

Topics of the term and diploma papers for MSc students of the 1st and the 2nd year/

Темы курсовых работ и магистерских диссертаций для студентов 1 и 2 курсов

Given topics are tentative. The exact formulation should be negotiated with the supervisor/

Темы дипломных работ даны ориентировочно.
Точные формулировки определяются в согласовании с научным руководителем

Sofya Budanova, PhD	2
Tatiana Mayskaya, PhD	3
Alexis Belianin, PhD	5
Maxim Nikitin, PhD	6
Sergey Stepanov, PhD	7
Emiliano Catonini, PhD	8
Roman Zakharenko, PhD	10
Anna Yurko, PhD	11
Fabian Slonimczyk, PhD	12
Vitalijs Jascisens, PhD	13
Steven Kivinen, Ph.D	20
Roman Chuhay, PhD	21
Markus Gebauer, PhD	22
Vladimir Sokolov, PhD	23
Luca Gelsomini, PhD	24
Alexei Boulatov, PhD	25
Dmitry Makarov, PhD	26
Udara Peiris, PhD	27
Vincent Fardeau, PhD	28
Sylvain Carré, PhD	29
Runjie Geng, PhD	31
Peio Zuazo-Garin, PhD	32
Maria Kokoreva	33
Victor Lapshin	33
Professor Guglielmo Maria Caporale, MSc, PhD	34
Viatcheslav Mishchenko	37
Maria Semenova	39
Sergey Gelman, PhD	43

Sofya Budanova, PhD

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Research Interests: Econometrics

Penalized estimation:

- Jianqing Fan and Runze Li. Variable selection via nonconcave penalized likelihood and its oracle properties. *Journal of the American Statistical Association*, 96(456):1348–1360, 2001.
- Robert Tibshirani. Regression shrinkage and selection via the lasso. *Journal of the Royal Statistical Society. Series B (Methodological)*, pages 267–288, 1996.
- Hui Zou. The adaptive lasso and its oracle properties. *Journal of the American statistical association*, 101(476):1418–1429, 2006.
- Keith Knight and Wenjiang Fu. Asymptotics for lasso-type estimators. *Annals of statistics*, pages 1356–1378, 2000.
- Cun-Hui Zhang. Nearly unbiased variable selection under minimax concave penalty. *The Annals of Statistics*, pages 894–942, 2010.
- Benedikt M Pötscher and Hannes Leeb. On the distribution of penalized maximum likelihood estimators: The lasso, scad, and thresholding. *Journal of Multivariate Analysis*, 100(9):2065–2082, 2009.

Finite mixture models (identification, estimation, application):

- Sidney J Yakowitz and John D Spragins. On the identifiability of finite mixtures. *The Annals of Mathematical Statistics*, pages 209–214, 1968.
- Henry Teicher. Identifiability of finite mixtures. *The Annals of Mathematical Statistics*, pages 1265–1269, 1963.
- Khalaf E Ahmad and Essam K Al-Hussaini. Remarks on the non-identifiability of mixtures of distributions. *Annals of the Institute of Statistical Mathematics*, 34(1):543–544, 1982.
- Elizabeth S Allman, Catherine Matias, and John A Rhodes. Identifiability of parameters in latent structure models with many observed variables. *The Annals of Statistics*, pages 3099–3132, 2009.
- Marc Henry, Yuichi Kitamura, and Bernard Salanié. Partial identification of finite mixtures in econometric models. *Quantitative Economics*, 5(1):123–144, 2014.
- Geoffrey McLachlan and David Peel. *Finite mixture models*. Wiley, 2004.
- Antoni Bosch-Domènech, José G Montalvo, Rosemarie Nagel, and Albert Satorra. A finite mixture analysis of beauty-contest data using generalized beta distributions. *Experimental economics*, 13(4):461–475, 2010.
- Teck-Hua Ho, Colin Camerer, and Keith Weigelt. Iterated dominance and iterated best response in experimental “p-beauty contests”. *The American Economic Review*, 88(4): 947–969, 1998.
- James D Hamilton. Regime switching models. In *Macroeconometrics and Time Series Analysis*, pages 202–209. Springer, 2010.
- Rosemarie Nagel. Unraveling in guessing games: An experimental study. *The American Economic Review*, 85(5):1313–1326, 1995.

- Michael P Keane and Kenneth I Wolpin. The career decisions of young men. *Journal of political Economy*, 105(3):473–522, 1997.
- Hu, Y., McAdams, D., & Shum, M. (2013). Identification of first-price auctions with non-separable unobserved heterogeneity. *Journal of Econometrics*, 174(2), 186-193.

Tatiana Mayskaya, PhD

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Research Interests: Economics of Information, Microeconomics, Experimental Economics, Behavioral Economics, Networks

Requirements for students: Please write a *motivation letter* where you should specify what research question you want to study and why; this letter should not be treated as a formality but as means to express your *actual motivation* to work with me.

Topics:

- **Dynamic information collection and experimentation – one decision maker**
 - Chaloner, Kathryn, and Isabella Verdinelli. “Bayesian experimental design: A review.” *Statistical Science*, 1995.
 - Moscarini, Giuseppe, and Lones Smith. “The optimal level of experimentation.” *Econometrica*, 2001.
 - Keller, Godfrey, Sven Rady, and Martin Cripps. “Strategic experimentation with exponential bandits.” *Econometrica*, 2005.
 - Shiryaev, Albert N. *Optimal stopping rules*. Vol. 8. Springer Science & Business Media, 2007.
 - Keller, Godfrey, and Sven Rady. “Strategic experimentation with Poisson bandits.” *Theoretical Economics*, 2010.
 - Gittins, John, Kevin Glazebrook, and Richard Weber. *Multi-armed bandit allocation indices*. John Wiley & Sons, 2011.
 - Klein, Nicolas, and Sven Rady. “Negatively correlated bandits.” *Review of Economic Studies*, 2011.
 - Keller, Godfrey, and Sven Rady. “Breakdowns.” *Theoretical Economics*, 2015.
 - Ke, T. Tony, Zuo-Jun Max Shen, and J. Miguel Villas-Boas. “Search for information on multiple products.” *Management Science*, 2016.
 - Nikandrova, Arina, and Romans Pans. “Dynamic project selection.” *Theoretical Economics*, 2017.
 - Fudenberg, Drew, Gleb Romanyuk, and Philipp Strack. “Active learning with a misspecified prior.” *Theoretical Economics*, 2017.
 - Fudenberg, Drew, Philipp Strack, and Tomasz Strzalecki. “Speed, accuracy, and the optimal timing of choices.” *American Economic Review*, 2018.
 - Che, Yeon-Koo, and Konrad Mierendorff. “Optimal dynamic allocation of attention.” *American Economic Review*, 2019.
- **Dynamic information collection and experimentation – many decision makers**
 - Hörner, Johannes, and Andrzej Skrzypacz. “Learning, experimentation and information design.” 2016. Review paper, see references within.
 - Chan, Jimmy, Alessandro Lizzeri, Wing Suen, and Leeat Yariv. “Deliberating collective decisions.” *Review of Economic Studies*, 2017.
- **Bayesian persuasion**
 - Kamenica, Emir, and Matthew Gentzkow. “Bayesian persuasion.” *American Economic Review*, 2011.

- Kamenica, Emir, and Matthew Gentzkow. “Competition in persuasion.” *Review of Economic Studies*, 2017.

- **Market for information**

- Mullainathan, Sendhil, and Andrei Shleifer. “The market for news.” *American Economic Review*, 2005.
- Besley, Timothy, and Andrea Prat. “Handcuffs for the grabbing hand? Media capture and government accountability.” *American Economic Review*, 2006.
- Gentzkow, Matthew, and Jesse M. Shapiro. “Media bias and reputation.” *Journal of Political Economy*, 2006.
- Chan, Jimmy, and Wing Suen. “A spatial theory of news consumption and electoral competition.” *Review of Economic Studies*, 2008.
- Gul, Faruk, and Wolfgang Pesendorfer. “The war of information.” *Review of Economic Studies*, 2012.
- Prat, Andrea, and David Strömberg. “The political economy of mass media.” *Advances in economics and econometrics*, 2013.

Research Interests: Behavioural and Experimental Economics and Psychology (<http://epee.hse.ru>), Individual and Collective Decision Making, Structural Econometric Modeling.

