CURRICILUM VITAE

Name	**BRAZOVSKII** Serguei
Birth	30 September 1945, Tchita, Russia
Nationality:	French (native Russian)
Affiliation	Research Director emeritus, Laboratoire de Physique Théorique et des Modèles Statistiques - LPTMS, CNRS, Orsay, France
Address	LPTMS, Bât. Pascal n° 530, rue André Rivière, Université Paris-Saclay, 91405, Orsay Cedex, France
Office	*phone* 33-1 69 15 68 74 *Fax* 33-1 69 15 65 25
E-mail	brazov@lptms.u-psud.fr *WEB* http://www.lptms.u-psud.fr/membres/brazov

Scientific degrees:

1995	French University Professor State Qualification
1983	Doctor degree (Habilitation) in physical and mathematical sciences "Superstructures in quasi one- dimensional systems and in liquids" (Landau Institute for Theoretical Physics, Moscow, Russia)
1983	Senior Research Scientist degree (Superior Attestation Committee, Russia)
1972	Candidate degree (Ph. D.) in physical and mathematical sciences "Electronic properties of semimetals and semiconductors under high magnetic field", supervisor I.E. Dzyaloshinskii (Landau Institute for Theoretical Physics)
1969	Master degree "Electronic spectra of crystals under high magnetic fields", supervisor I.E. Dzyaloshinskii (Moscow Physical Technical Institute)

Affiliations:

Since 1998	Research director, at LPTMS - CNRS, France (*currently emeritus*)
1997 – 2000	Consultant of Los Alamos and Brookhaven National Laboratories, USA.
1972 –1998	carrier at L.D. Landau Institute for Theoretical Physics: from junior to senior and leading scientist

Scientific Responsibilities:

Administration:

1998 - 2011	Condensed matter group leader, LPTMS, Orsay
1989 – 1992	Department head of the Landau Institute for Theoretical Physics
1990 – 1992	Deputy director of the program of Landau Institute at the Institute for the Scientific Interchange Foundation, Turin, Italy.
1990 - 1992	Coordinator of the Euro NETWORK "Frontiers in Condensed Matter Physics".

Expertise:

Expert of grants for NSF, ANR, RTRA.

2010-2011	Expert council member for ANR program « Retour de post docs », France
2010	Expert council member for program "Measures to Attract Leading Scientists to Russian Educational Institutions", New Eurasia Foundation, Ministry of education and science of Russia and of Germany.
1972 - 1982	Expert of the "Institute of Scientific Information", Moscow, Russia.

Scientific councils member:

1998 – 2005	LPTMS – CNRS & Univ. Paris-Sud, Orsay, France.

1988 – 1993 Inst. for Scientific Interchange, Turin, Italy.
1986 – 1994 Landau Institute for Theoretical Physics, Moscow, Russia.

Funding, Grants:

2015-2018 Grants of Minister of Education of Russia: "Theory of dynamical phase transitions and locally tunable electronic states".

2007-2009 **INTAS**, #05-1000008-7972 (Orsay, Grenoble, Tübingen, Moscou) "Interlayer tunnelling spectroscopy of condensed electronic states with charge, spin and magnetic ordering in layered nano-materials", responsible of the team of the University Paris-Sud, Orsay.

2007-2010 **ANR**, BLAN07-3-192276, (Orsay, Grenoble, Amiens, Moscow) "Local manipulation of collective quantum processes in correlated electronic states", responsible for the team of LPTMS, Orsay.

2008-2010 **RTRA,** Supersolide, with SPEC CEA, Saclay, participant from LPTMS.

2002-2004 **INTAS 01-2212** "Electron quantum liquids and quantum solids of reduced dimensionality in molecular organic and inorganic host lattices".

Responsible of the team of the University Paris-Sud, Orsay, France.

1993 – 1996 **INTAS** A92-024 responsible at the Institute of Scientific Interchange, Turin, Italy.

Editorial

1988 -- 2017 Editorial board of the Journal "Synthetic metals", Elsevier.
1990 – 1997 Editorial board of the "Journal de Physique".
1996 Invited Editor of "Edition de Physique".
1975 - 1987 Interpreter of scientific books, « Mir » Publ. House, Moscow, Russia.
2013 Co-editor of Proceedings of IMPACT: Eur. Phys. J. Special Topics **222** (2013)
Since 1993 Co-editor of Proceedings of ECRYS:

Referee for journals: PRL, PRB, Appl. Phys. Lett., Journ. Appl. Phys., JETP, JETP Lett., Synth. Met., Optical Materials, Solid State Commun., Nature Mat., European Phys. Journ., EPL, Journ. of Phys., Nucl. Phys. B, Physica B, Phys. Lett. A.

