UNIVERSITÀ DEGLI STUDI DI MILANO

AL MAGNIFICO RETTORE **DELL'UNIVERSITA' DEGLI STUDI DI MILANO** **COD. ID: 5302**
I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B research grant at the Department of Earth Sciences "Ardito Desio"
Scientific manager: *Prof. Giovanni Muttoni*

LEONID SUROVITSKII

CURRICULUM VITAE

PERSONAL INFORMATION

Surname	*Surovitskii*
Name	*Leonid*
Date of birth	25.02.1981

PRESENT OCCUPATION

Appointment	Structure
Director of the Paleomagnetic Laboratory	*Scientific Division "Geomodel" of St. Petersburg State University, Russia*

EDUCATION AND TRAINING

Degree	Course of studies	University	Year of achievement of the degree
Master degree	*Physics*	*St. Petersburg Sate University, Russia*	*2007*
Specialization/Bachelor	*Physics*	*St. Petersburg Sate University, Russia*	*2003*
PhD	*Geophysics*	*Michigan Technological University, USA*	*2021*
Degree of medical specialization			
Degree of European specialization			
Other	*Engineering Geomechanics and Seismic*	*Institute of Comprehensive Exploitation of Mineral Resources (Russian Academy of Sciences)*	*2015*

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REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
31.12.2018	*AGU (American Geophysical Union)*	*Washington, D.C., USA*
20.04.2021	*EGU (European Geophysical Union)/Copernicus*	*Göttingen, Germany*

FOREIGN LANGUAGES

Languages	level of knowledge
Russian	*native*
English	*Level 4 (ILR)*

AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
2014	*Award for the Best Report at the 11th international scientific conference for young scientists and specialists "Problems of development of mineral resources in the XXI century". Institute of Comprehensive Exploitation of Mineral Resources Russian Academy of Sciences, (Russia)*
2016	*Acknowledgement in the Final Technical Report: "Keweenaw Fault Geometry, Secondary Structures, and Slip Kinematics along the Bête Grise Bay Shoreline". Principal Investigator: James M. DeGraff, Research Professor*

TRAINING OR RESEARCH ACTIVITY

Lab hardware expertise - Development of the alert system for the cryogenic compressor of 2G SQUID magnetometer (MTU);
Lab hardware expertise - 2G SQUID magnetometer helium refills, calibration, and repair (MTU);
Lab hardware expertise - Design and construction of an advanced cooling system for the paleomagnetic laboratory (SPbSU);
Lab hardware expertise - Installation and improvement of a gas supply regulating system for thermal demagnetizer (SPbSU);
Lab hardware expertise - Design of an experimental setup (Helmholtz coils and a hydraulic press) for piezo-magnetization research (SPbSU).
Additional expertise - Rock magnetic methods in sedimentology (certified)
Additional expertise - Scanning Electron Microscope user (certified)
Additional expertise - AutoCAD, Matlab, R, 3Ds Max, etc.(non-certified)
Additional expertise - Automation programming (non-certified)
Field experience - Paleomagnetic sampling in China.
Field experience - Paleomagnetic sampling in US (Michigan, Wisconsin, Minnesota)

Field experience - Paleomagnetic sampling in Canada (Ontario)
Field experience - Archeomagnetic sampling in Russia (Central and North-Western regions)

PROJECT ACTIVITY

Year	Project
2019 – present	*Magnetic Minerals in Archaeological Ceramics and Fired Clays: Genesis, Phase Composition, and Applications in Geophysics and Archeology*
2019 – 2021	*Magnetic properties of ferrimagnets of the titanomagnetite series at cryogenic temperatures*
2019	*High-coercivity magnetic minerals in archaeological ceramics*
2017	*Investigation of magnetic properties of the area overlying the hydrocarbon-bearing Niagaran Pinnacle reefs (Michigan, USA)*

