

Nikolay Khabarov – Curriculum Vitae

Date of Birth: February 10, 1976
Nationality: Russian

Address: International Institute for Applied Systems Analysis (IIASA)
Schlossplatz 1, Laxenburg A-2361, Austria

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Education

Moscow State University, Faculty of Computational Mathematics and Cybernetics

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| 2004 | PhD in Mathematics. Dissertation topic: Methods of Solving Optimal Control Problems Based on Contiguous Ellipsoids. |
| 1993 – 2001 | Student (excellent diploma). Post-graduate studies. |

Skills

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| Languages | English – fluent, German – fair, Russian – mother tongue. |
| Computer | Programmer: C/C++, Java/Swing, Pascal/Delphi, Fortran, Perl, PHP, OpenCL, SQL, HTML, VBA, JavaScript. Programmer/user: GAMS, R, GIS: GRASS, Saga; MatLab, Maple, LaTeX, and MS/Open/Libre Office. |

Professional Experience

International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

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| 2007 - now | Research Scholar | Principal investigator and contributor to IIASA's projects including crop growth modelling, climate change impacts assessment, economics of adaptation, carbon price risks reduction through financial tools supporting REDD, and others. |
| Self-employed | | |
| 2003 - 2006 | Software Developer | Development and marketing of software products for personal productivity and teamwork. |
| PromInvestGas, JSC, Moscow | | |
| 2003 | Head of Business Development | Marketing research and co-ordination of various projects in the field of liquid petroleum gas and petrochemical industry. |
| 2002 | IT-Department / Programmer | Development of an in-house automated workflow system to support supply chain management. |
| VISTA Legal Services, JSC, Moscow | | |
| 2001 | Executive Officer | Implementation of a financial planning system and internal workflow procedures. |
| 2000 | Head of International Department | Establishment of professional relations with major partners in the field of offshore business. |
| 1999 | IT-Department / Programmer | Development of an electronic document handling system. Development of the company's Web site. |

East-West Investment Bank, JSC, Moscow

1998 Fixed Income Trader Trading operations on the Moscow Interbank Currency Exchange (MICEX). Development of an in-house software system for data interchange between back-office and trading department.

Personal

Married, have two children. Interests: literature, pop music, sport/fitness.

List of Publications

Applied Research:

- Khabarov N, Lubowski R, Krasovskii A, and Obersteiner M. Flobsion—Flexible Option with Benefit Sharing. *International Journal of Financial Studies* 2019; 7 (2): p. 22. doi: 10.3390/ijfs7020022.
- Krasovskii A, Khabarov N, Lubowski R, Obersteiner M. Flexible Options for Greenhouse Gas-Emitting Energy Producer. *Energies*. 2019; 12(19):3792. doi: 10.3390/en12193792
- Folberth C, Elliott J, Müller C, Balkovič J, Chryssanthacopoulos J, Izaurralde R.C, Jones C.D, Khabarov N, et al. Parameterization-induced uncertainties and impacts of crop management harmonization in a global gridded crop model ensemble. *PLOS ONE* 2019; 14(9): e0221862. doi: 10.1371/journal.pone.0221862
- Müller C, Elliott J, Kelly D, Arneth A, Balkovic J, Ciais P, Deryng D, Folberth C, Hoek S, Izaurralde R.C, Jones C.D, Khabarov N, Lawrence P, Liu W, Olin S, Pugh T.A.M, Reddy A, Rosenzweig C, Ruane A.C, Sakurai G, Schmid E, Skalsky R, Wang X, de Wit A, Yang H. The Global Gridded Crop Model Intercomparison phase 1 simulation dataset. *Sci. Data* 2019; 6 50. doi:10.1038/s41597-019-0023-8
- Schewe J, Gosling SN, Reyer C, Zhao F, Ciais P, Elliott J, Francois L, Huber V, Lotze HK, Seneviratne SI, van Vliet MTH, Vautard R, Wada Y, Breuer L, Büchner M, Carozza DA, Chang J, Coll M, Deryng D, de Wit A, Eddy TD, Folberth C, Frieler K, Friend AD, Gerten D, Gudmundsson L, Hanasaki N, Ito A, Khabarov N, et al. State-of-the-Art Global Models Underestimate Impacts from Climate Extremes. *Nature Communications* 2019; 10 (1):1005. doi:10.1038/s41467-019-08745-6
- Folberth C, Baklanov A, Balkovič J, Skalský R, Khabarov N, Obersteiner M. Spatio-temporal downscaling of gridded crop model yield estimates based on machine learning. *Agricultural and Forest Meteorology*. 2019; 264, 1–15. doi:10.1016/j.agrformet.2018.09.021
- Khabarov N, Obersteiner M. Modeling Global Trade in Phosphate Rock within a Partial Equilibrium Framework. *Sustainability*. 2018; 10(5):1550. doi:10.3390/su10051550
- Krasovskii A, Khabarov N, Pirker J, Kraxner F, Yowargana P, Schepaschenko D, Obersteiner M. Modeling Burned Areas in Indonesia: The FLAM Approach. *Forests* 2018, 9, 437. doi: 10.3390/f9070437
- Müller C, Elliott J, Pugh TAM, Ruane AC, Ciais P, Balkovic J, Deryng D, Folberth C, Izaurralde RC, Jones CD, Khabarov N, Lawrence P, Liu W, Reddy AD, Schmid E, Wang X. 2018. Global patterns of crop yield stability under additional nutrient and water inputs. *PLOS ONE* 13 e0198748. doi:10.1371/journal.pone.0198748
- Gusti M, Forsell N, Havlik P, Khabarov N, Kraxner F, and Obersteiner M. 2018. “The Sensitivity of the Costs of Reducing Emissions from Deforestation and Degradation (REDD) to Future Socioeconomic Drivers and Its Implications for Mitigation Policy Design.” *Mitigation and Adaptation Strategies for Global Change*. doi:10.1007/s11027-018-9817-9.
- Balkovič J, Skalský R, Folberth C, Khabarov N, Schmid E, Madaras M, Obersteiner M and van der Velde M (2018), Impacts and Uncertainties of +2°C of Climate Change and Soil Degradation on European Crop Calorie Supply. *Earth's Future*. doi:10.1002/2017EF000629
- Golub A, Fuss S, Lubowski R, Hiller J, Khabarov N, Koch N, Krasovskii A, Kraxner F, Laing T, Obersteiner M, Palmer C, Piris-Cabezas P, Reuter W, Szolgayová J, Taschini L & Wehkamp J (2018) Escaping the climate policy uncertainty trap: options contracts for REDD+, *Climate Policy*, doi:10.1080/14693062.2017.1422478
- Khabarov N, Obersteiner M (2017) Global Phosphorus Fertilizer Market and National Policies: A Case Study Revisiting the 2008 Price Peak. *Frontiers in Nutrition*, Vol. 4, 2017. doi:10.3389/fnut.2017.00022

