Lucie Novakova

*6.4.1981
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mobile: +420 605 117 392

Summary: *I am a hard-working person who wants to move forward and learn new things, and exchange ideas and knowledge. I have excellent organizational and managerial skills with twenty-five years of experience.*

Education

25.6.2019 – 24.1.2020	**EurGeol** Professional title of the European Federation of Geologists
11.6.2013 – 20.9.2013	***RNDr.*** Structural Geology, Institute of Petrology and Structural Geology, Faculty of Science, Charles University in Prague, CR
1.9.2006 – 10.6.2013	***Ph.D.*** Structural Geology, Institute of Petrology and Structural Geology, Faculty of Science, Charles University in Prague, CR *Thesis theme: Brittle tectonics in the NE Bohemian Massif as related to recent tectonic movements indicated by GPS measurements*
1.9.2000 – 29.5.2005	***MSc.*** Geology, Geochemistry, Institute of geochemistry, mineralogy and mineral resources, Faculty of Science, Charles University in Prague, CR *Thesis theme: Distribution of mercury in a small forested catchment – locality Lesní Potok, Central Bohemia*

Professional experience

Since 1.1.2020	Institute of Geology, TU Bergakademie Freiberg, Germany *Postdoc, Thermochronology laboratory work, fission track dating*
Since 1.1.2009	Institute of Rock Structure and Mechanics, Czech Academy of Sciences, Department of Seismotectonics *Researcher (since 2017), Project Manager (2017-02/2019), Postdoc (2013-2016), Ph.D. student (2009-2013) Active tectonics, Structural Geology, Microstructural analysis, Seismology, Team and individual work on the projects*
1.1.2019 – 31.12.2019	Institute of Geology, Czech Academy of Sciences, Paleomagnetic laboratory Researcher, *Magnetic studies, Team and individual work on the projects*
1.6.2018 – 31.7.2018	Institute of Geology, TU Bergakademie Freiberg, Germany *Postdoc, Thermochronology laboratory work, fission track dating*
1.1.2008 – 31.12.2009	Institute of Petrology and Structural Geology, Faculty of Science, Charles University in Prague, CR *Ph.D. student, Structural geology, Tectonics, Team leader of the project*
1.9.2000 – 31.12.2008	Institute of Rock Structure and Mechanics, Czech Academy of Sciences, Department of Geodynamics *MSc. student (2000-2005), Ph.D. Student (2005-2008), Geodynamics, GPS monitoring, Structural Geology, Team and individual work on projects*
2.10.2001 – 29.5.2005	Institute of Geology, Czech Academy of Sciences, Laboratory of the Environmental geology and geochemistry *MSc. student research worker, Geochemistry, Laboratory work*

Stays abroad

Since 1.1.2020	Institute of Geology, TU Bergakademie Freiberg, Germany

Research Stay, Fission track analysis, Laboratory work

1.7.2019 – 12.7.2019 Institute of Geology, TU Bergakademie Freiberg, Germany
Research Stay, Fission track analysis, Laboratory work

1.6.2018 – 31.7.2018 Institute of Geology, TU Bergakademie Freiberg, Germany
Research Stay, Fission track analysis, Laboratory work

5.6.2010 – 20.6.2010 Department of Earth Sciences, Third Rome University, Italy
Ph.D. internship, Microtectonic analysis, Laboratory, and fieldwork in Central Apennines

9.9.2009 – 20.9.2009 Department of Earth Sciences, Third Rome University, Italy
Ph.D. internship, Active tectonics, Laboratory work

10.7.2008 – 19.7.2008 Department of Earth Sciences, Third Rome University, Italy
Ph.D. internship, Microtectonic analysis, Laboratory, and fieldwork in Central Apennines

8.7.2007 – 15.7.2007 Department of Earth Sciences, Third Rome University, Italy
Ph.D. internship, Structural geology, Laboratory work

Parenting

Mother of three children

13.8.2018 – 24.2.2019 Maternity leave
10.12.2014 – 31.8.2015 Maternity leave
1.1.2012 – 31.12.2013 Parental leave (part-time job)
13.12.2010–31.12.2011 Maternity leave

Publications

20 peer-reviewed scientific articles and conference proceedings
8 chapters in research monographs
>50 abstracts from conferences, project reports
H index 7 (Research Gate), >7800 reads, 157 citations
https://www.researchgate.net/profile/Lucie_Novakova3

