Honors and grants:

The award of the American Physical Society for young Russian scientists (1993); Honored Scientist of Republic of Tatarstan (2012); Honorary Worker of the Sphere of Education of the Russian Federation (2017); **Principal investigator** of the **25** grants (1992-2020).

10. Other activities:

(2003-present) **Regular Referee** of "Physical Review", "Physical Review Letters", "Superconductor Science and Technology", "Physics Letters A" "Scientific Reports" etc.;

Advisor of PhD (6) and Master (13) Theses.

Elected member of the KFU Academic Council (from 2010); **Elected Scientific Secretary** of the Academic Council of the Institute of Physics (from 2016).

11. **Date of filling** – May 5, 2021.

List of 10 important publications in last 5 years

1. F. M. Siraev, A. S. Kutuzov, M. V. Avdeev, Yu. N. Proshin Competition between BCS and FFLO States in Magnetic Superconductors in a Cryptoferromagnetic Phase. JETP Letters. – 2020. - Vol. 111, No. 3. - P. 139-144. DOI: 10.1134/S0021364020030133
2. O. N. Borisova, V. A. Tumanov, Yu. N. Proshin Controllable Josephson $0-\pi$ Junction Based on a Four-Layer Ferromagnetic–Superconductor System (FSFS). Physics of Metals and Metallography. – 2020. - Vol. 121, No. 5. - P. 434-438. DOI: 10.1134/S0031918X20050051
3. M.V. Avdeev and Yu.N. Proshin. Long-range spin-singlet proximity effect for a Josephson system with a single-crystal ferromagnet due to its band-structure features. Physical Review B. - 2018. – V. **97**. – 100502(R). DOI: 10.1103/PhysRevB.97.100502
4. V.A. Tumanov, Yu.V. Goryunov, Yu. N. Proshin. Oscillations of the Critical Temperature in a (Fe/Cr/Fe)/V/Fe Heterostructure. JETP Letters. –V. **107**, No. 7. – P. 426–430. DOI:10.1134/S002136401807010X
5. Yu.N. Proshin and M.V. Avdeev The theory of long-range Josephson current through a single-crystal ferromagnet nanowire. Journal of Magnetism and Magnetic Materials. - 2017. – V. 459. – P. 359-362. DOI:10.1016/j.jmmm.2017.08.021
6. S.K. Saikin, M.A. Shakirov, C. Kreisbeck, U. Peskin, Yu.N. Proshin, and Alán Aspuru-Guzik On the Long-Range Exciton Transport in Molecular Systems: The Application to H-Aggregated Heterotriangulene Chains // J. Phys. Chem. C. – 2017. – V.121, Is.45. - pp 24994–25002. DOI:./10.1021/acs.jpcc.7b08933
7. M.V.Avdeev and Y.N. Proshin. How experimentally to detect a solitary superconductivity in dirty ferromagnet-superconductor trilayers? Journal of Magnetism and Magnetic Materials. - 2017. – V. 440. – P. 116-118. DOI: 10.1016/j.jmmm.2016.12.149
8. M.V.Avdeev and Y.N. Proshin.The Solitary Superconductivity in Dirty F_1F_2S Trilayer with Arbitrary Interfaces. J. Low Temp. Phys. – 2016. – V. 185, Issue 5. – pp. 453–459. DOI: 10.1007/s10909-016-1661-2
9. V. A. Tumanov and Yu. N. Proshin. The effect of planar magnetic inhomogeneities on the critical temperature of ferromagnet-superconductor systems. J. Low Temp. Phys. – 2016. – V. 185, Issue 5. – pp. 460-466. DOI 10.1007/s10909-016-1611-z
10. M. G. Khusainov, M. M. Khusainov, Y. A. Sakhratov, V. L. Matukhin, Yu. N. Proshin. A Proximity Effect in Pure HTS/Ferromagnet Contacts. IEEE Transactions on Applied Superconductivity. – 2016. - V. 26, N. 3. – 7201005 (5 pp.) DOI: 10.1109/TASC.2016.2529286