- Arneth A, Balkovic J, Ciais P, de Wit A, Deryng D, Elliott J, Folberth C, Glotter M, Iizumi T, Izaurrealde RC, Jones AD, Khabarov N, Lawrence P, Liu W, Mitter H, Müller C, Olin S, Pugh TAM, Reddy AD, Sakurai G, Schmid E, Wang X, Wu X, Yang H, Büchner M (2017) ISIMIP2a Simulation Data from Agricultural Sector. GFZ Data Services. doi:10.5880/PIK.2017.006
- Khabarov N, Krasovskii A, Schwartz A, McCallum I, and Obersteiner M (2017). Socioeconomic Value of Hydrometeorological Information in Austria. In: Kruse JB, Crompvoets J, and Pearlman F (eds), GEOvalue: The Socioeconomic Value of Geospatial Information. Boca Raton, FL: Taylor & Francis - CRC Press. ISBN: 978-1-4987-7451-2
- Krasovskii A, Khabarov N (2017). Opportunity costs and offsets acceptance in FI-REDD model. IIASA Working Paper. IIASA, Laxenburg, Austria: WP-17-019, <http://pure.iiasa.ac.at/14876/>
- Obersteiner M, Balkovič J, Böttcher H, Bouma J, Fritz S, Fuss S, Havlik P, Heumesser C, Hochrainer S, Jantke K, Khabarov N, et al. 2017. "The Value of Global Earth Observations." In *Satellite Earth Observations and Their Impact on Society and Policy*, Eds. Onoda M and Young O.R., 137–42. Singapore: Springer Singapore. doi:10.1007/978-981-10-3713-9_12
- Frieler K, Schauburger B, Arneth A, Balkovic J, Chryssanthacopoulos J, Deryng D, Elliott J, Folberth C, Khabarov N, Müller C, Olin S, Pugh TAM, Schaphoff S, Schewe J, Schmid E, Warszawski L and Levermann A, Understanding the weather signal in national crop-yield variability. *Earth's Future*. Accepted Author Manuscript. doi:10.1002/2016EF000525
- Müller C, Elliott J, Chryssanthacopoulos J, Arneth A, Balkovic J, Ciais P, Deryng D, Folberth C, Glotter M, Hoek S, Iizumi T, Izaurrealde RC, Jones C, Khabarov N, et al. (2017) Global gridded crop model evaluation: benchmarking, skills, deficiencies and implications, *Geosci. Model Dev.*, 10, 1403-1422, doi:10.5194/gmd-10-1403-2017
- Schauburger B, Archontoulis S, Arneth A, Balkovic J, Ciais P, Deryng D, Elliott J, Folberth C, Khabarov N, Müller C, Pugh TAM, Rolinski F, Schaphoff S, Schmid E, Wang X, Schlenker W and Frieler K (2017) Consistent negative response of US crops to high temperatures in observations and crop models. *Nature Communications*, 8. art.no.13931. doi:10.1038/NCOMMS13931
- Folberth C, Elliott J, Müller C, Balkovic J, Chryssanthacopoulos J, Izaurrealde RC, Jones CD, Khabarov N, Liu W, Reddy A, Schmid E, Skalsky R, Yang H, Arneth A, Ciais P, Deryng D, Lawrence PJ, Olin S, Pugh TAM, Ruane AC and Wang X (2016) Uncertainties in global crop model frameworks: effects of cultivar distribution, crop management and soil handling on crop yield estimates. *Biogeosciences Discussions*. pp. 1-30. (In Press)
- Porwollik V, Müller C, Elliott J, Chryssanthacopoulos J, Iizumi T, Ray DK, Ruane AC, Arneth A, Balkovič J, Ciais P, Deryng D, Folberth C, Izaurrealde RC, Jones CD, Khabarov N, Lawrence PJ, Liu W, Pugh TAM, Reddy A, Sakurai G, Schmid E, Wang X, de Wit A, Wu X (2016) Spatial and temporal uncertainty of crop yield aggregations. *European Journal of Agronomy*. doi:10.1016/j.eja.2016.08.006
- Krasovskii A, Khabarov N, Obersteiner M (2016). CO₂-intensive power generation and REDD-based emission offsets with a benefit-sharing mechanism. *Energy Syst.* doi:10.1007/s12667-016-0222-8 (open access, published online: 04 October 2016)
- Krasovskii A, Khabarov N, Obersteiner M (2016). Fair pricing of REDD-based emission offsets under risk preferences and benefit-sharing. *Energy Policy*, Vol. 96, Pages 193–205. doi:10.1016/j.enpol.2016.05.040
- Deryng D, Elliott J, Folberth C, Muller C, Pugh TAM, Boote KJ, Conway D, Ruane AC, Gerten D, Jones JW, Khabarov N, Olin S, Schaphoff S, Schmid E, Yang H, Rosenzweig C (2016). Regional disparities in the beneficial effects of rising CO₂ concentrations on crop water productivity. *Nature Climate Change* (advance online publication) doi:10.1038/nclimate2995
- Krasovskii A, Khabarov N, Migliavacca M, Kraxner F, Obersteiner M (2016). Regional aspects of modelling burned areas in Europe. *International Journal of Wildland Fire*, doi:10.1071/WF15012 (published online: 02 February 2016)
- Khabarov N, Krasovskii A, Obersteiner M, et al (2016) Forest fires and adaptation options in Europe. *Reg Environ Change* 16(1):21-30 doi:10.1007/s10113-014-0621-0 (published online: 07 September 2014).
- Ermolieva T, Havlik P, Ermoliev Y, Mosnier A, Obersteiner M, Leclère D, Khabarov N, Valin H, Reuter W (2016). Integrated Management of Land Use Systems under Systemic Risks and Security Targets: A Stochastic Global Biosphere Management Model. *Journal of Agricultural Economics* 67 (3): 584–601. doi:10.1111/1477-9552.12173
- Ermolieva TY, Ermoliev YM, Havlik P, Mosnier A, Leclere D, Kraxner F, Khabarov N & Obersteiner M (2015). Systems analysis of robust strategic decisions to plan secure food, energy, and water provision based on the stochastic GLOBIOM model. *Cybernetics and Systems Analysis*, 51(1):125-133 (January 2015)

