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Dr Kazbulat Shogenov

Leader, Hydrocarbon Reservoirs Geo-modeller / Petrophysicist / Geophysicist / Geo-Technology specialist / CO₂ Use and Geological Storage, CO₂-EOR/EOR+ specialist

ADDRESS: Tallinn University of Technology (TalTech), Department of Geology, Ehitajate tee 5, 19086 Tallinn, Estonia.

PLACE AND DATE OF BIRTH: Estonia, 01.06.1982

CITIZENSHIP: Estonia (EU)

MARITAL STATUS: with Wife and three Children

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Web of Science (Publons): 0-8590-2019

SYNOPSIS:

Strong leadership abilities, 2D and 3D Seismic Reservoirs Modeller for CO₂-EOR/EOR+ and CCUS operations, with a solid background in Geology, Geophysics, Laboratory Rock Physics, Petrophysics and Computer Programming.

EDUCATION:

2009-2015: PhD. Tallinn University of Technology, Earth sciences - Thesis: "Petrophysical models of CO₂ plume at the prospective storage sites in the Baltic Region". The first PhD in Estonia in the field of CO₂ Geological Storage, <http://digi.lib.ttu.ee/i/?2520>

2007-2008: MSc. Tallinn University of Technology, Geotechnical Engineering - Thesis: "Petrophysical and Geochemical Correlation of Ordovician Rocks in South Estonian wells".

2001-2005: BSc. Tallinn University of Technology – Geo-technology - Thesis: "Petrophysical properties of Ordovician and Devonian rocks in Valga and Mehikoorma wells".

WORK EXPERIENCE:

2021-....: Founder and CEO in SHOGenergy consulting company

2008-....: Researcher, Department of Geology at TalTech (Estonia)

- GEOLOGICAL STRUCTURES STUDY: reservoir characterization, CO₂ storage capacity estimation in saline aquifers and oil-bearing reservoirs, 2-D and 3-D modelling (Surfer 8, Petrel Schlumberger)
- Geophysical data interpretation
- Participation in CO₂ Geological Storage/CO₂-Enhanced Oil Recovery and Energy Storage projects
- Laboratory measurements (petrophysical and mineralogical) and experiments (CO₂-rock interactions)
- GIS GEODATABASES AND MAPPING (ARC GIS 9)
- Data modelling, statistical analysis
- Teaching of students (CCS course, petrophysical/mineralogical study)
- E-learning courses
- Writing of scientific papers (>60 published papers, including >30 in Publons)

2000-....: Coach, Estonian Taekwondo Union (Estonia)

- Teaching of children (from 3 years), cadets and juniors (10-17 y.), adults (18-39 y.) and veterans (40-60 y.)
- National Estonian instructor license (5th level)
- International coach license (ITF and WT)
- Special needs and Para-Taekwondo international coach (ITF and WT)
- From 2017 (National Taekwondo Team Coach)
- **Students are European and World Champions** (first in Estonian history 2-times European champions, and first World champions- 2 World champions) – 2017-2019

2012-2013: Researcher, OGS (National Institute of Oceanography and Experimental Geophysics), Trieste (Italy, www.ogs.trieste.it)

- Time-lapse (4D) rock physics and seismic numerical reservoir modelling to the monitoring of CO₂ geological storage (MatLab 7, Seismic Unix, Absoft Fortran Compiler)
- Estimation of in situ reservoir seismic and petrophysical properties with different CO₂ saturation levels using mesoscopic rock physics theories (MatLab 7 software)
- 3D Geological, Lithological and Petrophysical Numerical Modelling of E6 Offshore Oil-Bearing Structure in the Baltic Sea (Jewel Suite, Surfer 8)

2010: Researcher, BRGM, Orleans, France (www.brgm.fr) (6-month contract):

- Performed EOR, CCS studies on some Paris Basin oil reservoirs, properties, volume estimations and interpretation.

Achievement: Created a new interactive log model including all analysed and interpreted data.

2005-2008: Engineer, Institute of Geology at TUT (Estonia)

- Computation of rock and reservoir properties with empirical relations.
- Geophysical, Petrophysical, Geochemical, Mineralogical Analyses, Interpretation and Correlation. Application of statistical analyses (Statistica for Windows software).

2003-2005: Technician, Institute of Geology at Estonian Academy of Sciences (Estonia)

- Measured and interpreted petrophysical properties of more than 1000 rock samples.