Topics of my specific interest this academic year include:

1. Strategic behaviour in experimental settings
2. Economics of Healthcare and Medical Decision Making
3. Economics of Religion
4. Media economics

Experimental and Behavioral Economics

- ☐ John D.Kagel and Alvin E.Roth. Handbook of Experimental Economics. Princeton, 1995; vol 2, 2016
- ☐ Charles R. Plott and Vernon L. Smith. Handbook of Experimental Economics Results. Elsevier, 2008.
- ☐ Colin Camerer, George Loewenstein, Matthew Rabin. Advances in Behavioural Economics. Princeton, 2004.
- ☐ Moffat P. Experimentics. Macmillan, 2015
- ☐ Ariel Rubinstein A. Modelling bounded rationality. Cambridge (MA): MIT Press, 1998.

Individual decision making

- ☐ Fishburn P.C. Utility theory for decision sciences. Wiley, 1970.
- ☐ Aleskerov F.T. and Aiserman M.A. Theories of choice. North-Holland, 1995.
- ☐ Quiggin J. Generalized expected utility: the rank-dependent model. Kluwer, 1993.

Game theory

- ☐ Drew Fudenberg and Jean Tirole. Game theory. MIT Press, 1993.
- ☐ Roger Myerson. Game theory: analysis of conflict. Harvard, 1991.
- ☐ Ariel Rubinstein, Martin Osborne. A course in game theory. MIT Press, 1993.
- ☐ Sanjev Goyal. Connections. Princeton, 2007.
- ☐ Larry Samuelson. Evolutionary games and equilibrium selection, MIT Press, 1998.
- ☐ R.Aumann and S.Hart, eds. Handbook of game theory with economic applications. Vols 1-3. Elsevier.

Structural econometric modeling

- ☐ Victor Aguirregabiria and Pedro Mira. Dynamic Discrete Choice Structural Models: A Survey. Journal of Econometrics, 2010, v.156, p.31-67.
- ☐ John Rust. Structural estimation of Markov decision processes,” in R. E. Engle and McFadden (eds.) Handbook of Econometrics Volume 4, North-Holland. Amsterdam, 1994.
- ☐ Steve Berry and Peter Reiss. Empirical Models Of Entry And Market Structure. In: M.Armstrong and R.Porter, eds. Handbook of Industrial Organization Volume 3, Elsevier, 2007.

Research Interests:

1. Game-Theoretic Models of Litigation;
2. Theoretical Models of Financial crises
3. Antitrust and Collusion.

Requirements for students: Please send your CV and BSc transcript to Prof. Nikitin

Game-Theoretic Models of Litigation:

- Spier, Kathryn. Litigation, In: Handbook of Law and Economics, ch. 4.
- Landeo, Claudia, Maxim Nikitin and Scott Baker. 2006. Deterrence, Lawsuits and Litigation Outcomes under Court Errors, Journal of Law, Economics and Organization, Vol. 23, No 1, pp. 57-97.
- Reinganum, Jennifer and Louis Wilde. 1986. Settlement, Litigation, and the Allocation of Litigation Costs, RAND Journal of Economics, Vol. 17, No 4, pp. 557-566.
- Landeo, Claudia and Maxim Nikitin. 2018. Financially-Constrained Lawyers: An Economic Theory of Legal Disputes, Games and Economic Behavior, [Vol. 109](#), Pages 625-647

Theoretical Models of Financial Crises

- Diamond D.W., Dybvig P.H., 1983. Bank runs, deposit insurance and liquidity, Journal of Political Economy, vol. 91, pp. 401-419.
- Allen F., Gale D., 2000. Financial contagion, Journal of Political Economy, vol. 108, pp. 1-33.
- Chang, R. and A. Velasco. 2000. Financial Fragility and Exchange Rate Regime. Journal of Economic Theory, Vol. 92, pp. 1-34.
- Chang R., Velasco A., 2000. Banks, debt maturity and financial crises, Journal of International Economics, vol. 51, pp. 169-194.
- Nikitin M, and R.T. Smith. 2008. Information Acquisition, Coordination and Fundamentals in a Financial Crisis, Journal of Banking and Finance, Vol. 32, pp. 907-914.
- Morris, S., Shin, H., 1998. Unique equilibrium in a model of self-fulfilling currency attacks. American Economic Review 88, 587–597.
- Morris, S., Shin, H., 2000. Rethinking multiple equilibria in macroeconomic modeling. In: Bernanke, B.S., Rogoff, K. (Eds.), 2000 NBER Macroeconomic Annual. The MIT Press, Cambridge, MA, pp. 139–161.
- Morris, S., Shin, H., 2004. Coordination risk and the price of debt. European Economic Review 48, 133–153.
- Freixas, X., A. Martin and D. Skeie. 2011. Bank Liquidity, Interbank Markets and Monetary Policy. Review of Financial Studies, pp. 2656-2694.
- Diamond, D. and R. Rajan. 2011. Fear of Fire Sales. Illiquidity Seeking, and Credit Freezes. Quarterly Journal of Economics, Vol. CXXVI, pp. 557-591.

Antitrust and Collusion

- Marvao, P. and G. Spagnolo. 2014. What do we Know about Effectiveness of Leniency Policies? A Survey of Empirical and Experimental Evidence. Working Paper
- Chen, Zh. and P. Rey. 2013 On the Design of Leniency Programs. Journal of Law and Economics, Vol. 56, No. 4 (November 2013), pp. 917-957

Research interests: Economics of Information, Microeconomics, Corporate Finance

Research topics (broadly defined):

- Formation of beliefs and social learning
- Formation of preferences
- Leadership
- Persuasion
- Information aggregation
- Reputation
- Political economy of authoritarian regimes

Literature:

- Ottaviani, M., & Sørensen, P. (2001). Information aggregation in debate: who should speak first?. *Journal of Public Economics*, 81(3), 393-421.
- Catonini, E., & Stepanov, S. (2017). Reputation and Information Aggregation, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2790033
- Morris, S. (2001). Political correctness. *Journal of political Economy*, 109(2), 231-265.
- Crawford, V. P., & Sobel, J. (1982). Strategic information transmission. *Econometrica: Journal of the Econometric Society*, 1431-1451.
- Kamenica, E., & Gentzkow, M. (2011). Bayesian Persuasion. *American Economic Review*, 101(6), 2590-2615.
- Scharfstein, D. S., & Stein, J. C. (1990). Herd behavior and investment. *The American Economic Review*, 465-479.
- Bikhchandani, S., Hirshleifer, D., & Welch, I. (1992). A theory of fads, fashion, custom, and cultural change as informational cascades. *Journal of political Economy*, 100(5), 992-1026.
- Hermlin, B. E. (2012). Leadership and corporate culture. *Handbook of organizational economics*, 432-78.
- Bolton, P., Brunnermeier, M. K., & Veldkamp, L. (2010). Economists' perspectives on leadership. *Handbook of leadership theory and practice*, 239-264.
- Loeper, A., Steiner, J., & Stewart, C. (2014). Influential opinion leaders. *The Economic Journal*, 124(581), 1147-1167.
- De Mesquita, E. B. (2010). Regime change and revolutionary entrepreneurs. *American Political Science Review*, 104(3), 446-466.
- Shadmehr, M. (2015). Extremism in revolutionary movements. *Games and Economic Behavior*, 94, 97-121.
- Dagaev, D., Lamberova, N. and Sobolev, A., 2019. Stability of revolutionary governments in the face of mass protest. *European Journal of Political Economy*, 60, p.101812.
- De Mesquita, E. B. (2008). Terrorist factions. *Quarterly Journal of Political Science*, 3(4), 399-418.
- Bernheim, B.D., Braghieri, L., Martínez-Marquina, A. and Zuckerman, D., 2019. A Theory of Chosen Preferences. Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3350187.
- Hestermann, N., Le Yaouanq, Y. and Treich, N., 2020. An economic model of the meat paradox. *European Economic Review*
- Levy, R., 2014. Soothing politics. *Journal of Public Economics*, 120, pp.126-133.
- Levy, G. and Razin, R., 2019. Echo chambers and their effects on economic and political outcomes. *Annual Review of Economics*, 11, pp.303-328.
- Östling, R., 2009. Economic influences on moral values. *The BE Journal of Economic Analysis & Policy*, 9(1).
- Bénabou, R., 2013. Groupthink: Collective delusions in organizations and markets. *Review of Economic Studies*, 80(2), pp.429-462.

Research interests: Game Theory, Economic Theory, Applied Microeconomic Theory

My main topic of research for this year will be forward induction reasoning in dynamic games. Students who are interested in this topic are encouraged **to consult my papers on my hse webpage**, the papers in the list above, and **write a short report** on what aspects of the problem they plan to investigate and in which direction they believe they can develop the existing body of work.

I also welcome students with different research topics in microeconomic theory, provided that they propose their own, original research question.

