Scholarly Activities

In 2020-2021, the Interdisciplinary Center for Economic Science (ICES) had seven faculty from the Economics Department: Daniel Houser (Director), Jonathan Beauchamp, Cesar Martinelli, Kevin McCabe, Johanna Mollerstrom, Jonathan Schulz, Thomas Stratmann. ICES also had one Affiliate Faculty that visited this year: Marian Moszoro. Below are the scholarly activities each faculty member conducted over the past year.

Jonathan Beauchamp

Professor Jonathan Beauchamp had a productive research year, with one of his papers being published in a high-impact journal (Nature Human Behavior) and another one having received a “Revise & resubmit” decision from the top journal in the field of genetics (Nature Genetics). The paper that was published in Nature Human Behaviour was coauthored with members of the Social Science Genetics Association Consortium (SSGAC), a large consortium of which he is a member and which seeks to foster rigorous and responsible research at the intersection of genetics and the social sciences. In the paper, entitled “Resource profile and user guide of the Polygenic Index Repository” (Becker et al. 2021), the authors developed a large repository of polygenic indices (i.e., variables that partially predict particular traits based on an individual’s genotype) for various applied microeconomic datasets. The paper that received a “Revise & resubmit” decision from Nature Genetics is also coauthored with the SSGAC. The paper is entitled “Polygenic prediction within and between families from a 3-million-person GWAS of educational attainment”; it reports the results of the fourth large-scale study of the genetics of educational attainment (EA), in which data was analyzed from over 3 million individuals to gain a better understanding of genetic and environmental influences on EA.

Beauchamp also made substantial progress on a suite of other ongoing research projects. In particular, with coauthors, he produced an advanced draft of a paper entitled “Kinship systems and economic development”, in which the authors study the relationship between kin-based institutions and economic development around the world. Though they have received little attention from economists, kin-based institutions are among the most fundamental of human institutions, which tightly structure the social life in most of the world’s societies. There are plans to post and circulate a working paper in the next few months, and to submit the paper to a top economics journal in the next 6 months. Second, Beauchamp has produced an advanced draft of a paper entitled “Nature and nurture: evidence from molecular genetics data in Korean American adoptees”, in which he and his coauthors analyze a sample of Korean adoptees who have been quasi-randomly assigned to their adoptive families and who were genotyped. The authors obtained unbiased estimates of the effects of polygenic indices and of family SES and other environmental variables on adoptee outcomes. The authors also investigate whether and how genes and family environment interact. Third, with two coauthors, Beauchamp has worked on a project in which they aim to study insurance markets and predict the impact of consumers having increasing private information on their genetic predisposition on those markets. Fourth, with four other coauthors, Beauchamp has been working on paper that examines the heterogeneous treatment effects of Swedish schooling reforms that took place in the 1950s on a suite of outcomes.
Beauchamp was also involved in a successful grant proposal to the Templeton Foundation, for research funding in the amount of $2,542,700.00, over a three-year period. The proposal is entitled “Religion, family structure and the origins of individual freedom and economic prosperity”, and is related to the research agenda that includes the above-mentioned paper on kin-based institutions and economic development.

Beauchamp has also been the PI on a subcontract with the University of Southern California. The subcontract, which initially covered the 2019-20 academic year, was renewed for 2020-21; it has involved a total of $87,960.00 in funding over the two years to sponsor his work on various genoeconomics studies and related projects in collaboration with the SSGAC (including the two projects described in the first paragraph above).

Beauchamp has also presented his research at various seminars and conferences, including the following:
- ICES Seminar in Experimental Economics and Game Theory, George Mason University
- Seminar at the La Follette School of Public Affairs, University of Wisconsin – Madison
- Seminar at the Schar School of Policy and Government, George Mason University
- Behavior Genetics Association Annual Meeting (virtual)
- Conference on “Genes, social mobility, and inequalities across the life-course” (virtual)

In 2020, Beauchamp had organized a monthly reading group for the SSGAC. Every month a group of 10-20 SSGAC researchers (some of whom have been trained as economists and others as geneticists) met via videoconference to discuss recent papers in the fields of genoeconomics and genetics.