2010-2022: EAGE Conference & Exhibition (European Association of Geoscientists & Engineers)

- Invited session convener and abstracts reviewer (Rock physics, petrophysics, CCS, CO₂-EOR)
2017-2022: Invited reviewer of MDPI journal (Geosciences, Minerals, Processes), Springer Nature journal (Natural Resources Research, International Journal of Earth Sciences), De Gruyter journal (Environmental and Climate Technologies)

LEADERSHIP POSITIONS:

- 2002-....:** Member of Board, the president of Kabardian Cultural Society of Estonia "Elbrus", national cultural organisation (Lyra national minority organisation)
- 2006-....:** Member of Board, Estonian Taekwondo Union - the biggest martial arts organisation in Estonia
- 2008-....:** Member of Board, the president of "Generation" - youth sport, social, cultural organisation (Estonia)
- 2018-....:** Member of Board, Estonian Taekwondo Federation (WT, Olympic TKD, Estonia)
- 2011-....:** Member of Board, the president of Katleri Taekwondo club (Estonia) - the biggest and strongest TKD club in Estonia
- 2015-....:** Member of Board, the president of Katleri Shogen club - one of the strongest TKD club in Estonia
- 2016-....:** Member of Board, the president of Apartment association "Pae Tulp", Pae 17a, Tallinn
- 2019-2022:** Member of Board, the president of administration of Estonian Islamic Centre Foundation
- 2021-....:** Member of Board, the president of CCUS consulting company of SHOGenergy

TECHNICAL TRAINING IN ROCK PHYSICS, EOR AND CCS (2003-2019):

- Institute of Geology at Tallinn University of Technology (Estonia)
- University of Leoben (Austria), <http://www.unileoben.ac.at>
- University of Helsinki (Finland), <http://www.helsinki.fi/geo/english/index.html>
- Research Institute of Earth's Crust of St. Petersburg University (Russia)
- BRGM Laboratories (France) with cooperation of TOTAL Oil Company, www.brgm.fr
- IFPEN (French Institute of Petroleum) petrophysical labs, www.ifpenergiesnouvelles.fr

LABORATORY AND ANALYTICAL EXPERIENCE (2003-2021):

- Data modelling, statistical analysis, scientific papers writing
- Sampling, sample preparation for chemical and physical lab. measurements
- Physical rock properties measurements (water/helium density and porosity, gas permeability, magnetic-susceptibility, residual magnetization, electric resistivity, dielectric constant, acoustic P-, S- wave velocity)
- Rock physics theories application in properties estimation and quality control
- Rock mineralogical description
- Drill core description (carbonate, siliciclastic and oil-bearing core)
- Thin-section analyses using Trans. Electron Microscope (TEM) and Scanning El. Microscope (SEM)
- Well logging data analyses, correlation and interpretation
- Well stratigraphic correlation
- Gamma-ray log interpretation and correlation
- Rock physical, chemical and mineralogical data analyses and correlation
- Reservoir properties analyses (Oil, gas and CO₂ storage)
- Estimation of CO₂ storage capacity in saline aquifers and oil-bearing reservoirs (CO₂-EOR, EOR+)
- Economic modelling of the Estonian-Latvian cross border CO₂ capture-transport-storage scenario
- Seismic data analyses and interpretation, 3D geological static modelling

SELECTION OF TECHNICAL COURSES ATTENDED:

- 2020-** International Para Coach License Level II (World Para Taekwondo)
- 2020-** Special pedagogy (Pedagogy for special needs people), Saint-Petersburg Academy of postgraduate education
- 2020-** International Instructor Seminar (International Taekwon-do Federation)
- 2020-** Children with special needs and features of psychosomatics (Estonian Taekwondo Union)
- 2019-** Theoretical and practical International Instructors Course and Seminar (25 hours, International Taekwon-do Federation, Vienna)
- 2019-** Theoretical coach course, module of sports management, pedagogical-psychological, biomechanical and biomedical subjects (70 hours, Tallinn University, TU)
- 2019 –** Continental License Coach Training Course (World Taekwondo Europe)
- 2017-** Data management and analysis in MS Excel for advanced users (TUT)
- 2013-** Training program – Coach as a leader. Organized by Tallinn University
- 2012-2013-** Marie Curie Research Training Networks (EU FP7) – Quantitative Estimation of Earth's Seismic Sources and Structure – QUEST (OGS, Italy, Trieste). Studied course – Seismic numerical modelling to monitor CO₂ storage in the Baltic Sea offshore structure. This research is the main part of the PhD study
- 2012-** Course of International School of Geophysics on "Understanding Geological Systems for Geothermal Energy" (Erice, Sicily)
- 2011-** Courses for improving skill in ARC-GIS modelling and mapping (TUT)
- 2010-** Training course "Modelling chemical reactivity during CO₂ geological storage" (BRGM, Orleans)
- 2010-** CCS modelling course (Imperial College of London, UK, London)
- 2010-** CCS geochemical course (Max Planck Institute for Marine Microbiology, Germany, Bremen)
- 2010-** Marie Curie Research Training Networks (EU FP6) - GRASP (BRGM, France, Orleans). Studied course – "Petrophysical and mineralogical properties of sandstones from the oil-bearing reservoirs in Paris Basin: prospects for CO₂ storage and Enhanced Oil Recovery"

