

3rd Annual Business Research Conference

Theme: Global Business Environment –
Risk and Resilience during COVID-19 Pandemic

Thursday, December 3, 2020



UNIVERSITY OF THE
DISTRICT OF COLUMBIA
SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION

Logistics & International Trade (LIT) Analytics



LIT AMBASSADORS

Uniqueness of LIT Concentration

- First of its kind program in the District of Columbia and Metropolitan Area
- UDC is the only school that offers a program combining Logistics and International Trade Analytics
- Collaboration between 2 schools – SBPA and SEAS
- STEM (Science, Technology, Engineering, and Mathematics) Business focused concentration
- Producing a future-oriented skilled workforce in the area of LIT
- Open to all SBPA and SEAS majors
- Opportunity of study abroad in China during Summer
- Research and conference presentations opportunities

Required Courses

Global Logistics Stream 1 – (Mandatory)

- ◆ BGMT 396 / 313 Global Logistics and Supply Chain Management (NEW! Spring 2020)

International Trade Stream 2 – (Select any three)

- ◆ MKTG 308 International Marketing
- ◆ FINA 318 International Finance
- ◆ BGMT 311 Spreadsheet Analytics
- ◆ BGMT 308 Entrepreneurship
- ◆ MKTG 404 Marketing Research
- ◆ BGMT 407 Multinational Corporate Management
- ◆ BGMT 395 Study Abroad (NEW! Summer 2020)
- ◆ MECH 406 Engineering Economics

COME, JOIN US @ LIT ANALYTICS



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Physical Location: Bldg. 38, Room 219

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DEAN'S WELCOME



It was not long ago that we planned and organized the first SBPA Annual Business Research Conference. In no time, it has become one of the highpoints of our program and a testimonial of our faculty-student corroboration and achievements. The conference is a showcase of SBPA's quality impact and a glorious display of our students' accomplishments. All is firmly evident by the quality of the prominent panel of judges who participate in reviewing and evaluating the projects. We are excited about the 3rd Annual Business Research Conference on December 3, 2020. Having our students and faculty corroborating with research projects is one of the unique features of the experiential learning at the School of Business and Public Administration (SBPA) at the University of the District of Columbia.

The "Annual Research Conference" is our opportunity to celebrate the scholarly achievements of our students, and to recognize the excellent work of our faculty

members in their efforts to mentor and transform the creative minds of their students through an empowering education in a student-centered experiential environment. It confirms our commitment to the School, the University's vision, the *Equity Imperative*, and to be recognized for providing outstanding educational programs and graduating successful local, national and global organizational leaders, while ensuring that all our students achieve their highest levels of human potential.

As Dean of the SBPA, I welcome you to what I believe will be a very successful Research Conference. I am very proud of the work our students do as they pursue their research activities.

Sincerely,

Mohamad Sepehri, Ph.D.
Dean, School of Business and Public Administration
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CONFERENCE CHAIRS' WELCOME



Tih Koon (Alex) Tan, Ph.D.
Chairperson and Associate Professor
Department of Accounting & Finance
School of Business and Public Administration
tihkoon.tan@udc.edu



Amit Arora, Ph.D.
Associate Professor of SCM
Department of Management
School of Business and Public Administration
amit.arora@udc.edu

It gives us immense pleasure to welcome you to our 2020 3rd Annual Business Research Conference. We would like to start by wishing everyone the best of health and safety during these difficult times. COVID-19 has caused immense loss of life and livelihoods for millions worldwide and has stopped world economies in their tracks. Despite these extraordinary times, we will overcome the risks and be resilient. Aptly, the theme of our conference this year is "Global Business Environment: Risk and Resilience during the COVID-19 Global Pandemic." At the School of Business and Public Administration (SBPA), students have the opportunity to develop a deeper understanding of the theories and concepts they learn, and how to apply them in specific, real-life business situations. Through opportunities like this conference, SBPA students are empowered to discover the rigor and rewards of exploration through scholarship and to showcase their research beyond the classroom. We sincerely appreciate the tremendous effort and preparation of the students and their faculty advisors. Our special thanks to our Dean - Dr. Mo Sepehri - and to Management Department Chair – Dr. Jian Hua - for their support, and to the SBPA faculty, staff, and students involved in organizing and planning this event. We would also like to thank our distinguished judges and guests for their encouragement to all our students.