Selected peer-reviewed scientific journals

- Štěpančíková, P., Fischer T., Stemberk, J., **Nováková, L.,** Hartvich, F. 2019. Active tectonics in the Cheb basin: youngest documented Holocene surface faulting in central Europe? *Geomorphology.* 327, 472-488. doi.org/10.1016/j.geomorph.2018.11.007.
- **Nováková, L.**, Schnabl, P., Buechner, J., 2018. The characterization of sunburn basalts and their magnetic and petrographic properties. *Journal of Geosciences*, 63, 333-344. DOI: 10.3190/jgeosci.274.
- **Nováková, L**., Pavlis, T.L., 2017. Assessment of the precision of smart phones and tablets for measurement of planar orientations: A case study. *Journal of Structural Geology.* Vol. 97, 93-103. DOI: dx.doi.org/10.1016/j.jsg.2017.02.015
  The first paper collected such amount of data and discussed the results of measurements with smartphones and tablets and the possibility to use them as a digital geological compass.
- **Nováková, L**., 2016. Paleoseismology: evidence of earth activity. *International Journal of Earth Sciences.* Vol. 105, 5, 1467-1469. DOI 10.1007/s00531-016-1331-2
- **Nováková, L**., Brož M., Štrunc, J., Záruba, J., Sosna, K., Najser, J., Rukavičková, L., Franěk, J., Rudajev, V., 2016. Bedrock instability of underground storage systems in the Czech Republic, Central Europe. *Applied Geophysics.* Vol. 13, 2, 315-325. DOI 10.1007/s11770-016-0563-z
- **Nováková, L**., 2016. Paleostress analysis of the tectonic movements of the Sudetic Marginal Fault. *Geoscience Research Reports.* Vol. 49, 177-181. DOI 10.3140/zpravy.geol.2016.17
- **Novakova, L.,** 2015. Tectonic phase separation applied to the Sudetic Marginal Fault Zone (NE part of the Czech Republic). *Journal of Mountain Science.* Vol. 12, Iss. 2, 251-267. Springer. (DOI) 10.1007/s11629-014-3297-5.

- **Nováková, L.,** 2014. Evolution of paleostress fields and brittle deformation in Hronov-Poříčí Fault Zone, Bohemian Massif. *Studia Geophysica et Geodeatica.* 58, 269-288. Springer. DOI: 10.1007/s11200-013-1167-1
- **Nováková, L**., Brož M., 2014. On the paleostress analysis using kinematic indicators found on an oriented core. *Universal Journal of Geoscience.* Vol. 2, No. 2, 76-83. DOI: 10.13189/ujg.2014.020206
- **Nováková, L**., Sosna K., Brož, M., Najser, J., Novák., P., 2012. The matrix porosity and related properties of a leucocratic granite from the Krudum Massif, West Bohemia. *Acta Geodynamica et Geomaterialia.* Vol. 9, No. 4, (168), 521–540.
- **Nováková, L.**, Novák, P., Brož, M., Sosna, K., Pitrák, M., Kasíková, J., Rukavičková, L., Maňák, L., 2012. The results of borehole acoustic imaging from a granite in the Jihlava District, Czech Republic: implications for structural geological research. *Journal of Geography and Geology,* Vol. 4, No. 4, 92–101.
- **Nováková, L.,** Sosna, K., Brož, M., Najser, J., Novák P., 2011. Geomechanical parametres of the Podlesí granites and its relationship to seismic velocities. *Acta Geodynamica et Geomaterialia.* Vol. 8, No. 3 (163), 353–369.
- **Nováková, L.**, Hájek, P., Šťastný, M., 2010. Determining the relative age of fault activity through analyses of gouge mineralogy and geochemistry: a case study from Vápenná (Rychleby Mts), Czech Republic. *International Journal of Geosciences.* Vol. 1, No. 2, 66-69.
- Skácelová, Z., Rapprich, V., Valenta, J., Hartvich, F., Šrámek, J., Radoň, M., Gaždová, R., **Nováková, L.,** Pécskay, Z., 2010. Geophysical research on structure of partly eroded maar volcanoes: Miocene Hnojnice and Oligocene Rychnov volcanoes (northern Czech Republic). *Journal of Geosciences.* Vol. 55, Iss. 4, 299-310.
- **Nováková, L.,** 2010. Detailed brittle tectonic analysis of the limestones in the quarries near Vápenná village. *Acta Geodynamica et Geomaterialia.* Vol. 7, No. 2 (158), 1-8.