Lastly, Beauchamp helped set up a visiting faculty position for Duman Bahrami-Rad in the Department of Economics at GMU for 2020-21. Duman is a coauthor on the paper on kin-based institutions and economic development and the visiting position has allowed Beauchamp and co-authors to work productively on that paper.

Daniel Houser, Director

Professor Daniel Houser had an active year of publishing research. Below are published works:
- Leverage and asset prices: An experiment
  Marco Cipriani, Ana Fostel, Daniel Houser
  Journal of Economic Behavior & Organization 183, 700-717
- The aspirational income hypothesis: On the limits of the relative income hypothesis
  Elias L. Khalil, Jason A. Aimone, Daniel Houser, Siyu Wang, Deborah Martinez, Kun Qian
  Journal of Economic Behavior & Organization 182, 229-247
- Clientelism and identity
  James Habyarimana, Daniel Houser, Stuti Khemani, Viktor Brech, Ginny Seung Choi, Moumita Roy
  Economic and Political Studies 9 (1), 113-133
Inertia in partnerships: The role of gender
Wei Bao, Daniel Houser, Yulie Rao, Erte Xiao
Economics Letters 196, 109491

If wages fell during a recession
Joy Buchanan, Daniel Houser
Journal of Economic Behavior & Organization

Experimental public choice: An introduction to the special issue
Gregory DeAngelo, Daniel Houser, Rustam Romaníuc
Journal of Economic Behavior & Organization 175 (C), 278-280

A New Mechanism to Alleviate the Crises of Confidence in Science—With An Application to the Public Goods Game
Luigi Butera, Philip J. Grossman, Daniel Houser, John A. List, Marie Claire Villeval
National Bureau of Economic Research

Houser also has working papers that were submitted for publication. Below is the list of working papers:

  Lina Diaz, Daniel Houser, John Ifcher, Homa Zarghamee
  IZA Discussion Paper

- Learning Language: An Experiment
  Daniel Houser, Yang
  George Mason University, Interdisciplinary Center for Economic Science

- Stochastic Bargaining in the Lab
  Shuwen Li, Daniel Houser
  ICES working paper

- Assignment Markets: Theory and Experiments
  Artur Dolgopolov, Daniel Houser, Cesar Martinelli, Thomas Stratmann
  George Mason University, Interdisciplinary Center for Economic Science

- An economic analysis of business drinking: Evidence from a lab-in-the-field experiment
  Jianxin Wang, Daniel Houser
  GMU Working Paper in Economics

- Endogenous Leverage and Default in the Laboratory
  Marco Cipriani, Ana Fostel, Daniel Houser
  National Bureau of Economic Research

- Image spillovers in groups and misreporting.
  Remi Suchon, Daniel Houser

- Sign me up! A model and field experiment on volunteering
  Erte Xiao, Daniel Houser
  ICES working paper

- Social preferences and social curiosity
  Weiwei Tasch, Daniel Houser
  GMU Working Paper in Economics
Houser submitted one proposal for external funding as co-PI. “Norms in Exceptional Environments” is a research proposal focused on norm development in the Arctic, and it was submitted to the NSF in collaboration with University of Pennsylvania, Weiwei Tasch, PI.

Houser received two externally funded awards:
  o “Theory and Experiments on Competition”, PI, NSF dissertation improvement award to Jian Song (co-PI)
  o “Field Experiments on Leadership”, PI, NSF dissertation improvement award to Moumita Roy (co-PI)

Houser participated in creative partnerships:
  o Dr. Weiwei Tasch, University of Pennsylvania, collaborated on an NSF proposal to explore the creation of norms in exceptional environments, particularly the Arctic.
  o Dr. Jianxin Wang, Central South University (China), a Mason-approved research collaboration investigating the behavioral economic impact of moderate alcohol intoxication.

Lastly, Houser was named the 2021 Distinguished Scholar of the Association of Private Enterprise Education. He was the sole recipient of this award.