NSF FUNDED LIT ANALYTICS CENTER WELCOME



As Director of the Logistics & International Trade (LIT) Analytics Center funded by the National Science Foundation, I would like to acknowledge and congratulate our undergraduate and graduate business researchers, who have contributed to the success of the Third UDC Business Conference on December 3, 2020. Congratulations and Kudos to our very own Business Firebirds!

The Conference Theme: "**Global Business Environment: Risk and Resilience during the COVID-19 Global Pandemic**" is very timely. The COVID-19 crisis has brought disruptions to the business environment and the way organizations operate. COVID-19 has infected over 54 million people and caused 1.3 million deaths world-wide (Johns Hopkins University & Medicine, dated November 16, 2020), pushing 88 to 114 million people around the world into extreme poverty. COVID-19 has caused the global economy to enter a rapid downward spiral to recession. I am

extremely happy to see students researching on COVID-19 and its impact on global economy.

On July 15, 2019, the School of Business and Public Administration received a prestigious National Science Foundation (NSF) grant for establishing the Logistics & International Trade (LIT) Analytics Center of Excellence, and for developing a STEM-Business- focused LIT concentration program at the University of the District of Columbia. Consequently, the LIT Analytics Center was established during August 2019, in collaboration with UDC's School of Business and Public Administration (SBPA) and its School of Engineering and Applied Sciences (SEAS), with an overall comprehensive goal of advancing science, technology, engineering, mathematics (STEM) and business-focused LIT education and research partnerships at UDC. The LIT Analytics Center is committed to sponsoring student research projects that will provide students opportunities to continue their research passions, and subsequently empower and transform them into leaders of the 21st Century workforce. One of the activities we are most proud of is the engagement of our undergraduate and MBA students in research projects with faculty members. Through this process, students have the opportunity to develop research skills that enable them to gain deeper understanding of the theories and concepts they learn as they pursue their degrees, and how these theories and concepts are applied in specific business situations.

On behalf of the LIT Analytics Center, and our bright NSF LIT Ambassadors (**Ms. Brea Ellis, Ms. Teressa Kassahun, Ms. Ivanna Kovalchuk, and Ms. Katherine Garrison**), we welcome you to our **3rd Business Research Conference**, and invite you to be part of LIT Analytics Center initiatives.

Sincerely,

Anshu S. Arora, Ph.D., PMP
Associate Professor of Marketing
Director, NSF-Funded Logistics & International Trade (LIT) Analytics Center (anshu.arora@udc.edu)

CONFERENCE ORGANIZERS & JUDGES

3rd ANNUAL BUSINESS RESEARCH CONFERENCE CO-CHAIRS

Dr. Alex Tan and Dr. Amit Arora

3rd ANNUAL BUSINESS RESEARCH CONFERENCE EVENT JUDGES

Dr. John R. McIntyre

Keynote Speaker

*Director of the Georgia Tech CIBER, Professor of Management, Scheller College of Business,
Georgia Institute of Technology*

Dr. Anne Marie Zwerg

Director of the Master in International Management, Universidad de La Sabana, Colombia

Dr. Victor R. McCrary

Vice President for Research and Graduate Programs, University of the District of Columbia

FACULTY ADVISORS

Dr. Julius Anyu, Dr. Malva Reid, Dr. Anshu Arora, Dr. Feng Xu, Dr. Nazha Gali, Dr. Racquel Brown-Gaston, Dr. Donovan Collier, and Dr. Suzan Abed

SBPA RESEARCH CONFERENCE SPONSORS

Dr. Mohamad Sepehri, Dean

*School of Business & Public Administration,
University of the District of Columbia*

Dr. Jian Hua, Professor and Chairperson

*Department of Management, School of Business & Public Administration
University of the District of Columbia*