Research monographs, chapters

- **Novakova, L.,** Novak, P., 2021. Spectacular sandstone rock cities in the Czech Republic. In: Mukherjee S. (Ed.). Field Guide Book on Structural Geology and Tectonics. *Springer*. In print.
- **Novakova, L.,** 2020. Brittle Faults – Kinematic indicators. In: Mukherjee S. (Ed.). *Atlas of Structural Geology 2nd Edition. Elsevier*. ISBN 9780128168028.
- Büchner, J., **Nováková, L.,** Schnabl, P., 2020. Various Structures – Fringe zone, Sunburn textures, Paleomagnetic studies – thermal demagnetization. In: Mukherjee S. (Ed.). *Atlas of Structural Geology. 2nd Edition. Elsevier*. ISBN 9780128168028.
- **Nováková, L.,** Pavlis, T.L., 2019. Modern Methods in Structural Geology of Twenty-first Century: Digital Mapping and Digital Devices for the Field Geology. *Teaching Methodologies in Structural Geology and Tectonics*. Ed. Mukherjee, S., Springer. 43-54. doi.org/10.1007/978-981-13-2781-0
  BookAuthority identifies and rates this book as the second best book in the world, based on public mentions, recommendations, ratings and sentiment.
- **Novakova, L**., 2015. Spatial Analysis of Remote Sensing Data in Early Stage of a Seismo-tectonic Research. In: Lollino G., Giordan, D., Thuro, K., Carranza-Torres C., Wu, F., Marinos, P., Delgado, C. (Eds.) *Engineering Geology for Society and Territory – Volume 6. Applied* Geology for Major Engineering Projects. Springer. 119-123. ISBN 978-3-319-09060-3. DOI 10.1007/978-3-319-09060-3_21. I
- **Novakova, L**., 2015. Brittle Faults – Kinematic indicators. In: Mukherjee S. (Ed.). *Atlas of Structural Geology*. Elsevier. ISBN: 978-0-12-420152-1. DOI 10.1016/B978-0-12-420152-1.00003-X.
- **Novakova, L.,** 2015. Various Structures – Fringe zone. In: Mukherjee S. (Ed.). *Atlas of Structural Geology*. Elsevier. ISBN: 978-0-12-420152-1. DOI 10.1016/B978-0-12-420152-1.00006-5.
- **Nováková, L.**, Brož, M., Novák, P., 2010. Comparative study of geophysical parameters and geochemical analysis in undisturbed granites. *In Williams et al. (eds.) Geologically Active*. 2010 Taylor & Francis Group, London, 2281-2288.

Participation on the conferences
International conferences and congresses (EGU, AGU, IAEG, EAGE, Goldschmidt)
International and national workshops (CETEG, Workshop On Recent Geodynamics of the Sudety Mts. and Adjacent Areas)
Oral presentations and posters

Invited lectures

30.9.2020	Department of Geology, Technical University Bergakademie Freiberg *Contribution to the discussion on processing and measurements methodology in fission-track analysis*
9.7.2019	Department of Geology, Technical University Bergakademie Freiberg *High resolution apatite fission-track thermochronology: A test case along the western margin of the Bohemian Massif*
20.10.2016	Department of culture, the town of Steti. New Zealand by geologist's eye. About volcanoes, earthquakes, geysers and other sites of New Zealand.
7.10.2016	Faculty of Science, Masaryk University, Brno *Analysis of the tectonic movements in NE part of the Bohemian Massif*
3.5.2016	Department of Geology, TU Bergakademie Freiberg *Fault Zones: an overview from macro- to micro- scale*
19.2.2014	Faculty of Mathematics and Physics, Charles University, Prague *Strain conditions in the NE part of the Bohemian Massif*
10.6.2013	Faculty of Sciences, Charles University, Prague *Brittle tectonics in the NE Bohemian Massif as related to recent tectonic movements indicated by GPS measurements.*
20.9.2011	Faculty of Sciences, Charles University, Prague *Usage of a borehole acoustic image in structural geology*
17.9.2008	The Geological Society, Burlington House, Piccadilly, London *Reactivation of brittle tectonic structures in the Sudetic Marginal Fault vicinity (in north east of Bohemian Massif). Fault zones: Structure, Geomechanics and Fluid Flow*
21.10.2006	Faculty of Science, Masaryk University, Brno *Study of the tectonic movements in the Bohemian Massif using brittle tectonics kinematic indicators*