Organization of the International conferences:

1987 - 1990 Co-organizer of bilateral Symposiums: France-USSR and USA-USSR

2012 & 2016 Chairman of the international conference IMPACT 2102 and the school IMPACT 2016 – Electronic States and Phases Induced by Electric or Optical Impacts

1993 – 2019 Co-chairman of International conferences on Electronic Crystals - ECRYS.

Invited positions

Brazil: 2012,2013,2014,2017 - Int. Inst. of Physics - Natal;

Croatia: 1980 – University of Zagreb

Denmark: 1976-97 **–** NORDITA, Kopenhagen;

France: 1992-93 – ILL, Grenoble, 1995, 96, 97 – LPS, LURE, CNRS & University Paris-sud*;*

Israel: 1993-94 - Weizmann Institute, Rehovot;

Italy: 1988-90 – Institute for Scientific Interchange, Turin; 1987,1994 – ICTP, Trieste;

Japan: 2002, 2012, 2016 – University of Tokyo; 2003, 2010 – Yukawa Institute, Kyoto; 2015 – OIST, Okinawa.

Russia: 2015-2018 Nat. University of Sci. and Thech. MISiS

South Korea: 2009 – Seoul Nat. University; 2016 – Inst. for basic research and APCTP

Switzerland: 1986 – ETH, Zurich

USA: 1998 - BNL, 1996-2000 – visits to LANL; 1994 – University of California at Santa Barbara; 2007 – James Frank Inst., University of Chicago.

Teaching experience:

1980 – 1994 Statistical Physics, Landau minimum, at the Graduate school of Landau Institute for Theoretical Physics, Moscow, Russia.

2008-2013 Lecture courses at: Seoul National University, University of Tokyo, Federal University of Rio Grande do Norte.

2016 Lectures at NUST MISiS, Moscow, Russia

International schools for young researchers:

France: Cargèse (2009,2012,2016,2017), Les Houches (2001, 1999, 1995) ; IHP - Paris (1999).

Italy : Trento (2003), ICTP - Trieste (2001)

1973-1997 Many schools in the USSR for young researchers:
on theoretical physics, condensed matter physics, low temperature physics, magnetism.

Master and PhD students

1983 – 1992 at the Landau Institute for Theoretical Physics: four PhD students (now, all have permanent research or university positions).

1999 – 2010 three PhD students, two have university positions, one –post doc.

After 1998 Member of several Jury for PhD and Habilitation in France and Switzerland.

International Meetings: invited talks - more than 50

Publications:

total # of independent original pbs. >180 (12 during the last 5 years),
total number of references >6000, h-index – 38 (*data from Google*).

Scientific achievements and current directions:

Phase transitions: "***Brazovskii phase transition***" of weak crystallization.
Light emitting conducting polymers – **"*Brazovskii-Kirova model*"**.
Liquid crystals: theory of the "blue phase".
Low-dimensional electronic systems and applications to properties of synthetic materials – organic metals, chain conductors, conjugated polymers;
Electronic crystals - charge/spin density waves, charge order, ferroelectricity; applications to tunnelling in nanostructures, nonlinear and femtosecond optics.
Pinning and sliding of electronic crystals, plastic flows,
applications to space resolved synchrotron radiation studies *).
Topological defects in electronic systems: solitons and instantons, topological confinement of charge and spin, dislocations, solitonic lattices and FFLO in superconductors, exact solution for many-body problems, understanding of solitons seen by STM and in quasi 1D Mott insulators.
Electric-field-induced electronic phases including the superconductivity.
Co-discovery of electronic ferroelectricity *); its prediction in conducting polymers.
Ground state reconstruction and spacio-temporal processes in nano-junctions of CDWs *).
Dynamical phase transition and domains patterns under optical pumping*).
Hidden phase reached under optical or voltage pilses in a polaronic Mott crystal.
Dynamical phase transitions and self-focusing in evolution of optically pumped ensembles of excitons; applications to neutral-ionic transition.
(* *In collaborations with experimental groups from Grenoble, Ljubljana, Moscow, Orsay*)