2004- Geological mapping course. Fieldwork organized by Danish Technical University (Molinos, Spain)

COMPUTING SKILLS:

- Operating systems: MS Windows, MS-DOS, Mac OS
- Programming language: Fortran
- Programs: Petrel, Jewel Suite, Seismic Unix, Absoft Fortran Compiler, MatLab 7, Surfer 8, MS Office, iWork (Pages, Numbers, Keynote), Corel Draw, Front Page, Adobe Photoshop, Dreamweaver, Statistica for Windows, ArcGIS, Adobe InDesign CS.

LINKS TO SCIENTIFIC PROJECTS:

2022-2025- Horizon Europe-HERCCULES: HEROES IN SOUTHERN EUROPE TO DECARBONIZE INDUSTRY WITH CCUS

2022-2025- Horizon Europe CCUS ZEN (CCUS Zero Emission Network) – Leading of WP3

2020-2023- Strategic partnership for fostering circular economy approach in extractive industry-related study programmes (VERT20047)

2021-2022- Hydrogen Storage in European Subsurface (VFP20055)

2020-2022- Routing Deployment of Carbon Capture, Use and Storage CCUS in the Baltic Sea Region (BSR)

2017-2021- CLEANER - CLEAN clinKER production by Calcium looping process (CCUS Work package, Leader of techno-economic modelling task), Horizon 2020

2016-2020- ENOS (ENabling Onshore CO₂ Storage in Europe), Horizon 2020

2015-2016- ESTMAP, Horizon 2020

2016-2017- CO₂ Geological Storage in the Baltic Sea Region/CGS Baltic (Seed money project, V16022)

2012-2017- The Newsletter of the ENeRG Network (LEPGI 299)

2018-2021- The Website of the ENeRG Network

2014-2019- Estonian Ministry of Education & Research programme (SF0320080s07, IUT19-22)

2011-2013- CGS EUROPE, (<http://www.cgseurope.net>), EC FP7

2006-2009- CO₂NET EAST (<http://co2neteast.energnet.com>), EC FP6

2006-2008- EU GEOCAPACITY (<http://nts1.cgu.cz/geocapacity>), EC FP6

2012-2013- CO₂STOP, EC FP7 sub-contract

INDUSTRIAL PROJECTS:

2009- CO₂ geological storage in Estonia and neighbouring regions: analysis and options and storage recommendations (in English and Estonian, confidential)- **Eesti Energia AS**

AWARDS:

2009- 1st Award – "The best M.Sc. student research work-2009" by Estonian Geographical Society in the field of mining, geology and other earth sciences ("Correlation of the Ordovician bedrock in the South Estonian boreholes by petrophysical and geochemical properties")

2007- Student geology and mining award by the Department of Mining at Tallinn University of Technology – 3rd place (research work: "South Estonian lithological discrimination by gamma-ray logs and petrophysical data")

STUDENTS TEACHING:

2022 - Erasmus+ Teacher International Mobility. Lessons for students: "Synergy of CCUS and renewable energy for carbon-neutral future". Seminar for graduated SPE students: "CO₂ and Hydrogen storage site marketing: How to make your storage site unique and attractive?" (13-24.06.2022)

Middle East Technical University (METU), Department of Petroleum & Natural Gas Engineering

2021 - Supervisor of Master study in the field of Hydrogen vehicles modelling: "INVESTIGATING THE PROCESS OF COMPRESSED HYDROGEN REFUELLING OF 80-LITRE TYPE IV TANK OF FUEL CELL VEHICLES" (Master student at Tallinn University of Technology, School of Engineering, Department of Mechatronics, AKSHAY NANKANI, India)