- Krasovskii A, Khabarov N & Obersteiner M (2015). CO₂-intensive power generation and REDD-based emission offsets with a benefit sharing mechanism. IIASA Interim Report IR-15-018.
- Krasovskii A, Khabarov N & Obersteiner M (2015). Fair pricing of REDD-based emission offsets under risk preferences and benefit sharing. IIASA Interim Report IR-15-019.
- Havlík P, Valin H, Gusti M, Schmid E, Leclère D, Forsell N, Herrero M, Khabarov N, Mosnier A, Cantele M, Obersteiner M (2015) Climate Change Impacts and Mitigation in the Developing World: An Integrated Assessment of the Agriculture and Forestry Sectors; World Bank, Policy Research Working Paper 7477.
- Frieler K, Levermann A, Elliott J, Heinke J, Arneth A, Bierkens MFP, Ciais P, Clark DB, Deryng D, Döll P, Falloon P, Fekete B, Folberth C, Friend AD, Gellhorn C, Gosling SN, Haddeland I, Khabarov N, et al (2015) A framework for the cross-sectoral integration of multi-model impact projections: land use decisions under climate impacts uncertainties. *Earth Syst Dynam* 6, 447–460. doi:10.5194/esd-6-447-2015
- Fuss S, Havlík P, Szolgayová J, Schmid E, Reuter W H, Khabarov N, Obersteiner M, Ermoliev Yu, Ermolieva T, Kraxner F (2015) Global food security & adaptation under crop yield volatility, *Technological Forecasting and Social Change*, ISSN 0040-1625. doi:10.1016/j.techfore.2015.03.019
- Huggel C, Scheel M, Albrecht F, Andres N, Calanca P, Jurt C, Khabarov N, Mira-Salama D, Rohrer M, Salzmann N, Silva Y, Silvestre E, Vicuña L, Zappa M (2015) A framework for the science contribution in climate adaptation: Experiences from science-policy processes in the Andes. *Environ Sci Policy* 47:80–94. doi:10.1016/j.envsci.2014.11.007
- Krasovskii A, Khabarov N, Obersteiner M (2014) Impacts of the fairly priced REDD-based CO₂ offset options on the electricity producers and consumers. *Econ Reg* 273–288.
- Leclere D, Havlik P, Fuss S, Schmid E, Mosnier A, Walsh B, Valin H, Herrero M, Khabarov N & Obersteiner M (2014). Climate change induced transformations of agricultural systems: insights from a global model. *Environmental Research Letters*, 9(12):124018 doi:10.1088/1748-9326/9/12/124018
- Piontek F, Mueller C, Pugh TAM, Clark DB, Deryng D, Elliott J, Folberth C, Frieler K, Friend AD, Khabarov N, Mengel M, Ostberg S, Schewe J, Warszawski L, Wisser D, Schellnhuber HJ, et al. (2014). Multisectoral climate impact hotspots in a warming world. *PNAS*, 111(9):3233-3238 (4 March 2014) (Published online 16 December 2013).
- Rosenzweig C, Elliott J, Deryng D, Ruane AC, Mueller C, Arneth A, Boote KJ, Folberth C, Khabarov N, et al. (2014). Assessing agricultural risks of climate change in the 21st century in a global gridded crop model intercomparison. *PNAS*, 111(9):3268-3273 (4 March 2014) (Published online 16 December 2013).
- Elliott J, Deryng D, Mueller C, Folberth C, Khabarov N, Rosenzweig C, Wisser D, et al. (2014). Constraints and potentials of future irrigation water availability on agricultural production under climate change. *PNAS*, 111(9):3239-3244 (4 March 2014) (Published online 16 December 2013).
- Balkovič J, van der Velde M, Skalský R, Xiong W, Folberth C, Khabarov N, Smirnov A, Mueller ND, Obersteiner M (2014) Global wheat production potentials and management flexibility under the representative concentration pathways. *Glob Planet Change* 122:107–121. doi:10.1016/j.gloplacha.2014.08.010
- Xiong W, van der Velde M, Holman IP, Balkovic J, Lin E, Skalský R, Porter C, Jones J, Khabarov N, Obersteiner M (2014) Can climate-smart agriculture reverse the recent slowing of rice yield growth in China? *Agric Ecosyst Environ* 196:125–136. doi: 10.1016/j.agee.2014.06.014
- van der Velde M, Balkovic J, Beer C, Khabarov N, Kuhnert M, Obersteiner M, Skalsky R, Xiong W & Smith P (2014). Future climate variability impacts on potential erosion and soil organic carbon in European croplands. *Biogeosciences Discussions*, 11:1561-1585(23 January 2014).
- Mosnier A, Obersteiner M, Havlik P, Schmid E, Khabarov N, Westphal M, Valin H, Frank S & Albrecht F (2014). Global food markets, trade and the cost of climate change adaptation. *Food Security*, 6(1):29-44 (February 2014) (Published online 26 January 2014).
- Zhao Q, Liu J, Khabarov N, Obersteiner M & Westphal M (2014). Impacts of climate change on virtual water content of crops in China. *Ecological Informatics*, 19(1):26-34 (January 2014) (Published online 14 December 2013).
- Romanovskaya AA, Anisimov OA, Kurganova IN, Komarov AS, Mukhortova LV, Pozdnyakov LA, Romanenkov VA, Sirin AA, Stepanov AL, Khabarov NV, Shvidenko AZ, Shchepashchenko DG (2014) Carbon balance of soil: consequences of climate change. Chapter 4.5. In: *Second ROSHYDROMET Assessment Report on Climate Change and its Consequences in Russian Federation*. Moscow: Federal Service for Hydrometeorology and Environmental Monitoring (ROSHYDROMET). Pp. 507-550. [In Russian] http://downloads.igce.ru/publications/OD_2_2014/v2014/htm/