Cesar Martinelli

In the year 2020–2021, Professor Cesar Martinelli’s research has included work on political economy, public policy, experimental economics, and revealed preference theory.
  o In terms of political economy, Martinelli got a solo theoretical article on "Accountability and Grand Corruption" accepted in American Economic Journal: Micro, and started a new empirical project on political corruption with a colleague at the Catholic University of Peru, with reference to the Odebrecht scandal in Latin America.
  o In terms of public policy, Martinelli finished a draft, soon to be submitted, on the economic consequences of mass migration, with reference to the Venezuelan exodus in Latin America, co-authored with colleagues at the University of Maryland.
  o In terms of experimental economics, Martinelli got his review article on "Communication and Information in Games of Collective Decision," co-authored with Thomas R. Palfrey, published in the Handbook of Experimental Game Theory; Martinelli has also continued working with his former students at Mason, Arthur Dolgopolov and Weiwei Zhang, on learning in experimental markets, and he is planning political economy experiments with his current PhD student Edgar Castro.
  o In terms of revealed preference theory, Martinelli got the article "A Utility Representation Theorem for General Revealed Preference,” co-authored with my former student at Mason, Mikhail Freer, published in Mathematical Social Sciences 111 (2021) 68–76, and he has another paper co-authored with Mikhail Freer currently under third revision for Economic Theory.

Martinelli gave online seminars at Caltech, Essex University, DePaul University, and Universidad del Pacifico (Lima), a public conference at INFOX (a Peruvian platform) on
accountability and corruption, and online presentations in the World Congress of the Econometric Society, the World Congress of the Game Theory Society, and the LACEA political economy group.

Martinelli continued his work as advisory editor of *Games and Economic Behavior* and was appointed to the Topics Board of the journal *Games*. He was also part of the scientific committee of the ETH Workshop on Democracy, at ETH Zurich, held online this year. Martinelli has published the following articles:

- Accountability and Grand Corruption, forthcoming in *American Economic Journal: Micro*

Martinelli published the following blog posts:

- El éxodo venezolano en el Perú (Foco Económico, May 2021)
- Los senderos que se bifurcan (Foco Económico, January 2021)
- Impacto del Intervencionismo: Pérdida de Productividad, Capital e Ingresos (IPAE Hoja de Ruta, December 2020)

**Kevin McCabe**

Professor Kevin McCabe is the principal investigator at the Computational Experimental Economics Laboratory (CEELAB) at the Interdisciplinary Center for Economic Science (ICES). Professor McCabe currently advises four graduate students. One student, Maggie Lehr, completed her Ph.D. in 2021. Other students include Stephan Kunath, currently finishing his dissertation; Sarah Sylvester, studying for her field exams; and Aleksander Psurek, who just started the Ph.D. program. Students at the lab work on various research projects using agent-based simulations and human subject experiments to study the decentralized computations performed by market institutions and human (and cyber) agents. As part of the market computations research, the lab is working with industry partners to build and run field experiments on blockchains. See grant information below.

McCabe also contributed a chapter to the Book, *The Art of Experimental Economics – Twenty Top Papers Reviewed*, edited by Gary Charness and Mark Pingle. McCabe’s co-authored paper, “Trust, reciprocity, and social history,” with Joyce Berg and John Dickhaut, was chosen as one of the top twenty and is reviewed in the book by Vernon Smith. In the book, McCabe also contributes a chapter reviewing the paper “Risk aversion and incentive effects,” by Charles Holt and Susan Laury. Professor McCabe is also working on a final revise and resubmit of his chapter
“Computational Microeconomic Experiments and the Study of Exchange,” in the book “State of Mind” edited by Miriam Teschl for Cambridge University Press. In October, Professor McCabe will present a paper co-authored with Dr. Lehr at the 2021 Gruter Foundation Meetings. The title of the talk is “Does Trust in Government Affect Pro-Social Covid-19 Preventative Decision Making?” Also, in October, Professor McCabe will present a co-authored paper titled “Adaptive Computational Markets” at the Economic Science Association (this research paper is a direct outcome of the research started with GMU graduate students in the “Computational Markets” class). Additional research efforts are discussed with the grants.