2020-2021 Supervisor of Master study in the field of CO₂ Geological Storage: "North Italian CCS scenario for the cement industry" (Master student Martina Mariani, University of Rome, La Sapienza and Tallinn University of Technology), Defended 02.11.20 (<https://digikogu.taltech.ee/et/Item/c5aae902-34b9-4019-be83-15265cae348b>)

2014-2017- Co-supervisor of PhD study in the field of e-learning: "Conformity Analysis of E-Learning Systems at Largest Universities in Estonia and Turkey on the Basis of EES Model" (PhD student F.Gullu, Tallinn University of Technology Faculty of Information Technology, Department of Informatics). Defended 28.08.17 (<https://digi.lib.ttu.ee/i/?8210>)

2010-2012- Teaching of students at TUT (CCS course, petrophysical/mineralogical study)

RECENT CONFERENCES ATTENDED (2012-2022):

2022- 83rd EAGE (European Association of Geoscientists & Engineers) Conference and Exhibition, 6-9 June, Madrid 2022 (oral presentation "Underground Hydrogen Storage in the Baltic Countries: Future Outlook for Latvia and Estonia"). Chairmen of the CCS and Utilization 2 session.

2017- 79th EAGE Conference & Exhibition incorporating SPE EUROPEC. Poster presentation: New economic concept of synergy of CO₂ geological storage and enhanced oil recovery in E6 structure offshore Latvia. (ID 41665), Th-P7-07, 12-15.06.2017, Paris, France. Invited poster session convener and abstracts reviewer (2010-2020).

2016- 13th Greenhouse Gas Control Technologies conference - GHGT-13. Oral: "Synergy of CO₂ storage and oil recovery in different geological formations: case study in the Baltic Sea". Poster: "3D geological and

petrophysical numerical models of E6 structure for CO₂ storage in the Baltic Sea”.

2016- World Forum of Universities of Resources on Sustainability, Saint-Petersburg, Russia. TUT official representative.

2014- 11th Middle East Geosciences Conference and Exhibition - “GEO”. Invited oral presenter: 3D Geological, Lithological and Petrophysical Numerical Models of E6 Offshore Oil-Bearing Structure in the Baltic Sea. 9-12.03.2014, Bahrain, Manama.

2013- 74th EAGE Conference & Exhibition incorporating SPE EUROPEC 2013. Poster presentation: Seismic Numerical Modelling to Monitor CO₂ Storage in the Baltic Sea Offshore Structure. (ID: 16848), Tu-P08-13, 10-13.06.2013, London, UK. Invited poster session convener and abstracts reviewer (2010-2017)

2013- CGS-Europe, 8th CO₂ GeoNet Open Forum. Poster: Seismic numerical modelling of CO₂ storage in the E6 structure offshore Latvia. 9-11.04.2013, Venice, San Servalo Island, Italy. Invited oral session chairmen.

2012- 11th GHGT conference. Poster: Petrophysical properties and capacity of prospective structures for geological storage of CO₂ onshore and offshore Baltic. 18-22.11.12, Kyoto, Japan.

2012- CGS-Europe, 7th CO₂ GeoNet Open Forum. Poster: Capacity estimation of prospective for CO₂ geological storage onshore and offshore structures in the Baltic Region. 17- 20.04.2012, Venice, San Servalo Island, Italy.

LANGUAGES:

English, Russian, Estonian, Arabic (primary)

DRIVING LICENSE:

2000-... Full EU driving license (B-Motor vehicles (mass < 3500 kg, 8+1))

RECENT PUBLICATIONS [2008-2021] (64 publications 2003-2022, including >30 in Publons):