- Migliavacca M, Dosio A, Camia A, Houborg R, Houston-Durrant T, Kaiser JW, Khabarov N, Krasovskii AA, Marcolla B, San Miguel-Ayanz J, Ward DS & Cescatti A (2013). Modeling biomass burning and related carbon emissions during the 21st century in Europe. *Journal of Geophysical Research: Biogeosciences*, 118(4):1732-1747 (December 2013) (Published online 8 November 2013).
- Balkovic J, van der Velde M, Schmid E, Skalsky R, Khabarov N, Obersteiner M, Sturmer B & Xiong W (2013). Pan-European crop modelling with EPIC: Implementation, up-scaling and regional crop yield validation. *Agricultural Systems*, 120:61-75 (September 2013)(Published online 3 July 2013).
- Kraxner F, Nordstrom E-M, Havlik P, Gusti M, Mosnier A, Frank S, Valin H, Fritz S, Fuss S, Kindermann G, McCallum I, Khabarov N, Bottcher H, See L, Aoki K, Schmid E, Mathe L & Obersteiner M (2013). Global bioenergy scenarios - Future forest development, land-use implications, and trade-offs. *Biomass and Bioenergy*, 57:86-96 (October 2013)(Published online 2 May 2013).
- Migliavacca M, Dosio A, Kloster S, Ward DS, Camia A, Houborg R, Houston-Durrant T, Khabarov N, Krasovskii AA, San Miguel-Ayanz J & Cescatti A (2013). Modeling burned area in Europe with the Community Land Model. *Journal of Geophysical Research: Biogeosciences*, 118(1):265-279 (March 2013) (Published online 18 March 2013).
- van der Velde M, See L, You L, Balkovic J, Fritz S, Khabarov N, Obersteiner M & Wood S (2013). Affordable nutrient solutions for improved food security as evidenced by crop trials. *PLoS ONE*, 8(4):e60075 (2 April 2013).
- van der Velde M, See L, Fritz S, Verheijen FGA, Khabarov N & Obersteiner M (2012). Generating crop calendars with Web search data. *Environmental Research Letters*, 7(2):024022 (April-June 2012).
- Szolgayova J, Fuss S, Khabarov N & Obersteiner M (2012). Robust energy portfolios under climate policy and socioeconomic uncertainty. *Environmental Modeling and Assessment*, 17(1-2):39-49 (March 2012) (Published online 5 July 2011).
- Fuss S, Szolgayova J, Khabarov N & Obersteiner M (2012). Renewables and climate change mitigation: Irreversible energy investment under uncertainty and portfolio effects. *Energy Policy*, 40:59-68 (January 2012)(Published online 24 July 2010).
- Huggel C, Khabarov N, Korup O & Obersteiner M (2012). Physical impacts of climate change on landslide occurrence and related adaptation. In: Clague J & Stead D (eds), *Landslides: Types, Mechanisms and Modeling*. Cambridge University Press, Cambridge, UK.
- Khabarov N, Huggel C, Obersteiner M & Ramirez JM (2011). Adaptation capacity of a landslide early warning system to climate change: Numerical modeling for the Combeima region in Colombia. *Journal of Integrated Disaster Risk Management*, 1(2)(13 December 2011).
- Szolgayova J, Fuss S, Khabarov N & Obersteiner M (2011). A dynamic CVaR-portfolio approach using real options: An application to energy investments. *European Transactions on Electrical Power*, 21(6):1825-1841 (September 2011) (Published online 27 May 2010).
- Moltchanova E, Khabarov N, Obersteiner M, Ehrlich D & Moula M (2011). The value of rapid damage assessment for efficient earthquake response. *Safety Science*, 49(8-9):1164-1171 (October 2011) (Published online 22 April 2011).
- Khabarov N (2011). Value of Earth Observations: Forest fires, earthquakes, and landslides. In: Borzacchiello MT & Craglia M (eds), *Socio-Economic Benefits from the Use of Earth Observation: Report from the International Workshop*. 11-13 July 2011, JRC - Joint Research Centre, Ispra, Italy.
- Huggel C, Khabarov N, Obersteiner M & Ramirez JM (2010). Implementation and integrated numerical modeling of a landslide early warning system: A pilot study in Colombia. *Natural Hazards*, 52(2):501-518 (February 2010) (Published online 22 April 2009).
- McCallum I, Fritz S, Khabarov N, Fuss S, Szolgayova J, Rydzak F, Havlik P, Kraxner F, Obersteiner M, Aoki K, et al. (2010). Identifying and quantifying the benefits Of GEOSS. *Earthzine*, posted on 12 July 2010 in Articles, Earth Observation, Economy, GEOSS/ICEO News.
- Szolgayova J, Fuss S, Khabarov N & Obersteiner M (2010). Robust long-term energy portfolios - A climate mitigation analysis. In: *Proceedings of the International Conference on Applied Energy (ICAE 2010)*. 21-23 April 2010, Singapore, pp.782-793.
- Fuss S, Khabarov N, Szolgayova J & Obersteiner M (2009). The effects of climate policy on the energy technology mix: An integrated CVaR and Real Options Approach. In: Golub A & Markandya A (eds), *Modeling Environment - Improving Technological Innovations under Uncertainty*. Routledge, London, UK (2009).