NSF Funded LIT Analytics Center Ambassadors

Ms. Brea Ellis, Ms. Tessa Kassahun, Ms. Katherine Garrison, and Ms. Ivanna Kovalchuk

CONFERENCE ORGANIZERS & JUDGES



Dr. John R. McIntyre

He is the founding Director of the Georgia Tech CIBER, Professor of Management in the College of Management, with a courtesy appointment in international relations, at Georgia Tech's Sam Nunn School of International Affairs. He received his graduate education at Northeastern University, completing his Ph.D. at the University of Georgia. Prior to joining Georgia Tech, in September 1981, he was Research Associate for International Management at the Dean Rusk Center, University of Georgia Law School. He has published in the journals Technology and Society, Public Administration Quarterly, International Management Review, Defense Analysis, Studies in Comparative and International Development, Journal of European Marketing, Politique Internationale, and International Trade Journal, among others.

Dr. McIntyre is the recipient of the State of Georgia Governor's 2009 International Award in international business education.



Dr. Anne Marie Zwerp

She is the Director of the Master in International Management at Universidad de La Sabana. She previously directed the undergraduate program in Business Administration at La Sabana and the Master of International Business at Universidad EAFIT in Medellín. She is a Ph.D candidate in Administration with emphasis in Organization Studies at EAFIT and has completed a doctoral diploma in International Business at Uppsala. She holds a Master in International Management from Baylor University and a degree in Economics from Virginia Tech. Her research interests include intercultural and international teams, diversity and inclusion, and team satisfaction. She has published in Journal of International Business Studies (JIBS) and the Journal of

Business Research (JBR) amongst others. Prior to academia, she worked in Citibank in Manhattan, New York and Wyndham Hotels in San Juan, Puerto Rico.

CONFERENCE ORGANIZERS & JUDGES



Dr. Victor R. McCrary, Jr.

Dr. McCrary, Jr., is the Vice President for Research and Graduate Programs at the University of the District of Columbia, leading the growth, development, direction, and oversight of the University's research enterprise. He has held similar research leadership positions at the Johns Hopkins University Applied Physics Laboratory, Morgan State University, and the University of Tennessee. He is a change agent and serial innovator, responsible for developing comprehensive, sustainable research strategies, fostering transdisciplinary research, and expanding research programs with federal and state agencies and private entities, including his contributions to Morgan State University enabling it to become only 130 universities nationwide to have R2 status in the Carnegie Classification of Institutions of Higher Education.

Dr. McCrary served two terms as the national president of the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE). He is a Fellow of the American Chemical Society. He received his doctoral degree in chemistry from Howard University, a master's degree in engineering management from the University of Pennsylvania, and a bachelor's degree in chemistry from The Catholic University of America.

CONFERENCE AGENDA

10:00 am – 10:10 am	Welcome - Dean Mo Sepehri, Dean, School of Business and Public Administration, University of the District of Columbia
10:10 am – 10:20 am	Welcome - Dr. Victor McCrary, Vice President for Research & Graduate Programs, University of the District of Columbia
10:20 am – 10:30 am	Introduction of Conference Theme – Dr. Alex Tan
10:30 am – 10:40 am	Introduction of Judges and Keynote Speaker – Dr. Amit Arora
10:40 am – 11:00 am	Keynote Speaker – Dr. John McIntyre, Professor and Executive Director of the Georgia Tech CIBER
11:00 am – 11:10 am	NSF-LIT Center Welcome and Rules/Rubrics – Dr. Anshu Arora
11:10 am – 11:55 am	Undergraduate Presentations
11:55 am – 12:40 pm	Graduate Presentations
12:40 pm – 1:00 pm	Closing Remarks & Awards Ceremony – Dean Mo and Dr. Reid