- ☐ Aumann, R. "Correlated Equilibrium as an Expression of Bayesian Rationality", *Econometrica*, 55, 1987, 1-18.
- ☐ Basu, K. and J. W. Weibull, "Strategy subsets closed under rational behavior", *Economic Letters*, 36, 1991, 141-146.
- ☐ Battigalli, P., "Strategic Rationality Orderings and the Best Rationalization Principle", *Games and Economic Behavior*, 13, 1996, 178-200.
- ☐ Battigalli, P. "On rationalizability in extensive games", *Journal of Economic Theory*, 74, 1997, 40-61.
- ☐ Battigalli, P., "Rationalizability in Infinite, Dynamic Games of Incomplete Information", *Research in Economics*, 57, 2003, 1-38.
- ☐ Battigalli, P. and A. Friedenberg, "Forward induction reasoning revisited", *Theoretical Economics*, 7, 2012, 57-98.
- ☐ Battigalli, P. and A. Prestipino, "Transparent Restrictions on Beliefs and Forward Induction Reasoning in Games with Asymmetric Information", *The B.E. Journal of Theoretical Economics*, 13(1), 2013, 79-130.
- ☐ Battigalli, P. and M. Siniscalchi, "Strong Belief and Forward Induction Reasoning", *Journal of Economic Theory*, 106, 2002, 356-391.
- ☐ Battigalli, P. and M. Siniscalchi, "Rationalization and Incomplete Information," *The B.E. Journal of Theoretical Economics*, 3, 2003, 1-46.
- ☐ Brandenburger, A., and A. Friedenberg, "Intrinsic correlation in games", *Journal of Economic Theory*, 141, 2008, 28-67.
- ☐ Chen, J., and S. Micali, "The order independence of iterated dominance in extensive games", *Theoretical Economics*, 8, 2013, 125-163.
- ☐ Cho I.K. and D. Kreps, "Signaling Games and Stable Equilibria", *Quarterly Journal of Economics*, 102, 1987, 179-222.
- ☐ Fudenberg, D., and D. Levine, "Self-confirming equilibrium", *Econometrica*, 61, 1993, 523-546.
- ☐ Govindan, S., and R. Wilson, "On forward induction," *Econometrica*, 77, 2009, 1-28.

- Greenberg, J., "The right to remain silent", *Theory and Decisions*, 48(2), 2000, 193-204.
- Greenberg, J., Gupta, S., Luo, X., "Mutually acceptable courses of action", *Economic Theory*, 40, 2009, 91-112.
- Harrington, J. "A Theory of Collusion with Partial Mutual Understanding", *Research in Economics*, forthcoming.
- Heifetz, A., and A. Perea, "On the Outcome Equivalence of Backward Induction and Extensive Form Rationalizability", *International Journal of Game Theory*, 44, 2015, 37--59.
- Kohlberg, E. and J.F. Mertens, "On the Strategic Stability of Equilibria", *Econometrica*, 54, 1986, 1003-1038.
- Kreps, D. M. and R. Wilson, "Sequential equilibria", *Econometrica*, 50, 1982, 863-94.
- Green, J. R., Mas-Colell, A., and Whinston, M., *Microeconomic Theory*, Oxford University Press, 2006.
- Man, P. "Forward Induction Equilibrium", *Games and Economic Behavior*, 75, 2012, 265-276.
- Osborne, M., "Signaling, Forward Induction, and Stability in Finitely Repeated Games", *Journal of Economic Theory*, 50, 1990, 22-36.
- Pearce, D., "Rational Strategic Behavior and the Problem of Perfection", *Econometrica*, 52, 1984, 1029-1050.
- Reny, P., "Backward Induction, Normal Form Perfection and Explicable Equilibria", *Econometrica*, 60, 1992, 627-49.
- Siniscalchi, M., "Structural Rationality in Dynamic Games", working paper, 2019.
- Van Damme, E. "Stable Equilibria and Forward Induction", *Journal of Economic Theory*, 48, 1989, 476--496.

Research interests: Development economics, International economics, Urban and transportation economics, Evolutionary Economics

Examples of thesis/diploma topics for 2020-2021 academic year

Transportation economics

1. Regulation of parking: optimal size of parking spot

With cities becoming increasingly congested with automobiles, a question arises of how to optimally choose the size of parking space. A very short space implies that many vehicles will need two or more adjacent spaces, which may be hard to find. A very long space implies that some of that space will be wasted. Heterogeneity of parking space will make it difficult to find the right spot. The research project will find the optimal solution. Another possibility is to analyze how the parking availability affects the size distribution of automobiles.

2. The political economy of residential parking

Governments often make parking for local residents much cheaper than for visitors, due to political power of the residents. This project aims to investigate the welfare effects of such inequality, in a model with multiple districts each having its own residential parking program. An analogy can be made with local producers lobbying for import tariffs (i.e. for limiting entry for foreign competitors).

3. The economics of carsharing market

Shared car parking in Moscow is free for its operators, which may lead to congestion of parking with shared vehicles in the city center. What is the socially optimal policy of pricing shared car parking and how will it affect the shared car market equilibrium? The theoretical analysis can be done in the context of my earlier work, "Optimal pricing for shared vehicles."

Cultural economics

4. Explaining heterogeneity in the respect of old people

Societies differ in the amount of respect paid to older individuals. There is plenty of empirical evidence that "traditional" (i.e. less developed) societies tend to respect more their elderly. The goal of the research is a theoretical model explaining the phenomenon. Greater respect means that young people pay more attention to the experience of the old, which is more relevant in societies that develop more slowly.

Other

5. Estimating "knowledge spillovers" among ICEF students

A policy of ICEF is to allocate undergraduate students in their examination room according to their rank, in order to reduce the amount of "knowledge spillovers" from strong to weak students. To goal of the research is to test the hypothesis of knowledge spillovers, by allocating students randomly in an exam and by investigating whether weak students with strong neighbors perform better than weak students with weak neighbors.

Research Interests: Family Economic, Labor Economics, Industrial Organization (theory), Structural estimation of microeconomic models

Literature:

Industrial organization theory

- Yurko, Anna V. "How does income inequality affect market outcomes in vertically differentiated markets?." *International Journal of Industrial Organization* 29.4: 493-503, 2011.
- Haan, Marco A. and Linda A. Toolsema, "The strategic use of debt reconsidered", *International Journal of Industrial Organization*, 26, pp. 616-624, 2008.
- A.Yurko, "From Consumer Incomes to Car Ages: How the Distribution of Income Affects the Distribution of Vehicle Vintages", 2009.
- "Can Increases in Real Consumer Incomes Explain the Aging of Motor Vehicles in the US?", 2009.

Labor / Family Economics

- Brien, Michael J., Lee A. Lillard, and Steven Stern, "Cohabitation, Marriage, and Divorce in a Model of Match Quality", *International Economic Review*, 47(2), pp. 451-494, 2006.
- Slonimczyk, Fabián, and Anna Yurko, "Assessing the impact of the maternity capital policy in Russia." *Labour Economics*, 2014.
- Slonimczyk, Fabián, Francesconi, Marco, and Anna Yurko "Moving On Up for High School Graduates in Russia: The Consequences of the Unified State Exam Reform", 2017.
- Black, S., P. Devereux & K. Salvanes, "The More The Merrier? The Effect of Family Size and Birth Order on Children's Education." *Quarterly Journal of Economics*, 120(2): 669-700, 2005.
- Booth, A. & H. J. Kee, "Birth Order Matters: The Effect of Family Size and Birth Order on Educational Attainment," *Journal of Population Economics*. 22(2): 367-397, 2009.
- Heiland, Frank, "Does the Birth Order Affect the Cognitive Development of a Child?" *Applied Economics*, Vol. 41, No. 14, pp. 1799–1818, 2009.
- Bernal, Raquel. "The Effect Of Maternal Employment And Child Care On Children's Cognitive Development." *International Economic Review* 49.4: 1173-1209, 2008.
- Del Boca, Daniela, Christopher Flinn, and Matthew Wiswall. "Household choices and child development." *The Review of Economic Studies* 81.1: 137-185, 2014.

Research interests: labor economics, economics of education, labor finance

Literature:

1) Life Cycle Wage Growth

- Lagakos, D., Moll, B., Porzio, T., Qian, N. and Schoellman, T., 2018. Life cycle wage growth across countries. *Journal of Political Economy*, 126(2), pp.797-849.
- Lagakos, D., Moll, B., Porzio, T., Qian, N. and Schoellman, T., 2018. Life-cycle human capital accumulation across countries: lessons from US Immigrants. *Journal of Human Capital*, 12(2), pp.305-342.
- Bowlus, A.J. and Liu, H., 2013. The contributions of search and human capital to earnings growth over the life cycle. *European Economic Review*, 64, pp.305-331.
- Brown, J.N., 1989. Why do wages increase with tenure? On-the-job training and life-cycle wage growth observed within firms. *The American Economic Review*, pp.971-991.
- MaCurdy, T.E., 1981. An empirical model of labor supply in a life-cycle setting. *Journal of political Economy*, 89(6), pp.1059-1085.
- Mincer, J., 1997. The production of human capital and the life cycle of earnings: Variations on a theme. *Journal of labor economics*, 15(1, Part 2), pp.S26-S47.
- Deaton, A., 1986. Life-cycle models of consumption: Is the evidence consistent with the theory?