- Szolgayova J, Fuss S, Khabarov N & Obersteiner M (2009). A dynamic CVaR-portfolio approach using real options: An application to energy investments. In: *2009 6th International Conference on the European Energy Market (EEM 2009)*. 27-29 May 2009, Leuven, Belgium.
- Fuss S, Khabarov N, Szolgayova J & Obersteiner M (2009). Valuing climate change uncertainty reductions for robust energy portfolios. In: *Proceedings from the 33rd International Symposium on Remote Sensing of Environment (ISRSE-33) "Sustaining the Millennium Development Goals"*. 4-8 May 2009, Stresa, Italy.
- Khabarov N, Bun A & Obersteiner M (2009). The value of observations for reduction of earthquake-induced loss of life on a global scale. In: *Proceedings from the 33rd International Symposium on Remote Sensing of Environment (ISRSE-33) "Sustaining the Millennium Development Goals"*. 4-8 May 2009, Stresa, Italy.
- Khabarov N, Moltchanova E & Obersteiner M (2009). Value of weather observations for reduction of forest fire impact on population. In: *Proceedings from the 33rd International Symposium on Remote Sensing of Environment (ISRSE-33) "Sustaining the Millennium Development Goals"*. 4-8 May 2009, Stresa, Italy.
- Khabarov N, Moltchanova E & Obersteiner M (2008). Valuing weather observation systems for forest fire management. *Systems Journal, IEEE*, 2(3):349-357 (September 2008).
- Fortin I, Fuss S, Hlouskova J, Khabarov N, Obersteiner M & Szolgayova J (2008). An integrated CVaR and real options approach to investments in the energy sector. *The Journal of Energy Markets*, 1(2):61-85 (Summer 2008).
- Fortin I, Fuss S, Hlouskova J, Khabarov N, Obersteiner M & Szolgayova J (2007). An Integrated CVaR and Real Options Approach to Investments in the Energy Sector. Economic Series #209, Institute for Higher Studies, Vienna, Austria (May 2007).