In addition to the research underway at the CEELAB, two courses are taught by Professor McCabe and are offered to undergraduate and graduate students. The first course, “Practical Computational Methods for Economists,” teaches students how to program in Python and uses a project-based approach to introduce students to computational thinking in economics. The second course, “Computational Markets,” was designed and taught for the first time in 2021. Computational Markets is designed to be a research-intensive course for undergraduate and graduate students. For example, one of the undergraduates who took this class is currently working on a capstone undergraduate research paper.

In addition to research and teaching, Professor McCabe and the CEELAB were awarded the following teaching and research grants.

- Grants in 2020, for $52,000, and 2021 for $49,550, from the International Foundation for Research in Experimental Economics (IFREE) to the Mercatus Foundation to fund Professor McCabe and the CEELAB for two undergraduate workshops in Computational Experimental Economics.
- A grant in 2021 from the Agoric Foundation to the Mercatus foundation for $45,000 to fund CEELAB research on automated market makers in blockchains.
- A grant in 2021 from the Electric Coin Company Foundation to the Mercatus Foundation for $45,000 to fund CEELAB research on the economics of privacy-preserving transactions on the blockchain.

The IFREE teaching grants have allowed McCabe to develop and refine a virtual research experience for undergraduates, including training materials, team-based research methodologies, and research software to enable undergraduates to contribute to ongoing CEELAB research. This research experience is offered to GMU students through the two CEELAB courses and to undergraduate fellows in the lab. Given the sunset of IFREE this year, McCabe is working on an NSF proposal and proposals to other funding sources for future REU’s.

McCabe is currently working with CEELAB graduate students on two working papers based on the summer grants listed above. The first of these papers has the working title “An agent-based model of liquidity provision and price dynamics in blockchain markets run by automated market makers.” This paper uses an agent-based microeconomic systems model of Uniswap 2 to study how blockchain protocol rules on liquidity provision affect price dynamics in markets run by automated market makers. The second paper has the working title “How do miners create bubbles in blockchain markets?” This paper uses an agent-based microeconomic systems model of Bitcoin like proof-of-work blockchains to study how governance rules and miner incentives affect speculative price bubbles in cyber securities. Both models are written in CEELAB’s
mTree software, allowing us to develop and run human subject experiments to test the hypotheses generated by these models and report these results in subsequent papers.

McCabe is currently working with the Agoric Foundation to secure additional industry support for four purposes. First, to continue the development of mTree once the primary developer Stephen Kunath has received his Ph.D. Second, to integrate mTree with the Agoric test blockchain to allow artifactual field experiments. Third, to continue a dialog with industry experts on developing models of blockchain economics. Fourth, continued funding of CEELAB research.

McCabe is working on two NSF research proposals. The first, called “How Computations Advance Markets,” will be based on the working paper “Adaptive Computational Markets” described above. The second, called “Governing the Blockchain Commons,” will propose experiments to study various existing and proposed governance mechanisms used by blockchain commons.

**Johanna Mollerstrom**

During 2020-2021, Professor Johanna Mollerstrom presented her research at 14 invited seminars at research institutions across the world (many of the presentations took place online, because of the COVID-19 pandemic). In addition, she presented her research at more than a dozen conferences - including conference organized by the Allied Association of Social Science (ASSA), the American Economic Association (AEA), the National Bureau of Economics (NBER), and the OECD. Her papers were accepted in high profiled journals like the American Economic Journal: Economic Policy, Public Choice, the European Economic Review, etc. She also helped organize a number of scientific sessions at conferences. In the summer of 2021, Mollerstrom was named a member of the OECD Expert Group on New Measures of the Public Acceptability of Reforms. This is a role that she will serve in until 2023. Finally, during 2020-2021, Mollerstrom was awarded a Faculty Research and Development Grant from George Mason University, and a Hayek Grant from the Institute for Humane Studies.