Research expeditions

21.7. – 3.8.2017	Caucasus Range, *Georgia* (field trip to study the morphotectonics and landslides effects)
30.11. – 7.12.2013	California, Arizona, Nevada, *USA* (field trip to the Grand Canyon, Death Valley, and San Andreas Fault to study the geology and active tectonics)
2.7. – 9.7.2012	Emilia-Romagna region, *Northern Italy* (field trip to the area affected by the quake M=6.2 to study the earthquake effects)
8.9. – 18.9.2010	Canterbury region, *New Zealand* (field trip to the area affected by the quake M=7.1 to study the earthquake effects)
26.6. – 3.7.2009	L´Aquila region, *Central Italy* (field trip to the area affected by the quake M=6.3 to study the earthquake effects)
15.5. – 27.5.2007	Serra de Estrela, *Portugal* (field trip to study the active tectonics)
18.11. – 13.12.2002	Tierra del Fuego, *Argentina* (field trip to study the Andean orogeny)
19.11. – 5.12.2001	Sierra Nevada, *Spain* (fieldtrip to study the active tectonics)

Organization of International conferences

9.12. – 13.12.2013	AGU Conference - OSPA Judge

20.10. – 23.10.2008 9th Czech - Polish Workshop on Recent Geodynamics of the Sudety Mts. and Adjacent Areas, Náchod, Czech Republic

29.3. – 31.3.2007 8th Czech - Polish Workshop on Recent Geodynamics of the Sudety Mts. and Adjacent Areas, Boguszyn near Klodzko, Poland

20.11. – 24.11.2006 7th Czech - Polish Workshop on Recent Geodynamics of the Sudety Mts. and Adjacent Areas, Ramzová, Czech Republic

Examples of participation in industrial innovation

20.3.2016 Certificate of professional competence to plan, carry out and evaluate geological works, Ministry of the Environment of the Czech Republic
Specialization in geochemistry

20.10.2015 Certificate of professional competence to plan, carry out and evaluate geological works, Ministry of the Environment of the Czech Republic
Specialization in structural geology

1.2. – 31.12.2009 Watrad Ltd., *external consultant (field of structural geology)*

1.1.2009 – 31.12.2015 Arenal Ltd., *external consultant (field of structural geology)*

Prizes and Awards

19.3.2019 Seal of Excellence, European Commission – *The project proposal was scored as a high–quality project proposal in a highly competitive evaluation process*

1.6.2018 – 31.7.2018 DAAD Award**,** Research Stays for University Academics and Scientists – *winner of the scholarship*

25.4.2016 The American Publishers Awards for Professional and Scholarly Excellence (Prose Award) *"Mukherjee S. 2015. (Ed) Atlas of Structural Geology. Elsevier"* – co-author of two chapters

10.6.2013 Faculty of Sciences, Charles University, *the best in class for the Ph.D. thesis defence*

15.10.2009 Institute of Rock Structure and Mechanics, CAS, *Brittle tectonic study of the reactivated faults in the NE part of the Bohemian Massif – student´s conference, 2nd place*

5.6.2009 EAGE Annual Conference & Exhibition – *winner of the travel grant for student conference*

10.9.2008 The Geological Society – winner of the travel grant for student conference

25.5.2007 – 31.7.2010 National Research Council, Italy – *4x times winner of the travel grant for the internship*

9.11.2007 Institute of Rock Structure and Mechanics, CAS, *Study of the brittle tectonic kinematic indicators in the Vápenná limestone and granite quarries – student´s conference, 2nd place*

10.9.2006 Faculty of Sciences, Charles University, *Brittle tectonics in the NE Bohemian Massif as related to recent tectonic movements indicated by GPS measurements – student presentation, 1st place*

Funding

Since 1.1.2020 Positioning the zircon fission-track and micro-Raman partial annealing zones: keys for thermochronology and the understanding of zircon material-properties and hydrocarbon maturity, funded by Ministry of Education, Youth and Sports of the Czech Republic/EU **(140k EUR)**
The project is a part of the Horizon 2020 call "Marie Skłodowska-Curie Actions - Individual Fellowships - European Fellowships (H2020-MSCA-IF-2018)". I am responsible for both management and research.

9.5.2019 – 20.11.2019 The influence of the magnetic field of basalts on the geological compasses within the structural geology measurements, funded by Institute of Geology CAS **(1.7k EUR)**

The project solved the relationship between the magnetic field and the basaltic rocks. I was responsible for both management and research.