2) The effect of employer characteristics on labor market outcomes

- Abowd, J.M. and Kramarz, F., 1999. The analysis of labor markets using matched employer-employee data. *Handbook of labor economics*, 3, pp.2629-2710.
- Heyman, F., Sjöholm, F. and Tingvall, P.G., 2007. Is there really a foreign ownership wage premium? Evidence from matched employer–employee data. *Journal of International Economics*, 73(2), pp.355-376.
- Siegel, D.S. and Simons, K.L., 2010. Assessing the effects of mergers and acquisitions on firm performance, plant productivity, and workers: new evidence from matched employer-employee data. *Strategic Management Journal*, 31(8), pp.903-916.
- Bayard, K., Hellerstein, J., Neumark, D. and Troske, K., 2003. New evidence on sex segregation and sex differences in wages from matched employee-employer data. *Journal of labor Economics*, 21(4), pp.887-922.
- Schank, T., Schnabel, C. and Wagner, J., 2007. Do exporters really pay higher wages? First evidence from German linked employer–employee data. *Journal of international Economics*, 72(1), pp.52-74.
- Iranzo, S., Schivardi, F. and Tosetti, E., 2008. Skill dispersion and firm productivity: An analysis with employer-employee matched data. *Journal of Labor Economics*, 26(2), pp.247-285.

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Research Interests: Public Finance, Labor Economics, Development Economics, Empirical Industrial Organization.

Remark. In general I am willing to advise students working on **any** empirical topic (including empirical corporate finance). Students have to take into account that on topics listed below I have developed more expertise and hence know the literature better.

My role as an adviser.

1. Helping to understand whether the question a student is asking is relevant/interesting;
2. Providing an advice on the relevant literature;
3. Providing an advice on econometric techniques: i.e., I can point to the literature discussing relevant econometric techniques;
4. Providing an advice on whether the particular methodology is suitable to answer a question.

What students should do if they want me to be their adviser. Before contacting me students should write a short research proposal (4 pages max). Stating the following:

1. **Research question:** students should explain why this question is interesting/relevant;
2. **Data:** students should explain what data sources they are planning to use;
3. **Literature review:** very short literature review on what has been previously done on this question.

Topic: Empirical Public Procurement.

Main References:

- Andreyanov, Pavel, Alec Davidson, and Vasily Korovkin. "Cartels and Fake Bidders in Procurement Auctions: Detection and Welfare Implications." *Mimeo: UCLA*, September 2017.
- Atmaca, Sumeyra, Koen Schoors, and Elena Podkolzina. "Public Procurement and Corrupt Reserve Prices." *Mimeo: HSE*, April 2017.
- Balsevich, Anna, and Elena Podkolzina. "Too High or Too Low? The Pros and Cons of Regulating the Reserve Price in Public Procurement in Russia." *Free Policy Briefs* (blog), March 13, 2017. <http://freepolicybriefs.org/2017/03/13/high-low-pros-cons-regulating-reserve-price-public-procurement-russia/>.
- Bandiera, Oriana, Andrea Prat, and Tommaso Valletti. "Active and Passive Waste in Government Spending: Evidence from a Policy Experiment." *American Economic Review* 99, no. 4 (September 2009): 1278–1308. <https://doi.org/10.1257/aer.99.4.1278>.
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Topic: Retirement Studies.

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Research Interests: Economic Theory, Networks, Matching, Information

Topics:

Networks, Information, and Beliefs:

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- Aumann, R. "Agreeing to Disagree," *The Annals of Statistics*, 1976.
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Networks and Matching in the Labour Market:

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Matching Mechanisms:

- Gale, D. and L. Shapley. "College Admissions and the Stability of Marriage," *The American Mathematical Monthly*, 1962.
- Roth, A. "Incentive Compatibility in a Market with Indivisible Goods," *Economics Letters*, 1982.
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Research Interests: Social and Complex Networks, Microeconomics, Labor Economics, Economics of Information

Literature:

Diffusion on networks

- Campbell, A., 2009, "Tell Your Friends! Word of Mouth and Percolation in Social Networks," job-market paper.
- Galeotti, A. and Goyal, S., 2008, "A Theory of Strategic Diffusion," forthcoming in Rand Journal of Economics.
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- Labor markets and networks
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Network formation

- Bala, V. and S. Goyal (1999), "A Non-Cooperative Model of Network Formation," Econometrica, 1181-1230.
- Jackson, M.O. and A. Wolinsky (1996), "A strategic model of economic and social networks," Journal of Economic Theory, 71, 44-74.
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Research Topics:

1. Search and (Assortative) Matching
Labour Markets
2. Empirical Evaluation
Natural Experiments
Policy Changes

Requirements for students:

1. Have at least a vague idea what the topic may be.
2. Ideally have read 1-2 papers in the field where the idea belongs to.
3. Have some questions on the topic prepared, to save both of us time.
4. Excellence in Micro 2 is not a requirement.

Literature Suggestions (broadly in line with the topics)

1. Search and (Assortative) Matching

- ☐ Mortensen, D., & Pissarides, C. (1994). "Job Creation and Job Destruction in the Theory of Unemployment". *The Review of Economic Studies*, 61(3), 397-415.
- ☐ Acemoglu, D., & Shimer, R. (1999). "Hurdles and Efficiency with Search Frictions". *International Economic Review*, 40(4), 827-849.
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- ☐ Burdett, K., Mortensen, D., 1998. "Wage Differentials, Employer Size, and Unemployment", *International Economic Review* 39, 257-273.

2. Empirical Evaluation

- ☐ Tealdi, C, Vindigni, A and Scotti, S. "Uncertainty and the Politics of Employment Protection", *Journal of Labour Economics*, 2015, Vol. 33 (1), Pages 209-267.
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- ☐ Cao, S., Shao, E. and Silos, P. (2011) "Fixed-Term and Permanent Employment Contracts: Theory and Evidence" Bank of Canada, Working Paper 2011-21.
- ☐ Guell, M. and Petrongolo, B., "How binding are legal limits? Transitions from temporary to permanent work in Spain", *Labour Economics*, 2007, 14(2), 153-183.
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- ☐ Lopes De Melo, R., (2009), "Sorting in the Labor Market: Theory and Measurement" Technical Report, University of Chicago.

Research Interests: International economics, financial economics, monetary economics.

Literature:

International macroeconomics

- Levy-Yeyaty . E., Sturzenegger, F., (2003) “To Float or To Fix: Evidence on the Impact of Exchange Rate Regimes on Economic Growth”, American Economic Review 93/4, p. 1173-1193.
- Hausmann, R., Panizza, U., Stein, E., (2001) “Why do Countries Float the Way They Float?”, Journal of Development Economics, 66, pp. 387-414.
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Interest rates

- Campbell, J., Shiller, R., (1991) “Yield Spreads and Interest Rate Movements”, The Review of Economic Studies, Vol. 58/3, pp. 495-514.
- Fama, E., Bliss, R., (1987) “The Information in Long Maturity Forward Rates”, American Economic Review, 77, pp. 680-692.
- Backus, D., Foresi, S., Mozamdar, A., Wu, L., (2001) “Predictable Changes in Yields and Forward Rates”, Journal of Financial Economics, 59, pp. 281-311.

Financial markets

- Grossman, S., (1976), “On the Efficiency of the Competitive Stock Market Where Traders Have Diverse Information”, Journal of Finance 32/2 pp. 573-585.
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- Jarrow, R., Modeling Fixed-Income Securities and Interest Rate Options. Stanford University Press

Research Interests: Financial Economic Theory (Financial Regulation, Financial Accounting, Financial Markets Infrastructure); Information Economics

Literature:

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- Hart, O. D., 1977. On the Profitability of Speculation. *Quarterly Journal of Economics* 91, 579-597.
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- Huddart, S., J. S. Hughes, M. Williams, 2010. Pre-announcement of insiders' trades. Working Paper, Pennsylvania State University.
- John, K., R. Narayanan, 1997. Market Manipulation and the Role of Insider Trading Regulations. *Journal of Business* 70, 217-247.
- King, M. R., and D. Rime, 2010, The \$4 trillion question: what explains FX growth since the 2007? *BIS Quarterly Review* December 2010, 27-42.
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- Kyle, A. S., S. Viswanathan, 2008. How to Define Illegal Price Manipulation. *American Economic Review* 98, 274-279.
- Lakonishok, J., I. Lee, 2001. Are Insider Trades Informative? *Review of Financial Studies* 14, 79-111.
- Leland, H. E., 1992. Insider Trading: Should it Be Prohibited? *Journal of Political Economy* 100, 859-887.
- Lenkey, S. L., 2014. Advance Disclosure of Insider Trading. *Review of Financial Studies* 27, 2504-2537.
- Milgrom, P. R., and N. Stokey, 1982, Information, Trade and Common Knowledge. *Journal of Economic Theory* 26, 17-27.