PATENTS

CONGRESSES AND SEMINARS

Date	Title	Place
2021	*High-temperature three-axis IRM Lowrie test.* ***Surovitskii, L.**, Kosterov, A.A., M. Kovacheva, M. Kostadinova-Avramova, N. Salnaya, and A.V. Smirnov.*	*EGU General Assembly 2021, online, 19-30 Apr 2021, EGU21-1782* *https://doi.org/10.5194/egusphere-egu21-1782.*
2021	*Tracing Ti-rich titanomagnetite oxidation with low-temperature magnetic measurements.* *Kosterov, A.A., **L. Surovitskii**, V. Maksimochkin, S. Yanson, and A.V. Smirnov*	*EGU General Assembly 2021, online, 19-30 Apr 2021, EGU21-1980* *https://doi.org/10.5194/egusphere-egu21-1980.*
2020	*High-coercivity magnetic minerals in archaeological ceramics: new insights from remanence acquisition and demagnetization measurements at elevated temperatures* *A.A. Kosterov, M. Kovacheva, M. Kostadinova-Avramova, P. Minaev, N. Sal'naya, **L. Surovitskii**, S. Yanson, and E. Sergienko*	*EGU General Assembly 2020, online, 4-8 May 2020, EGU2020-10130* *https://doi.org/10.5194/egusphere-egu2020-10130*
2019	*Rock Magnetic Properties of Sediments Overlying the Hydrocarbon-Bearing Niagaran Pinnacle Reefs near Bear Lake (Michigan, USA).* ***Surovitskii L.**, J.P. Tresnak, and A.V. Smirnov*	*30th Fall Meeting, AGU, San Francisco, USA* *Abstract GP43A-0786*

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2014	*Attenuation of seismic waves energy by underground pipelines.*	*11th International scientific conference for young scientists and specialists "Problems of development of mineral resources in the XXI century". Institute of Comprehensive Exploitation of Mineral Resources Russian Academy of Sciences, (Russia)* *Award for the Best Report*
2013	*Effect of charge diameter by a factor characterizing the relative seismic effect in the equation Sadowsky.*	*International research and practice conference "Modern technology and safety of blasting". National Mineral Resources University, (Russia)*
2012	*Monitoring velocity displacement of soil by production of blasting near the protected objects.*	*International research and practice conference "Aerology and safety of Mining Enterprise"* *National Mineral Resources University, (Russia)*
2012	*The dependence of the frequency characteristics of seismic waves on the parameters of massive explosions.*	*International scientific and practical conference "Combined technology of field development by deep quarries and mines". Kremenchuk Mykhailo Ostrohradskiy National University (Ukraine).*

PUBLICATIONS

Books

Articles in journals
*Kostadinova-Avramova M., Dimitrov P., Kosterov A., **Surovitskii L**. Studying the potential of rock magnetism to distinguish combustion structures of different type // Journal of Archaeological Science (in press).*
*Krivopaltsev D., **Surovitskii L**., Lukin M. A versatile software for statistical data analysis and spatial correlation // Problems of Geocosmos–2020 (2022) Springer Proceedings in Earth and Environmental Sciences, 89-103.*
*Kosterov A., Kovacheva M., Kostadinova-Avramova M., Minaev P., Salnaia N., **Surovitskii L**., Yanson S., Sergienko E. and Kharitonskii P. High-coercivity magnetic minerals in archaeological baked clay and bricks // Geophys. J. Int. (2021) 224, 1256–1271.*
*Lerner, G.A., Smirnov A.V., **Surovitckii L.V**., and Piispa E.J. Non-heating methods for absolute paleointensity determination: Comparison and calibration using synthetic and natural magnetite-bearing samples // Journal of Geophysical Research, 122, 2017, 1614-1633.*
***Surovitsky L.V**., Zharikov I.F. Attenuation of seismic waves energy by underground pipelines // Thesis of 11th international scientific conference for young scientists and specialists "Problems of development of mineral resources in the XXI century through the eyes of young", - M.: Publishing ICEMR RAS, 2014, p. 355-358.*
*Vozgrin R.A., **Surovitsky L.V**. Measurement of characteristics of blasting-seismic waves during the construction of trenches near existing gas pipeline // Notes of Mining Institution. Volume 198 St. Petersburg.: SPMI, 2013, p. 69-73.*