Technical Writing:

- Khabarov N (2012). *Documentation describing a netCDF-4.1.3 port using MinGW to build native Windows 64-bit and 32-bit DLLs*. Contribution to the official NetCDF documentation - online technical documentation and source code. University Corporation for Atmospheric Research. URL: http://www.unidata.ucar.edu/software/netcdf/docs/faq.html#windows_netcdf4_1 Direct URL: <http://user.iiasa.ac.at/~khabarov/netcdf-win64-and-win32-mingw/>

Published Datasets:

- Balkovic J, Khabarov N & Skalsky R (2019). AgMIP's global gridded crop model intercomparison (GGCMI) phase II CTWN-A archive: priority 1 outputs from EPIC-IIASA maize simulations [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.2582453>
- Balkovic J, Khabarov N & Skalsky R (2019). AgMIP's global gridded crop model intercomparison (GGCMI) phase II CTWN-A archive: priority 1 outputs from EPIC-IIASA soybean simulations [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.2582461>
- Balkovic J, Khabarov N & Skalsky R (2019). AgMIP's global gridded crop model intercomparison (GGCMI) phase II CTWN-A archive: priority 1 outputs from EPIC-IIASA winter wheat simulations [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.2582463>
- Balkovic J, Khabarov N & Skalsky R (2019). AgMIP's global gridded crop model intercomparison (GGCMI) phase II CTWN-A archive: priority 1 outputs from EPIC-IIASA spring wheat simulations [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.2582465>
- Balkovic J, Khabarov N & Skalsky R (2019). AgMIP's global gridded crop model intercomparison (GGCMI) phase II CTWN-A archive: priority 1 outputs from EPIC-IIASA rice simulations [Data set]. Zenodo. <http://doi.org/10.5281/zenodo.2582457>

Mathematics:

- Khabarov N.V., "Quadratic-order convergence algorithms for projection of a point onto a smooth convex compact set", In: *Abstracts of talks of "Voronezh Winter Mathematical School 2001 (Contemporary Methods of Function Theory and Related Problems)"*, pp. 269-270, Voronezh, Russia, 2001 [in Russian]
- Khabarov N.V., "Quadratic-order convergence algorithms for solving time-optimal problems", In: *Abstracts of talks of "Voronezh Spring Mathematical School 2001 (Contemporary Methods of the Boundary Value Problems Theory)"*, pp.164-165, Voronezh, Russia, 2001 [in Russian]

- Khabarov N.V., “An algorithm of solving of a time-optimal problem based on projection of a final state onto an attainable set”, In: *Proceedings of the XXIV Conference of the Young Scientists of Mechanics and Mathematics Faculty of Moscow State University named after M.V. Lomonosov*, pp. 182-184, Moscow, 2002 [in Russian]
- Khabarov N.V., “An algorithm for solving an optimal control problem based on the construction of tangent ellipsoids”, In: *Abstracts of talks of “Voronezh Spring Mathematical School 2002 (Contemporary Methods of the Boundary Value Problems Theory)”*, pp.156-157, Voronezh, Russia, 2002 [in Russian]
- Khabarov N.V., “An algorithm for projection of a point onto a set”, In: *Abstracts of talks of “Voronezh Spring Mathematical School 2003 (Contemporary Methods of the Boundary Value Problems Theory)”*, p.145, Voronezh, Russia, 2003 [in Russian]
- Kiselev Yu.N., Khabarov N.V., “Tangent ellipsoids in algorithms for solving a linear time-optimal problem”, In: *Proceedings of the 10th International Conference for Automatic Control “Automatics-2003”*, pp. 49-50, Vol. 1, Sevastopol, Ukraine, 2003 [in Russian]
- Khabarov N.V., “A method of solving a linear optimal control problem with a terminal functional of type “difference norm” based on tangent ellipsoids”, 67 pages, Moscow State University, Moscow, 2003, deposited on 20.10.2003 with VINITI #1832-B2003 [in Russian]
- Khabarov N.V., “A method of solving a linear time-optimal problem based on tangent ellipsoids”, 66 pages, Moscow State University, Moscow, 2003, deposited on 20.10.2003 with VINITI #1834-B2003 [in Russian]
- Kiselev Yu.N., Khabarov N.V., “About the quadratic order of convergence in the projection scheme for solving a problem of capturing a point by a family of convex sets”, In: *Electronic magazine “Investigated in Russia”*, pp. 2068-2077, Moscow, 2003, URL: <http://zhurnal.ape.relarn.ru/articles/2003/170.pdf> [in Russian]
- Kiselev Yu.N., Khabarov N.V., “Quadratic-order convergence algorithms for solving the problem of capturing a point by a family of convex sets”, In: *“Nonlinear Dynamics and Control. Issue 4”*, pp. 241-256, Editors: Emelyanov S.V., Korovin S.K., Fizmatlit, Moscow, 2004 [in Russian]
- Kiselev Yu.N., Khabarov N.V., “Algorithms having quadratic order of convergence applicable for solving the problem of capturing a point by a family of convex sets”, In: *Proceedings of “Mathematical models in economics and ecology. Scientific workshop: Khimki, Moscow Region, 2004, January 27–29”*, pp. 53-56, MAKS Press, Moscow, 2004 [in Russian]
- Kiselev Yu. N., Khabarov N. V., “Quadratic Convergence Algorithms for the Problem of Capture of a Point by a Family of Convex Bodies”, In: *Computational Mathematics and Modeling*, pp.57-72, Vol. 19, No. 1, 2008, Springer Science+Business Media, Inc.