- Rochet, J.C., J. Tirole, 2006, Two-sided Markets: A Progress Report. *Rand Journal of Economics* 37, 645-667.
- Roll, R., 1984, A Simple Implicit Measure of the Effective Bid-Ask Spread in an Efficient Market. *Journal of Finance* 39, 1127-1139;
- van Bommel, J., 2003. Rumors. *Journal of Finance* 58, 1499-1519.

Alexei Boulatov, PhD

aboulatov@hse.ru

Research Interests: Microstructures in Financial Markets, Financial Economics, Information Economics

Research topics:

Динамические стратегии (dynamic strategies)

- Albert S. Kyle, 1985, "Continuous Auctions and Informed Trader Trading", *Econometrica* 53, 1315-1335.
- Oleg Bondarenko, 2001, "Competing market makers, liquidity provisions, and bid-ask spreads", *Journal of Financial Markets* 4, 269-308.
- Kerry Back, 1992, "Insider Trading in Continuous Time", *The Review of Financial Studies* 5, 387-409.
- Оптимальные ликвидные стратегии (optimal execution)
- Almgren, R., and N.Chriss, 1999, "Optimal Execution of Portfolio Transactions," *Journal of Risk*, 3(2), 5-39.
- Almgren, R., and J. Lorenz, 2006, "Adaptive Arrival Price," Working Paper.
- Bertsimas, D., and A.W. Lo, 1998, "Optimal control of execution costs,"
- *Journal of Financial Markets*, 1, 1-50.

Оптимизация ограниченных информационных ресурсов (limited attention)

- Corwin, S. and J. Coughenour. "Limited Attention and the Allocation of Effort in Securities Trading." University of Notre Dame working paper 2006.
- Peng, L. and W. Xiong. "Investor Attention, Overconfidence, and Category Learning." *Journal of Financial Economics* 80 (2006), 563-602.
- Peng, L. "Learning with Information Capacity Constraints." *Journal of Financial and Quantitative Analysis* 40 (2005), 307-329.

Стратегический трейдинг и качество финансовых рынков (informed liquidity. Provision)

- Alex Boulatov and Thomas George, 2006, "Informed speculation and liquidity provision: a dynamic limit order book model", working paper.
- Jürgen Dönnert, 1993, "Price Competition between Market Makers", *Review of Economic Studies* 60, 735-751.
- Dan Bernhardt and Eric Hughson, 1997, "Splitting Orders", *The Review of Financial Studies*, 10, 69-101.

Research interests: Portfolio management, delegated money management, asset pricing, behavioral finance, information acquisition.

Comment for students: If you are interested in theoretical research in financial economics, you can include me in the list of your preferred supervisors **WITHOUT** talking to me beforehand. If you are unsure what modern theoretical finance research is, you can get an idea by reading recent theoretical papers published in leading finance journals (Journal of Finance, Review of Financial Studies, Journal of Financial Economics, Review of Finance). If you plan to choose me as the advisor, please **take into account** that our interaction will not be about me assigning you papers to read and giving you specific ideas as to how to extend models in these papers. You will need to make these choices yourself. My involvement will be in identifying problems in your proposed research plans and in steering you towards the "right path". I have no objections to being the advisor of a student who plans to work on an empirical finance paper. However, the student needs to be aware that a) this is not my main area of expertise, and b) I will be of little help with questions related to data collection.

Note: Please send your application to Natalia Kogutovskaya, ICEF Research Coordinator, and than it will be signed by D.Makarov in case of approval.

Possible topics:

1. Asset pricing and investor irrationality
2. Ambiguity aversion and the stock market
3. Information acquisition and portfolio choice
4. Investor heterogeneity and asset pricing
5. General equilibrium effects of portfolio delegation

Readings:

- 1) Barberis, Greenwood, Lin, and Shleifer, 2015, «X-CAPM: An extrapolative capital asset pricing model»
- 2) Praz, 2015, “Equilibrium Asset Pricing with both Liquid and Illiquid Markets”
- 3) Uppal and Bhamra, 2015, “Do Idiosyncratic Individual Behavioral Biases Have Aggregate Effects?”
- 4) Epstein and Schneider, 2010, “ Ambiguity and asset markets”
- 5) Kojien and Yogo, 2015, “An Equilibrium Model of Institutional Demand and Asset Prices”

Udara Peiris, PhD

upeiris@hse.ru

www.udarapeiris.org

Research interests: International Finance, Monetary Policy, Financial Stability, Credit/Default and Financial Frictions;

Requirements for students: students must read through <https://www.udarapeiris.org/home/student-research> before contacting Prof Peiris

Possible topics: by arrangement with prof. Udara Peiris

Research interests: Asset pricing with frictions, market microstructure

Comments for students: I expect students to have some broad idea of the topic they would like to work on and to have done some minimal background reading before meeting me. The topics below are indicative, not exhaustive.

Possible topics:

- ☐ Large investors and asset prices
- ☐ The effects of new market players (HFTs, ETFs) on market prices and stability
- ☐ Market impact of unorthodox monetary policy (QE and QE exit)
- ☐ Activism and Liquidity

Literature (Selected Papers)

- ☐ H. Zhu, 2012, Finding a Good Price in Opaque OTC Markets
- ☐ Z. He and A. Krishnamurthy, 2013, Intermediary Asset Pricing
- ☐ E. Davila and A. Korinek, Pecuniary Externalities in Economies with Financial Frictions
- ☐ M. Brunnermeier and Y. Sannikov, 2015, The I-Theory of Money
- ☐ I. Ben-David , F. Franzoni, R. Moussawi, J. Sedunov, 2015, [The Granular Nature of Large Institutional Investors](#)
- ☐ A. Menkveld and V. Van Kervel, 2018, High-Frequency Trading around Large Institutional Orders
- ☐ A. Chincio and V. Fos, 2018, The Sound of Many Funds Rebalancing
- ☐ M. Rostek and M. Weretka, 2015, Dynamic Thin Markets
- ☐ M. Pritsker, 2009, Large Investors: Implications for Equilibrium Returns, Shock Absorption, and Liquidity
- ☐ A. Kyle, A. Obizhaeva, Y. Wang, 2016, Smooth Trading with Overconfidence and Market Power
- ☐ S. Du and H. Zhu, 2016, What is the Optimal Trading Frequency in Financial Markets?
- ☐ Y. Sannikov and A. Skrzypacz, 2016, Dynamic Trading: Price Inertia and Front-Running
- ☐ Choi, J.H., K. Larsen, and D. Seppi, 2018, Information and Trading Targets in a Dynamic Equilibrium
- ☐ P. Collin-Dufresne, K. Black, V. Fos, T. Li, and A. Ljungqvist, 2018, [Activism, Strategic Trading, and Liquidity](#)

Main research interests: Banking, Market microstructure, Information economics.

Here is a selection of papers pertaining to my research interests. The most seminal ones are marked with an asterisk. I'm also open to supervising projects on other topics. Please contact me by e-mail for a discussion if you think you could be interested picking me as your advisor and I will be happy to meet with you.