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***Surovitsky L.V**. Features of underground pipeline vibrations in a seismic waves, explained on the model of the pipeline // Collection "Explosion Science" №110 / 67 - M.: Nedra, 2013, p. 196-208.*
*Zharikov I.F., **Surovitsky L.V**. Parameters affecting the velocity of propagation of seismic waves // Collection "Explosion Science" №110 / 67 - M .: Nedra, 2013, p. 180-195.*
***Surovitsky L.V**., Zharikov I.F., Vinogradov Yu.I. Overview of the experiment on creation the model of the existing gas pipeline and the impact on him blasting // News KrNU of Mykhailo Ostrohradskiy. Preview Issue 1/2013 (11) - Ukraine, Kremenchug, 2013, p. 137-143.*
*Gustov S.V., **Surovitsky L.V**. The dependence of the frequency characteristics of the seismic waves from the parameters of mass explosions // Collection "Explosion Science" № 109/66, - M.: Nedra, 2013, p. 257-266.*
*Vinogradov Yu.I., **Surovitsky L.V**. Ensuring safety in the manufacture of blasting near protected sites // Proceedings of The 8-st International Conference on the Mining Industry, Building and Energetics Problems. Volume 1 – Tula, Tula State University, 2012, p. 186-193.*
*Gustov S.V., **Surovitsky L.V**. Effect of charge diameter by a factor characterizing the relative seismic effect in the equation Sadowskiy // News KrNU of Mykhailo Ostrohradskiy. Preview Issue 4/2012 (75) - Ukraine, Kremenchug, 2012, p. 61-63.*
*Gustov S.V., **Surovitsky L.V**., Vinogradov Yu.I. Dependence of frequency characteristics of seismic waves from the parameters of mass explosions // News KrNU of Mykhailo Ostrohradskiy. Preview Issue 3/2012 (74) - Ukraine, Kremenchug, 2012, p. 106-109.*
***Surovitsky L**., Karpinsky V. Seismic noise characteristic in Saint-Petersburg district with different level of anthropogenic vibration // Problems of Geocosmos. 8th International conference – Saint-Petersburg State University, Russia, St. Petersbirg, 2010, p. 181.*

Congress proceedings
*The magnetic anisotropy of large-square artificial sediments desiccated under compacting pressure, Book of Abstracts. International Conference on Problems of Geocosmos, St. Petersburg, Russia. P. 196-197. May 24-28, 2004. Shashkanov V. A., Danilkin E. V., **Surovitsky L**. V., Petrov I. N.*

TEACHING EXPERIENCE

Software development (2020-2022) ITMO University (Russia). Supervision of undergraduate and graduate students in the implementation of their graduation projects. Development of software for geophysical needs
Planetary Geology and Geophysics (2017-2020) Michigan Technological University (USA). Teacher assistant.
Fundamentals of Applied and Environmental Geophysics (2017-2019) Michigan Technological University (USA). Teacher assistant.
Gravimetry (2006-2007) St. Petersburg State University (Russia). Teaching undergraduate course on gravimetry.

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RESEARCH INTERESTS

Paleomagnetism *- The long-term evolution of the Earth's magnetic field (morphology, stability, and intensity), planetary magnetism.*
Rock magnetism *- Magnetism of rocks, minerals, and synthetic materials; Biomagnetism and environmental magnetism.*
Methodology *- Development of novel methods and improvement of existing methods of paleomagnetic and rock magnetic research.*
Software and Hardware Development *- Automation of laboratory equipment and creation of relevant software. Development of new and improvement of existing instruments for magnetic measurements.*

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: St.Petersburg, 2.05.2022

SIGNATURE

L.Surovitskii

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