Selected presentations:

- Fair pricing of REDD-based emission offsets under risk preferences and benefit-sharing*, video presentation supporting published paper available online under Creative Commons Attribution license: <http://linkinghub.elsevier.com/retrieve/doi/10.1016/j.enpol.2016.05.040?goto=sd> June, 2016
- Spatial Analysis of Weather-induced Annual and Decadal Average Yield Variability as Modeled by EPIC for Rain-fed Wheat in Europe*, EGU General Assembly 2016, Vienna, Austria, 17-22 April 2016
- Risk Aversion & Fairly-Priced REDD Forwards*, International Union of Forest Research Organizations 2014 World Congress, Salt Lake City, Utah, USA, October 05 -October 11, 2014
- Forest Fires and Adaptation Options in Europe*, International Union of Forest Research Organizations 2014 World Congress, Salt Lake City, Utah, USA, October 05 -October 11, 2014
- Treatment of Uncertainty in Economic Assessment of Adaptation*, ECONADAPT EU FP7 Project General Assembly, Bilbao, Spain, 26-27 May 2014.
- Risk Aversion & Fairly-Priced REDD Forwards*, NORAD Project "Options Market and Risk Reduction Tools for REDD+", Progress Meeting, Berlin, Germany, 17-18 February 2014.
- Assessing Mitigation and Adaptation Options in an Integrated Modeling Framework*, Workshop III of the Andes Plus Project, Zurich, Switzerland, 3-4 May 2012.
- Value of Earth Observations: Forest Fires, Earthquakes, and Landslides*, Workshop on socioeconomic benefits of the use of Earth observations, JRC, Ispra, 11-13 July 2011.
- Climate Change Adaptation Capacity of a Landslide EWS: Analysis through Numerical Modeling*, 1st Annual Conference of the International Society for Integrated Disaster Risk Management - IDRiM 2010, Vienna, Austria, 1 – 3 September 2010.

- Integrated numerical modeling of a landslide early warning system in a context of adaptation to future climatic pressures*, European Geosciences Union General Assembly 2010, Vienna, Austria, 02 – 07 May 2010.
- Satellite-Based Built-Up Area Monitoring for Efficient Earthquake Response: A Case Study of Grande-Terre Island, Guadeloupe*, Symposium on Small Satellite Programs for Sustainable Development, Graz, Austria, 8 - 11 September 2009.
- The Value of Observations for Reduction of Earthquake-Induced Loss of Life on a Global Scale*, United Nations International UN-SPIDER Workshop: Building Capacities to Reduce Disasters, Vienna, Austria, 2 - 4 June 2009.
- Value of Weather Observations for Reduction of Forest Fire Impact on Population*. 33rd International Symposia on Remote Sensing of Environment, Stresa, Italy, May 4-8, 2009.
- The Value of Observations for Reduction of Earthquake-Induced Loss of Life on a Global Scale*. 33rd International Symposia on Remote Sensing of Environment, Stresa, Italy, May 4-8, 2009.
- Weather Observation Systems and Efficiency of Fighting Forest Fires*, AGU Fall Meeting, San Francisco, California, USA, December 10–14, 2007.
- Endogenous Diversification Effects Due to Robust Management of Technologies Under Uncertainty*, Workshop on Co-evolutionary Dynamism between Innovation and Institutional Systems, Tokyo, Japan, March 27-28, 2007.