1) *Banking (modelling of coordination failures and regulation)*

- Admati, A., DeMarzo, P., Hellwig, M., and Pfleiderer, P. (2011). "Fallacies, irrelevant facts, and myths in the discussion of capital regulation: why bank equity is *not* expensive." Working paper, Stanford University.
- Allen, F., Carletti, E., Goldstein, I., and Leonello, A. (2015). "Moral Hazard and Government Guarantees in the Banking Industry." *Journal of Financial Regulation*, 0:1–21.
- Allen, F. and Gale, D. (1998). "Optimal financial crises." *Journal of Finance*, 53(4):1245–1284.
- Bouvard, M., Chaigneau, P., and deMotta, A. (2015). "Transparency in the Financial System: Rollover Risk and Crises." *Journal of Finance*, 70(4).
- Carletti, E., Goldstein, I., and Leonello, A. (2018). "The interdependence of bank capital and liquidity." Working paper.
- Dang, T., Gorton, G., Holmström, B., and Ordoñez, G. (2017). "Banks as Secret Keepers." *American Economic Review*, 107(4):1005–1029.
- (*) Diamond, D. and Dybvig, P. (1983). "Bank runs, deposit insurance, and liquidity". *Journal of Political Economy*, 91(3):401–419.
- Eisenbach, T. (2017). "Rollover risk as market discipline: A two-sided inefficiency". *Journal of Financial Economics*, 126(2):252–269.
- Goldstein, I. and Pauzner, A. (2005). "Demand-Deposit Contracts and the Probability of Bank Runs". *Journal of Finance*, 60(3):1293–1327.
- Gorton, G. and Ordoñez, G. (2014). "Collateral Crises". *American Economic Review*, 104(2):343–378.
- Koenig, P. (2015). "Liquidity Requirements: A Double-Edged Sword". *International Journal of Central Banking*, 11(4):129–168.
- (*) Morris, S. and Shin, H. (2006). "Global Games: Theory and Applications". Cambridge University Press.
- Quigley, D. and Walther, A. (2017). "Inside and outside information: Fragility and Stress Test Design." Working paper.
- (*) Rochet, J.-C. (2008), "Why Are There So Many Banking Crises?", Princeton University Press.
- Santos, J. and Suarez, J. (2019). "Liquidity standards and the value of an informed lender of last resort". *Journal of Financial Economics*, 132:351–368.
- Gorton, G. and Ordonez, G., "Fighting Crises with Secrecy", Working paper, 2019
- Hoerova, M., Mendicino, C., Nikolov, K., Schepens, G. and S. van den Heuvel, "Benefits and costs of liquidity regulation", *European Central Bank Working Paper 2169*, 2018
- Leitner, Y. and Williams, B., "Model Secrecy and Stress Tests", Working paper, 2018
- Monnet, C. and Quintin, E., "Rational Opacity", *Review of Financial Studies* 30(12), 2019

2) *Microstructure*

a) *1-period models of trading under asymmetric information:*

- Bagnoli, M., Viswanathan, S., and Holden, C. (2001). "On the Existence of Linear Equilibria in Models of Market Making". *Mathematical Finance*, 11(1):1–31.
- Boulatov, A., Kyle, A., and Livdan, D. (2013). "Uniqueness of Equilibrium in the single period Kyle '85 model". Working paper.
- Carre, S., Collin-Dufresne, P. and Gabriel, F. (2019). "Insider Trading with Penalties". Working paper.
- DeMarzo, P., Fishman, M., and Hagerty, K. (1998). "The Optimal Enforcement of Insider Trading Regulations." *Journal of Political Economy*, 106(3):602–632.
- (*) Kyle, A. (1985). "Continuous Auctions and Insider Trading". *Econometrica*, 53(6):1315–1335.

b) *High-frequency trading*

- Haas, M., Khapko, M. and Zoican, M., “Speed and Learning in High-Frequency Auctions”, Working paper, 2020
- (*) Pagnotta, E. and Philippon, T., “Competing on Speed”, *Econometrica* 86(3), 2018
- Menkveld, A. and Zoican, M., “Need for Speed? Exchange Latency and Liquidity”, *Review of Financial Studies* 30(4), 2017
- Du, S. and Zhu, H., “What is the optimal trading frequency in financial markets?”, *Review of Economic Studies* 84(4), 2017
- (*) Budish, E., Cramton, P. and Shim, J., “The High-Frequency Trading Arms Race: Frequent Batch Auctions as a Market Design Response”, *The Quarterly Journal of Economics* 130(4), 2015
- Biais, B., Foucault, T. and Moinas, S., “Equilibrium Fast Trading”, *Journal of Financial Economics* 116(2), 2015
- Baldauf, M. and Mollner, J., “High-Frequency Trading and Market Performance”, *Journal of Finance* 75(3), 2020

3) *Fintech*

- Pagnotta, E., “Bitcoin as Decentralized Money: Prices, Mining, and Network Security”, Working paper, 2020
- Biais, B., Bisière, C., Bouvard, M. and Casamatta, C., “The Blockchain Folk Theorem”, *Review of Financial Studies* 32(5), 2019
- Easley, D., O’Hara, M. and Basu, S., “From mining to markets: The evolution of bitcoin transaction fees”, *Journal of Financial Economics* 134(1), 2019
- Pagnotta, E. and Buraschi, A., “An Equilibrium Valuation of Bitcoin and Decentralized Network Assets”, Working paper, 2018
- Liu, Z. Luong, N., Wang, W., Niyato, D., Wang, P., Liang, Y., Kim, D., “A Survey on Applications of Game Theory in Blockchain”, *IEEE*, 2019

Runjie Geng, PhD
Runjie.geng@bf.uzh.ch

Research Interests: General equilibrium theory, Computational economics, Behavioral Macroeconomics, asset pricing

Requirements for students: Please send me a motivation letter and a CV.

Topics:

- Aliprantis, C. D. and Border, K. C. (2006). Infinite dimensional analysis: a hitchhiker's guide. Springer.
- Brumm, J., Kryczka, D., and Kubler, F. (2017). Recursive equilibria in dynamic economies with stochastic production. *Econometrica*, 85(5):1467–1499.
- Cao, D. (2017). Speculation and financial wealth distribution under belief heterogeneity. *The Economic Journal*, 128(614):2258–2281.
- Citanna, A. and Siconolfi, P. (2010). Recursive equilibrium in stochastic overlapping-generation economies. *Econometrica*, 78(1):309–347.
- Citanna, A. and Siconolfi, P. (2012). Recursive equilibrium in stochastic olig economies: Incomplete markets. *Journal of Mathematical Economics*, 48(5):322–337.
- Duffie, D., Geanakoplos, J., Mas-Colell, A., and McLennan, A. (1994). Stationary markov equilibria. *Econometrica: Journal of the Econometric Society*, pages 745–781.
- Duggan, J. (2012). Noisy stochastic games. *Econometrica*, 80(5):2017–2045.
- Gabaix, X. (2014). A sparsity-based model of bounded rationality. *The Quarterly Journal of Economics*, 129(4):1661–1710.
- Häusler, E. and Luschgy, H. (2015). Stable convergence and stable limit theorems, volume 74. Springer.
- Heaton, J. and Lucas, D. J. (1996). Evaluating the effects of incomplete markets on risk sharing and asset pricing. *Journal of political Economy*, 104(3):443–487.
- Hellwig, M. F. (1983). A note on the implementation of rational expectations equilibria. *Economics Letters*, 11(1-2):1–8.
- Krusell, P. and Smith, Jr, A. A. (1998). Income and wealth heterogeneity in the macroeconomy. *Journal of political Economy*, 106(5):867–896.
- Kubler, F. and Polemarchakis, H. (2004). Stationary markov equilibria for overlapping generations. *Economic Theory*, 24(3):623–643.
- Kubler, F. and Schmedders, K. (2002). Recursive equilibria in economies with incomplete markets. *Macroeconomic dynamics*, 6(2):284–306.
- Kubler, F. and Schmedders, K. (2003). Stationary equilibria in asset-pricing models with incomplete markets and collateral. *Econometrica*, 71(6):1767–1793.
- Lucas, R. E. (1978). Asset prices in an exchange economy. *Econometrica: Journal of the Econometric Society*, pages 1429–1445.
- Maskin, E. and Tirole, J. (2001). Markov perfect equilibrium: I. observable actions. *Journal of Economic Theory*, 100(2):191–219.
- Mehra, R. and Prescott, E. C. (1985). The equity premium: A puzzle. *Journal of monetary Economics*, 15(2):145–161.
- Santos, M. (2001). On non-existence of markov equilibria in competitive-market economies.
- Shiller, R. J. (2015). Irrational exuberance: Revised and expanded third edition. Princeton university press.
- Stokey, N. L. (1989). Recursive methods in economic dynamics. Harvard University Press.

Research interests: Game Theory, Decision Theory, Economic Theory

You can see in the list below that I'm mostly interested in high theory: the foundations of solution concepts in games and the strategic impact of *small* asymmetries in private information. Specifically, for the following months I'll be particularly interested in very theoretical issues related to refinements à la global game in dynamic games when asymmetric information can be partially persistent (also, in the conceptual foundation of the meaning of "small" as mentioned in the first sentence of this paragraph, but that's quite challenging). Let me know.