**Jonathan Schulz**

Professor Jonathan Schulz was able to secure a large Templeton grant (~2.5 million) together with his collaborator Joseph Henrich. This will allow him to study the role of kin networks for human psychology, political institutions, and economic prosperity. Schulz and his collaborators Shaul Shalvi and Ori Weisel received another research proposal ($200,000) that will allow them to study cross-societal variation in corruption and dishonesty. A third proposal (with Yarrow Dunham) received support from the Psychological Science Accelerator, which will allow them to study minimal group formation (or the minimal group paradigm) in a large-scale cross-cultural study. He has submitted several articles for peer-review at academic journals. The articles focus on overconfidence as a social signal, the role of beliefs and attitudes to explain cross-societal variation in cooperation, and the role of selection into economic laboratory experiments. Two further papers are almost ready for submission.
In May 2021, Schulz co-organized two interdisciplinary workshop. One focused on *Kinship in Medieval Europe* which brought together leading historians, economic historians, and psychologists to shed light on historical kinship systems. The other workshop focused on *Networks and Long-Term Cultural Change* and drew an interdisciplinary crowd consisting of leading researchers in political science, economics, network science, psychology, and cultural evolution.

Schulz was invited to (virtually) present his work on *Kin networks and Institutional Development* at seminars at NYU, University of York, the Institute for Advanced Study in Toulouse, University of Texas, University of Economics in Prague, the University of Hamburg, the Networks Science conference, and at a highly attended and prestigious workshop at the University of Utrecht; there he had the privilege to be one of only three presenters along with the two world-renowned researchers Daron Acemoglu and Guido Tabellini.

**Thomas Stratmann**

During 2020-2021, Professor Thomas Stratmann papers were accepted in the Journal of Institutional and Theoretical Economics, the International Review of Law and Economics, Socio-Economic Planning Sciences, and the Southern Economic Journal.

Currently, Stratmann is working in the field of laboratory Experimental Public Choice. Here, he examines the effect of various types of hierarchies in committees on whether the outcome of the committee collective choice is moral or not. In this context, morality means whether the committee collective choice sends a truthful message to the receiver, such as a legislature, or a deceptive message.

Stratmann further pursues an active research agenda in the intersection of Public Choice Theory and the field of Law and Economics. In one project, he analyzes Certificate of Need laws. These state laws, on the books in over 35 states, intentionally limit competition in the health care sector. His research analyzes who benefits and loses from Certificate of Need laws, as well as the impact of these laws on health outcomes. His work identifies incumbent hospitals as the main beneficiaries of Certificate of Need laws. Losers are would-be-competitors who are denied providing improved access and innovative care. Loses importantly include patients, who, when residing in states with these laws, experience less access to health care, more costly care, lower quality of health services, and less innovative medical care. His work in this area received international recognition as being selected as one of the Templeton Freedom Award Finalists.

Stratmann is one of four Editors of the European Journal of Political Economy and serves on as an Associate Editor for the Journal Public Choice. Stratmann is on the main dissertation advisor or on the dissertation committee of nine Economics GMU graduate students.

**Marian Moszoro**
In 2020-2021, Marian Moszoro continued his visit at ICES as an Affiliate Faculty. Moszoro published the following:


Moszoro submitted the following proposals for external funding:


Moszoro is involved with the following external research and creative partnership:

- University of Padova (Italy), Department of Economics, Visiting Professor of Economics 2021-2023.

Moszoro has completed other research that was published through the IMF:


Below are works in progress by Moszoro:

- Moszoro, Marian W. and Mauricio Soto. Road Quality and Mean Speed Score.
- Moszoro, Marian W. and Mauricio Soto. Effective Mean Speed Score in Metropolitan Areas.
- Moszoro, Marian W. Public versus Private Cost of Capital with State-Contingent Terminal Value.
Moszoro, Marian W., Béatrice Boulu-Reshef, and Ingy Helmy. Double-sided Opportunism in Infrastructure Investments.


Lastly, Moszoro presented at the following seminars and conferences:

2021: University of Chicago, IL (scheduled); SGH Warsaw School of Economics, Poland; European University Institute, Florence; International Monetary Fund, DC; Cornell University, NY

2020: MIT, MA; Université Paris 1 – Panthéon-Sorbonne; Universidad Nacional de Colombia-Medellín; International Monetary Fund, DC