1.1.2018 – 31.12.2019 Microtectonic study of the fault zones, funded by Institute of Rock Structure and Mechanics CAS **(3.7k EUR)**

The project focused on microtectonic studies of the fault zones with high-quality digital microscope Keyence VHX-6000. I was the only researcher, responsible for both management and research.

1.6.2017 – 28.2.2019 RINGEN+, funded by Ministry of Education, Youth and Sports of the Czech Republic/ESIF **(4m EUR)**

The project focused on the establishment of a professional background for research into the efficient use of the geothermal energy. I was the project manager for the partner IRSM CAS.

1.4.2017 – 28.2.2019 CzechGeo/EPOS Sci+, funded by Ministry of Education, Youth and Sports of the Czech Republic/ESIF **(2.5 m EUR)**

The project was a comprehensive geophysical field observation system operated by geosciences Institutions in the Czech Republic. I was the project manager for the partner IRSM CAS.

1.1. – 31.12.2017 Velocity models and source mechanisms of earthquakes derived from local seismic sites run by the IRSM, funded by Institute of Rock Structure and Mechanics CAS **(16.1k EUR)**

The project dealt with seismicity and active tectonics within the Bohemian Massif, Alps, Island, and Indonesia. As a team member, I was responsible for the investigations of tectonic structures and lineaments in the Bohemian Massif.

1.1. – 31.12.2014 Southern termination of the Hronov-Poříčí Fault Zone, funded by Institute of Rock Structure and Mechanics CAS **(1.7k EUR)**

The main aim of the project was to describe the range and length of the Hronov-Poříčí Fault Zone, particularly the southern part and termination of the zone. Other aims are to determine the active stress conditions of the study area, split up and determine the tectonic phases during the development of the Zone. I was the only researcher, responsible for both management and research.

1.1.2011 – 30.9.2014 Reversible storage of energy in the rock massif, funded by Technology Agency of the Czech Republic **(1.3m EUR)**

The project aimed at improvement of the underground thermal energy storage technology. As a team member, I was involved in detailed microstructure study of various rock types and geopolymers.

1.1.2009 – 31.1.2013 Nature of seismicity in the Hronov-Poříčí Fault area, funded by Czech Science Foundation **(117.7k EUR)**

The project studied seismicity and occurrence of mineral waters in an active fault area. I was a team member responsible for field geological survey of the fault zone including recent and paleostress analysis and groundwater level monitoring.

1.1.2009 – 30.6.2013 Research of intergranular porosity influence on deep geological disposal into geological formations, funded by the Ministry of Industry and Trade of the Czech Republic **(4.5m EUR)**

The project studied porosity of granites in the Bohemian Massif, in particular, the relationships between porosity, hydraulic permeability, and common geological, geotechnical and geophysical parameters. As a team member, I dealt with fracturing on both micro- and macro scale, including core orienting and interpretation of oriented core data.

1.1.2008 – 31.12.2009 Comparative study of the directions of recent tectonic activity according to structural geology, funded by Grant Agency of Charles University **(3.1k EUR)**

The project "Comparative study of the directions of recent tectonic activity according to structural geology research and long-term GPS monitoring in the

Rychleby Mts., Czech Republic" compared different approaches in stress studies, paleostress analysis of field brittle tectonic data and long-term GPS monitoring. Since the project partly covered my Ph.D. thesis theme, I was the only researcher responsible for both management and execution.

Supervising and mentoring activities

Editorial Board Member of Journal of Geosciences and Geomatics, Editorial Board Member of Universal Journal of Geoscience (2013-2016 Editor in Chief), Reviewer for International Journal of Earth Sciences, Journal of Mountain Science, International Journal of Geography and Geology, Journal of Geography, Environment and Earth Science International, Journal of Applied Geophysics, Marine and Petroleum Geology, Computers&Geosciences, Sensors, Journal of Structural Geology

1.1.2004 – 31.12.2009 Alpinautic Ltd., *adult experiential lecturing*
1.1.2001 – 31.12.2004 Outdoor Star Ltd., *adult experiential lecturing*
1.9.2000 – 31.12.2005 School Tour Ltd., *children, and student language teaching, the organization of summer and winter courses*

Miscellaneous

IAEG Member, Member of the Czech Tectonic Group & Central European Tectonic Studies Group (CETeG), Czech Association of Economic Geologists, EGU member, EFG member, AGU member, Geological Society member

since 20.11.2010 Municipal Council of Tupadly, Czech Republic
2.5.2012 – 21.10.2014 Deputy Mayor of the Municipality of Tupadly, Czech Republic