References:

- Chen, Yi-Chun (2012). "[A structure theorem for rationalizability in the normal form of dynamic games](#)". *Games and Economic Behavior*, **75**, 587–597.
- Chen, Yi-Chun, Alfredo Di Tillio, Eduardo Faingold and Siyang Xiong (2010). "[Uniform topologies on types](#)". *Theoretical Economics*, **5**, 445–478.
- Chen, Yi-Chun, Manuel Mueller-Frank and Mallesh M. Pai (2020). "[Continuous implementation with direct revelation mechanisms](#)". Mimeo.
- Chen, Yi-Chun, Alfredo Di Tillio, Eduardo Faingold and Siyang Xiong (2017). "[Characterizing the strategic impact of misspecified beliefs](#)". *The Review of Economic Studies*, **84**, 1424–1471.
- Dekel, Eddie, Drew Fudenberg and Stephen Morris (2006). "[Topologies on types](#)". *Theoretical Economics*, **1**, 275–309.
- 55
- Dekel, Eddie, Drew Fudenberg and Stephen Morris (2007). "[Interim correlated rationalizability](#)". *Theoretical Economics*, **2**, 15–40.
- Ely, Jeffrey and Marcin Peski (2011). "[Critical types](#)". *Review of Economic Studies*, **78**, 907–937.
- Germano, Fabrizio, Jonathan Weinstein and Peio Zuazo-Garin (2020). "[Uncertain rationality, depth of reasoning and robustness in games with incomplete information](#)". *Theoretical Economics*, **15**, 89–122.
- Han, Jungsuk and Albert S. Kyle (2017). "[Speculative equilibrium with differences in higher-order beliefs](#)". *Management Science*, **69**, 4317–4332.
- Morris, Stephen, Hyung Song Shin and Muhamet Yildiz (2016). "[Common belief foundations of global games](#)". *Journal of Economic Theory*, **163**, 826–848.
- Morris, Stephen and Hyun Song Shin (1998). "[Unique Equilibrium in a Model of Self-Fulfilling Currency Attacks](#)". *American Economic Review*, **88**, 587–597.
- Oury, Marion and Olivier Tercieux (2012). "[Continuous implementation](#)". *Econometrica*, **80**, 1605–1637.
- Penta, Antonio (2012). "[Higher order uncertainty and information: Static and dynamic games](#)". *Econometrica*, **80**, 631–660.
- Penta, Antonio and Peio Zuazo-Garin (2019). "[Rationalizability, observability and common knowledge](#)". Barcelona GSE Working Paper Series #1106.
- Piermont, Evan and Peio Zuazo-Garin (2020). "[Failures of contingent thinking](#)". Mimeo.
- Rubinstein, Ariel (1989). "[The electronic mail game: strategic behaviour under 'almost common knowledge'](#)". *American Economic Review*, **79**, 385–391.

- Ruiz G., David (2018). “Critical types in dynamic games”. Mimeo.
- Weinstein, Jonathan and Muhamet Yildiz (2007). “A structure theorem for rationalizability with application to robust predictions of refinements”. *Econometrica*, **75**, 365–400.

Maria Kokoreva

mkokoreva@hse.ru

Research interests: corporate finance, financial architecture of the company, value-based management

Victor Lapshin

vlapshin@hse.ru

Research interests: mathematical and computer modelling of financial markets, risk management, financial derivatives, quantitative finance

Topics:

Modeling bond markets

- Modelling low liquidity bond markets.
- Liquidity risks and liquidity measures in bond markets.
- Market price of risk and its measurement in bond markets.
- No-arbitrage relations in bond and CDS markets.
- Negative interest rates: causes, effects and modelling (financial, not macro).
- Russian bond market microstructure.
- Comparing numerical methods for estimating interest rates term structure.
- Choosing a stochastic dynamics model for Russian interest rates.
- Predicting Central Bank rate changes from market information.
- 2014 for interest rates in Russia – outlier, regime shift or normal behavior?
- Volatility of negative interest rates.
- Interest rate risks for bond portfolios.
- Credit spreads as a measure of credit quality.

General risk management

- Model risks in classical financial models and their estimation.
- Risk models validation.
- Data quality issues and data quality risk estimation.
- Do simple markets need advanced mathematical models for risk management?

Research Interests: International Finance, Empirical Finance, Monetary and Financial Economics

Some Possible Topics:

Linkages between Financial Markets

Caporale, G.M., Pittis, N. and N. Spagnolo (2002), “Testing for causality-in-variance: an application to the East Asian markets”, *International Journal of Finance and Economics*, 7, 3, 235-245.

Caporale, G.M., Philippas, N. and N. Pittis (2004), “Feedbacks between mutual fund flows and security returns: evidence from the Greek capital market”, *Applied Financial Economics*, 14, 1, 981-989.

Caporale, G.M., Hunter J. and F. Menla Ali (2014), “On the linkages between stock prices and exchange rates: evidence from the banking crisis of 2007-2010”, *International Review of Financial Analysis*, 33, 87-103.

Caporale, G.M., Menla Ali, F. and N. Spagnolo (2015), “Exchange rate uncertainty and international portfolio flows”, *Journal of International Money and Finance*, 54, 70-92.

Caporale, G.M., Menla Ali, F., Spagnolo, F. and N. Spagnolo (2017), “International portfolio flows and exchange rate volatility in emerging Asian markets”, *Journal of International Money and Finance*, 76, 1-15.

Caporale, G.M., Gil-Alana, L.A., and C.J. Orlando (2016), “Linkages between the US and European stock markets: a fractional cointegration approach”, 21, 2, 143-153, *International Journal of Finance and Economics*.

Modelling the Stochastic Behaviour of Asset Prices and Forecasting

Caporale, G.M. and L.A. Gil-Alana (2002), “Fractional integration and mean reversion in stock prices”, *Quarterly Review of Economics and Finance*, 42, 3, 599-609.

Caporale, G.M. and L.A. Gil-Alana (2004), “Long range dependence in daily stock returns”, *Applied Financial Economics*, 14, 6, 375-383.

Caporale, G.M. and L.A. Gil-Alana (2004), "Fractional cointegration and tests of present value models", *Review of Financial Economics*, 13, 3, 245-258.

Caporale, G.M. and L.A. Gil-Alana (2006), “Modelling stochastic volatility in asset returns using fractionally integrated semiparametric techniques”, *Applied Financial Economics Letters*, 2, 1, 9-12.

Caporale, G.M. and L.A. Gil-Alana (2007), “Long-range forecasting of the S&P 500 stock market index using fractional integration techniques”, *Journal of Financial Forecasting*, 1, 1, 71-82.

Caporale, G.M. and L.A. Gil-Alana (2012), “Estimating persistence in the volatility of asset returns using signal plus noise models”, *International Journal of Finance and Economics*, 17, 1, 23-30.

Caporale, G.M., Gil-Alana L.A., Plastun, A. and I. Makarenko (2016), “Long memory in the Ukrainian stock market and financial crises”, *Journal of Economics and Finance*, 40, 2, 235-257.

Asset Prices and the Real Economy

Caporale, G.M. and N. Spagnolo (2003), “Asset prices and output growth volatility: the effects of financial crises”, *Economics Letters*, 79, 1, 69-74.

Financial Econometrics Issues

Caporale, G.M., Ntantamis, C., Pantelidis, T. and N. Pittis (2005), “The BDS test as a test for the adequacy of a GARCH(1,1) specification: a Monte Carlo study”, *Journal of Financial Econometrics*, 3, 2, 1-28.

Financial Spillovers and Contagion

Caporale, G.M., Cipollini, A. and N. Spagnolo (2005), “Testing for contagion: a conditional correlation analysis”, *Journal of Empirical Finance*, 12, 3, 476-489.

Arestis, P., Caporale, G.M., Cipollini, A. and N. Spagnolo (2005), “Testing for financial contagion between developed and emerging markets during the 1997 East Asian crisis”, *International Journal of Finance and Economics*, 10, 4, 359-367.

Caporale, G.M., Pittis, N. and N. Spagnolo (2006), “Volatility transmission and financial crises”, *Journal of Economics and Finance*, Fall issue, 30, 3, 376-390.

Beirne, J., Caporale, G.M., Schulze-Ghattas, M. and N. Spagnolo (2010), “Global and regional spillovers in emerging stock markets: a multivariate GARCH-in-mean analysis”, *Emerging Markets Review*, 11, 250-260.

Caporale, G.M. and N. Spagnolo (2011), “Stock market integration between three CEECs, Russia and the UK”, *Review of International Economics*, 19, 1, 158-169.

Beirne, J., Caporale, G.M., Schulze-Ghattas, M. and N. Spagnolo (2013), “Volatility spillovers and contagion from mature to emerging stock markets”, *Review of International Economics*, 21, 5, 1060-1075.

Financial Variables and Macro News

Caporale, G.M., Spagnolo, F. and N. Spagnolo (2016), “Macro news and stock returns in the euro area: a VAR-GARCH-in-mean analysis”, 45, 180–188, *International Review of Financial Analysis*.

Caporale, G.M., Spagnolo, F. and N. Spagnolo (2017), “Macro news and exchange rates in the BRICS”, *Finance Research Letters*, 21, 140-143.