1. **Shogenov, K.**; Shogenova, A.; Šliaupa, S. **2022**. Underground Hydrogen Storage in the Baltic Countries: Future Outlook for Latvia and Estonia. 83rd EAGE Annual Conference & Exhibition: 83rd EAGE Annual Conference & Exhibition, Madrid, 6-9 June 2022. European Association of Geoscientists & Engineers, 1–5. DOI: 10.3997/2214-4609.202210772.
2. Shogenova, A.; Šliaupa, S.; **Shogenov, K.** **2022**. Underground Hydrogen Storage in the Baltic Countries: Future Outlook for Lithuania. 83rd EAGE Annual Conference & Exhibition: 83rd EAGE Annual Conference & Exhibition, Madrid, 6-9 June 2022. Amsterdam, The Netherlands: European Association of Geoscientists & Engineers, 1–5. DOI: 10.3997/2214-4609.202210707.
3. **Shogenov, K.**; Shogenova, A. **2021**. Innovative synergy CCUS and renewable energy project offshore Baltic using CO₂ emissions from the cement industry. 15th International Conference on Greenhouse Gas Control Technologies, GHGT-15, 15-18 March 2021, Abu Dhabi, UAE. Elsevier, 1–11 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3812387
4. **Shogenov, K.**; Shogenova, A. **2021**. Innovative synergy CCUS and renewable energy project offshore Baltic using CO₂ emissions from the cement industry. 15th International Conference on Greenhouse Gas Control Technologies, GHGT-15, 15-18 March 2021, Abu Dhabi, UAE. Elsevier, 1–11 https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3812387
5. Shogenova, A.; Nordbäck, N.; Sopher, D.; **Shogenov, K.**; Niemi, A.; Juhlin, C.; Šliaupa, S.; Ivandic, M., Wójcicki, A.; Ivask, J.; Klimkowski, L.; Nagy, S. **2021**. Carbon Neutral Baltic Sea Region by 2050: Myth or Reality? 15th International Conference on Greenhouse Gas Control Technologies, GHGT-15, 15th 18th March 2021 Abu Dhabi, UAE. Elsevier, SSRN, Energy, 1–12. DOI: 10.2139/ssrn.3817722.
6. Shogenova, A.; **Shogenov, K.**; Ivask, J.; Habitch, G.; Pellegrino, G. **2021**. Integration of Buzzi and Heidelberg cement plants into the first operating and planned CCUS cluster projects worldwide, using CLEANER project GIS database. 15th International Conference on Greenhouse Gas Control Technologies, GHGT-15 15th 18th March 2021 Abu Dhabi, UAE. Elsevier, SSRN, Energy, 1–12. DOI: 10.2139/ssrn.3813982.
7. Shogenova, A.; **Shogenov, K.**; Uibu, M.; Kuusik, R.; Simmer, K.; Canonico, F. **2021**. Techno-economic modelling of the Baltic CCUS onshore scenario for the cement industry supported by CLEANER project. 15th International Conference on Greenhouse Gas Control Technologies, GHGT-15 15th 18th March 2021 Abu Dhabi, UAE. Elsevier, SSRN, Energy, 1–13. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3817710
8. Shogenova, A.; **Shogenov, K.** **2020**. Definition of a methodology for the development of a techno-economic study for CO₂ transport, storage and utilization. Deliverable D7.1 of the Horizon 2020 CLEANER project. CLEANER.
9. **Shogenov, K.**; Shogenova, A. **2019**. Cost-competitive and self-supporting geothermal energy, CO₂-EOR and CO₂ storage concept: case study of E6 structure in the Baltic Sea. Energy Procedia: 14th Greenhouse Gas Control Technologies Conference Melbourne 21-26 October 2018 (GHGT-14). Available at SSRN: <https://ssrn.com/abstract=3366151>.
10. Shogenova, A., Uibu, M., Gastaldi, D., **Shogenov, K.**, Canonico, F., Trikket, A., Kuusik, R., Ivask, J., Cinti, G. & Simmer, K. **2019**. Transport, utilization and storage of CO₂ emissions produced by cement industry: CCUS study of the CLEANER project. 14th International Conference on Greenhouse Gas Control Technologies, GHGT-14, Melbourne, Australia, 21-25 October, 2018. Elsevier, 1–9. Available at SSRN: papers.ssrn.com/sol3/papers.cfm?abstract_id=3378578
11. Shogenova, A., **Shogenov, K.** & Ivask, J. **2018**. Regional and national regulations, gaps and recommendations for CCUS scenarios. Deliverable 7.3 of the Horizon 2020 CLEANER project N 764816. 1–72.
12. **Shogenov, K.** & Shogenova, A. **2017**. New economic concept of synergy of CO₂ geological storage and enhanced oil recovery in E6 structure offshore Latvia. 79th EAGE Conference and Exhibition 2017: 79th EAGE