Caporale, G.M., Spagnolo, F. and N. Spagnolo (2018), “Macro news and bond yield spreads in the euro area”, *European Journal of Finance*, 24, 2, 114-134.

Market Efficiency and Market Anomalies

Caporale, G.M., Gil-Alana L.A., and A. Plastun (2016), “The weekend effect: an exploitable anomaly in the Ukrainian stock market?”, *Journal of Economic Studies*, 43, 6, 954-965.

Caporale, G.M., Gil-Alana, L. and A. Plastun (2017), “Searching for inefficiencies in exchange rate dynamics”, *Computational Economics*, 49, 405-432.

Caporale, G.M., Gil-Alana L.A., and A. Plastun (2018), “Long-term price overreactions: are markets inefficient?”, *Journal of Economics and Finance*, 43, 4, 1-24.

Modelling Cryptocurrencies

Caporale, G.M. and T. Zekokh (2019), “Modelling volatility of cryptocurrencies using Markov-Switching GARCH models”, *Research in International Business and Finance*, 48, 143-155.

Caporale, G.M. and A. Plastun (2019), “BitCoin fluctuations and the frequency of price overreactions”, *Financial Markets and Portfolio Management*, 33, 2, 109-131.

Caporale, G.M. and A. Plastun (2019), “Price overreactions in the cryptocurrency market”, 46, 5, 1137-1155, *Journal of Economic Studies*.

Caporale, G.M., Kang, W.-Y., Spagnolo, F. and N. Spagnolo (2019), “Non-linearities, cyber attacks and cryptocurrencies”, *Finance Research Letters*, 7692, 1-10.

Caporale, G.M. and A. Plastun (2020), “Momentum effects in the cryptocurrency market after one-day abnormal returns”, forthcoming, *Financial Markets and Portfolio Management*.

The sphere of my scientific interests is related to scenario modeling of innovative business and investment analysis of innovative projects, including:

1. Financial modeling of innovative projects
2. Economic analysis of venture capital investments
3. Assessment and management of investment risks
4. Support for venture investments as a function of government

Topics

1. Ethical and legal foundations of artificial intelligence
2. Corporate governance methods for innovations
3. Venture investments as a basis for the development of an innovative economy
4. Sources and forms of financing for innovative development
5. Strategic M&A of innovative business
6. Motivation as a driver of innovative development
7. Innovative processes in the economy
8. Intellectual resources of the company
9. Small innovative entrepreneurship
10. Optimal dividend policy
11. Mergers and acquisitions as a tool for overcoming the crisis
12. Management of the company's innovation and investment process
13. Human Capital Management Innovation
14. Intellectual capital management
15. Interaction between large and small businesses
16. Public private partnership
17. State regulation of the innovation process
18. Strategic and indicative planning of innovations
19. Innovative development and economic growth
20. Innovative activities of medium and large businesses
21. Marketing component of innovation
22. Investment activity in a crisis
23. Venture financing of innovative projects
24. Commercialization of scientific ideas
25. Intellectual property in an innovative economy
26. Intellectual capital as a factor in the development of a company
27. Development of an innovative development strategy
28. Strategic entrepreneurship
29. Innovative potential of Russian small business
30. Strategies for innovative development of the region
31. Support mechanisms for innovative "startups"
32. Investment (innovation) project risk management
33. Financial and economic analysis and business valuation models
34. Formation of innovation infrastructure
35. An innovative organization as an object of management
36. Management of innovations as objects of intellectual property
37. Mechanisms of state support for innovation
38. Innovative potential of the real sector of the Russian economy
39. Methods of stimulating scientific, technical and innovative activities
40. Crisis management innovations
41. Innovation and innovative entrepreneurship

42. Staffing for an innovative economy
43. The mechanism of formation and reproduction of the economy of innovative development
44. Contradictions of innovation
45. Investment attractiveness of the company based on the cost approach
46. State regulation of innovation and investment processes in the economy
47. The institutional environment for innovation
48. State competitive selection of innovative projects and programs: goals, organization, control
49. The current state of the domestic scientific and innovative sphere
50. Funding mechanisms for scientific and innovative activities
51. Features of financial crises in the context of virtualization of the economy
52. Methods for stimulating scientific and technical innovation
53. Crisis as a form of movement of market processes
54. New methods of managing crisis processes in modern conditions
55. The state in the economy of innovative development: place, role, functions

Research interests: empirical banking, bank regulation, credit bureaus and credit registries, household financial decisions and strategies

Comments for students:

- Please see the list of my publications to get some ideas of the fields of my interests and expertise
- However, almost any topic in empirical banking or household finance you have in mind can be discussed.
- I supervise ICEF student in both traditional and project-based format. You can join one of the projects I supervise at the Faculty of Economic Studies, if you prefer the latter.
- Please read [the following](#) before asking for supervision.

Broad topics&research interests (include, but are not limited to) and literature:

Bank transparency

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- Semenova M. (2012). Market Discipline and Banking System Transparency: Do We Need More Information?//*Journal of Banking Regulation*. Vol.13, No 3. P. 241-248
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Depositor behavior, Market discipline, Deposit Insurance

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Credit information sharing, credit bureaus and credit registries

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Research Interests: empirical asset pricing, option pricing, stock market liquidity

Literature:

- Option pricing (option-implied risk and asset pricing)
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Sergey Tsyplakov
Associate Professor in Finance

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My Research Topics include mostly theory in the area of Corporate Finance and Banking, including:

- Capital Structure
- Banking and Regulation
- Risk Management
- Convertible Debt
- Risk Management
-

Below is the related literature for each area:

Optimal Bank Regulation: Bailouts, Bail-ins, Stress Tests and Capital Requirements

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Corporate Finance: Capital Structure

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Research Interests: Big Data, Cryptocurrencies, Forecasting, Applied Econometrics, Energy Economics, Risk Management.

1) Forecasting Russian GDP using Google Trends and bridge models:

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Mandatory Requirements:

- Very good knowledge of statistics and econometrics;
- Very good knowledge of R programming

2) Forecasting the probability of death of crypto-coins using a dataset of 2000 coins:

- Fantazzini, D. (2019). *Quantitative finance with R and cryptocurrencies*. Amazon KDP, ISBN-13, 978-1090685315.
- I Fantazzini, D., Zimin, S. (2020). A multivariate approach for the simultaneous modelling of market risk and credit risk for cryptocurrencies. *Journal of Industrial and Business Economics*, 47(1), 19-69.
- I Feder, A., Gandal, N., Hamrick, J.T., Moore, T., Vasek, M. (2018). The rise and fall of cryptocurrencies. In *Proc. of the Workshop on the Economics of Information Security (Weis)*.

Mandatory Requirements:

- Very good knowledge of financial econometrics and credit risk management.
- Very good knowledge of R programming.

3) Development and comparison of pricing models for crypto-coins:

- Lanre and Gotimer (2019), Valuing Bitcoin AN ANALYSIS OF METHODOLOGIES FOR VALUING BITCOIN (pages 13-35), available at <https://21shares.com/img/uploads/21shares-valuing-bitcoin-report.pdf>
- Cryptoasset valuation techniques by Lanre Ige (2018): <https://s3.us-east-2.amazonaws.com/lanreige/Cryptoasset+Valuation+Techniques.pdf>
- Part 1 (current state of token Valuation, page 12-28) in CRYPTOASSET VALUATION Identifying the variables of analysis, Working Report v1.0 October 2018, available at <https://www.louisbachelier.org/wpcontent/uploads/2018/10/cryptovaluationreport-v20181016-vf.pdf>.
- INET valuation model for cryptoassets developed by Chris Burniske and available at: <https://medium.com/@cburniske/cryptoasset-valuations-ac83479ffca7>

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<https://medium.com/@alexwoodard17/a-newway-to-find-discount-rates-in-crypto-models-58201facb1fd>
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<https://medium.com/@HASHCIB/the-nextstep-in-cryptoasset-valuation-34bade0386de>
- the VOLT Valuation Model for cryptoassets developed by Alex Evans and available at:
<https://medium.com/blockchannel/on-value-velocity-and-monetarytheory-a-new-approach-to-cryptoasset-valuations-32c9b22e3b6f>
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<https://blog.coinfabrik.com/a-review-on-cryptoasset-valuation-frameworks>,
- Fantazzini, D. (2019). *Quantitative finance with R and cryptocurrencies*. Amazon KDP, ISBN-13, 978-1090685315.
- Burniske, C., & Tatar, J. (2017). *Cryptoassets: The innovative investor's guide to Bitcoin and beyond*. McGraw Hill Professional.

Mandatory Requirements:

- Good knowledge of (traditional) stock valuation methods.
- Good knowledge of R programming