- Conference & Exhibition, 12-15 June, 2017, Paris, France, Extended Abstract. EAGE, ID 41665, Th-P7-07, 1-4.
13. Shogenova, A. & **Shogenov, K.** 2017. Integrated use of subsurface and CO₂ for enhanced recovery of resources - way to sustainable development and synergy with renewable energy. 79th EAGE Conference and Exhibition 2017: 79th EAGE Conference & Exhibition, 12-15 June, 2017, Paris, France, Extended Abstract. EAGE, ID 41665, We-P4-01, 1-5.
 14. **Shogenov, K.**, Forlin, E. & Shogenova, A. 2017. 3D geological and petrophysical numerical models of E6 structure for CO₂ storage in the Baltic Sea. Elsevier. Energy Procedia, 114, 3564-3571. <https://doi.org/10.1016/j.egypro.2017.03.1486>
 15. **Shogenov, K.**, Shogenova, A., Gei, D. & Forlin, E. 2017. Synergy of CO₂ storage and oil recovery in different geological formations: case study in the Baltic Sea. Elsevier. Energy Procedia, 114, 7047-7054. <https://doi.org/10.1016/j.egypro.2017.03.1846>
 16. **Shogenov, K.**, Gei, D., Forlin, E. & Shogenova, A. 2016. Petrophysical and numerical seismic modelling of CO₂ geological storage in the E6 structure, Baltic Sea, Offshore Latvia. Petroleum Geoscience, 22, 153-164. DOI:10.1144/petgeo2015-017
 17. Güllü, F., Kuusik, R., **Shogenov, K.**, Laanpere, M., Oysal, Y., Sözcü, Ö. F. & Parlak, Z. 2016. An Analysis and Comparison of Adoption of E-learning Systems in Higher Education by Lecturers at Largest Universities in Estonia and Turkey. Baltic Journal of Modern Computing, 4 (3), 428-440.
 18. **Shogenov, K.** 2015. Petrophysical models of the CO₂ plume at prospective storage sites in the Baltic Basin. PhD thesis, Tallinn University of Technology: TUT Press. <http://digi.lib.ttu.ee/ii/?2520>
 19. **Shogenov, K.**, Shogenova, A., Vizika-Kavvadias, O. & Nauroy, J. F. 2015. Experimental modeling of CO₂-fluid-rock interaction: The evolution of the composition and properties of host rocks in the Baltic Region. Earth and Space Science, 2, 262-284.
 20. **Shogenov, K.**, Shogenova, A., Vizika-Kavvadias, O. & Nauroy, J. F. 2015. Reservoir quality and petrophysical properties of Cambrian sandstones and their changes during the experimental modelling of CO₂ storage in the Baltic Basin. Estonian Journal of Earth Sciences, 64(3), 199-217.
 21. Shogenova, A., Piessens, K., Holloway, S., Bentham, M., Martínez, R., Kristin M. Flornes, K.M., Poulsen, N.E., Wójcicki, A., Sliupa, S., Kucharič, L., Dudu, A., Persoglia, S., Hladik, V., Saftic, B., Kvassnes, A., **Shogenov, K.**, Ivask, J., Suárez, I., Sava, C., Sorin, A. & Chikkatur, A. 2014. Implementation of the EU CCS Directive in Europe: results and development in 2013. Elsevier, The Netherlands. Energy Procedia 63, 6662-6670.
 22. **Shogenov, K.** & Gei, D. 2013. Seismic numerical modeling to monitor CO₂ storage in the Baltic Sea offshore structure. 10-13 June 2013, London, UK, Extended Abstract. EAGE, ID 16848, Tu-P08-13, DOI: 10.3997/2214-4609.20130631, 1-4.
 23. **Shogenov, K.**, Shogenova, A. & Vizika-Kavvadias, O. 2013. Potential structures for CO₂ geological storage in the Baltic Sea: case study offshore Latvia. Bulletin of the Geological Society of Finland, 85(1), ISSN: 0367-5211, 65-81.
 24. **Shogenov, K.**, Shogenova, A. & Vizika-Kavvadias, O. 2013. Petrophysical properties and capacity of prospective structures for geological storage of CO₂ onshore and offshore Baltic. Elsevier, Energy Procedia, 37, DOI: 10.1016/j.egypro.2013.06.417, 5036-5045.
 25. Shogenova, A., Piessens, K., Ivask, J., **Shogenov, K.**, Martínez, R., Suárez, I., Flornes, K.M., Poulsen, N.E., Wójcicki, A., Sliupa, S., Kucharic, I., Dudu, A., Persoglia, S., Holloway S. & Saftic, B. 2013. CCS Directive transposition into national laws in Europe: progress and problems to the end of 2011. Elsevier, Energy Procedia, in press, 1-9.
 26. Kleesment, A., Kirsimäe, K., Martma, T., Shogenova, A., Urtson, K. & **Shogenov, K.** 2012. Linkage of diagenesis to depositional environments and stratigraphy in the northern part of the Baltic basin. Estonian Journal of Earth Sciences, 61(1), 15 - 32.
 27. Shogenova, A.; Shogenov, K.; Vaher, R., Ivask, J., Sliupa, S., Vangkilde-Pedersen, T., Uibu, M. & Kuusik, R. 2011. Energy Procedia 2, Elsevier. CO₂ geological storage capacity analysis in Estonia and neighbouring regions. Energy Procedia, 4, 2785 - 2792.
 28. Shogenova, A.; **Shogenov, K.**, Pomeranceva, R., Nulle, I., Neele, F. & Hendriks, C. 2011. Economic modelling of the capture–transport–sink scenario of industrial CO₂ emissions: the Estonian–Latvian cross-border case study. Energy Procedia, 4, 2385 - 2392.
 29. Shogenova, A., **Shogenov, K.**, Schleifer, N. & Kallaste, T. 2010. Chemical composition and physical properties of the rocks. Viki Drill Core. Eesti Geoloogiakeskus., Tallinn. Estonian Geological Sections, Bulletin 10, 30-35.
 30. Shogenova A., Kleesment A., **Shogenov K.**, Põldvere A. & Jõelet A. 2010. Composition and properties of Estonian Palaeozoic and Ediacaran sedimentary rocks. 72nd EAGE Conference & Exhibition in Barcelona, Spain, Extended Abstracts. EAGE, Houten, The Netherlands. P248, 1-5.
 31. Shogenova, A., Šliupa, S., Vaher, R., **Shogenov, K.**, & Pomeranceva, R. 2009. The Baltic Basin: structure, properties of reservoir rocks and capacity for geological storage of CO₂. Estonian Journal of Earth Sciences. Tallinn. 58(4), 259-267.
 32. Shogenova, A., **Shogenov, K.**, Pomeranceva, R., Neele, F. & Hendriks, C. 2009. Capture–transport–storage scenario of CO₂ emissions produced by oil-shale based industry of Estonia. International Oil Shale Symposium, ABSTRACTS. Tallinn. 1p.
 33. Shogenova, A., Sliupa, S., **Shogenov, K.**, Sliupiene, R., Pomeranceva, R., Uibu, M. & Kuusik, R. 2009. Possibilities for geological storage and mineral trapping of industrial CO₂ emissions in the Baltic region. Elsevier,

- The Netherlands. Energy Procedia 1(1), 2753-2760.
34. Shogenova, A., Kleesment, A., Hirt, A., Pirrus, E., Kallaste, T., **Shogenov, K.** & Vaher, R. **2009**. Composition and properties of the iron hydroxides-cemented lenses in Estonian sandstone of Middle Devonian Age. Stud. Geophys. Geod. 53(1), 111-131.
35. Sliupa, S., Shogenova, A., **Shogenov, K.**, Sliapiene, R., Zabele, A. & Vaher, R. **2008**. Industrial carbon dioxide emissions and potential geological sinks in the Baltic States. Estonian Academy Publishers, Tallinn, Estonia. Oil Shale 25(4), 465-484.
36. Shogenova, A., Sliupa S., Shogenov, K., Sliapiene R., Pomeranceva, R., Uibu, M. & Kuusik, R. 2008. CO₂ geological storage and mineral trapping potential in the Baltic region. Dionyz Stur Publishers, Bratislava, Slovakia. Slovak Geological Magazine 5-14.
37. Shogenova, A. & **Shogenov, K.** **2008**. Chemical composition and physical properties of the rock. In: Põldvere, A. (ed.), Männamaa (F-367) drill core. Geological Survey of Estonia, Tallinn. Estonian Geological Sections Bulletin 9, 33-37.
38. **Shogenov, K.** **2008**. Correlation of the Ordovician bedrock in the South Estonian boreholes by petrophysical and geochemical properties. Master thesis AKG34LT, Tallinn, 62 p., attachments 20 p. https://www.ttu.ee/public/g/Geoloogia_instituut/Oppematerjal/ShogenovMagistritoo.pdf