UNDERGRADUATE ABSTRACTS

1. COVID-19 and the Global Value Chains: Avoiding Disruptions and Failures

Dainah Kilburn

Faculty Advisor: Anshu Arora

COVID-19 global pandemic has created supply chain disruptions worldwide and catastrophic public health crises that the world has never seen in a century. Organizations, governments, communities, and individuals have been negatively impacted by this contagion that has resulted in losses, pertaining to businesses and even human life. With time, the coronavirus outbreak will reduce worldwide, however businesses and individuals should be ready and willing to implement required steps needed for mitigating the disease. In today's turbulent times of COVID-19, measures like remote work, self-quarantining, stressing on online education and learning, avoiding large gatherings, limiting travel, and reducing visits to stores, are some strategies utilized globally for reducing the outbreak and eventually end the coronavirus disease. This research outlines the behavioral changes necessary for businesses and individuals worldwide for making sustainable transitions toward a more global value chain perspective. This paper addresses the following questions:

- What measures can we put in place to ensure that global value chains are not severely impacted when disasters like the Covid-19 pandemic occur?
- Does a better framework exist for a more efficient Global value chain system?

Since the supply chain disruptions, complexities and failures are now more evident in the light of the current pandemic, this research examines strategies and provide recommendations of avoiding future global supply chain failures during crises.

Keywords: COVID-19, Global Value Chains, Failures, Disruptions, Strategy Recommendations

2. Navigating the Fintech-Cleantech Landscape

Ivanna Kovalchuk

Faculty Advisor: Anshu Arora

Financial technology (Fintech) and Clean technology (Cleantech) have a potential to positively influence sustainable development. While Fintech demonstrates how technology democratized financial services, Cleantech introduces ways in which technology can contribute to environmental sustainability. The interaction of these two phenomena results in a myriad of sustainability applications with blockchain technology, being one of them. A blockchain-based ecosystem records data in a digital form and protects it from being modified achieving unprecedented transparency and efficiency. This research examines the impact and implementation of blockchain technology (with a focus on Fintech and Cleantech) on the financial and energy sectors. The research addresses the following questions:

- How are Fintech and Cleantech interrelated?
- What are some of the blockchain solutions for the financial and energy sectors?
- How does implementation of blockchain technology in the financial sector contribute to both Fintech and Cleantech applications?
- How does implementation of blockchain technology in the energy sector contribute to the achievement of sustainable development goals, and SDG 7 in particular?

The research offers an overview of useful blockchain-based Fintech and Cleantech applications in energy sector; and illustrates how small-scale renewables, distributed generation, consumer participation, and the integration of

UNDERGRADUATE ABSTRACTS

these can provide innovative energy platforms that result in the achievement of climate-resilient investment and sustainable development goals.

Keywords: *Fintech, Cleantech, blockchain, energy, sustainable development goals, green finance*

3. Examining University Students' Multitasking Behavior with Online Learning

Teressa Kassahun

Faculty Advisor: Anshu Arora

This research examines university students' multitasking behavior in online courses and investigates the significant indicators of multitasking in online learning environments. This research focuses on the students' multitasking behavior (related to self-efficacy for self-regulated learning (SE:SRL), Internet addiction, and multitasking tendency/behavior, in addition to student demographics (gender, age, classification, etc.)) in different online business courses. The study shows significant results and meaningful insights into multitasking tendency for students in online learning environments; and explores interrelationships amongst multitasking behavior, SE:SRL and internet addiction along with the correlations between multitasking and student demographics. The research integrates the following objectives:

- Explore online learning environments, Internet addiction, and students' demographics related to multitasking.
- Examine and define self-efficacy for self-regulated learning (SE:SRL) and the relationship between SE:SRL and multitasking in online environments.
- Investigate how multitasking affects academic performance.

In the current COVID-19 situation, a lot of impetus is given on online learning and online instructional design. Through the research, it strives to examine different pedagogical strategies in order to reduce multitasking behavior in online learning environments and strengthen overall learning and academic performance.

Keywords: *multitasking behavior/tendency, self-efficacy for self-regulated learning (SE:SRL), internet addiction, student demographics, online learning environments, pedagogical strategies, academic performance*

4. COVID-19 Global Pandemic & Its Impact on the Global Supply Chains

Andrea Gonzalez

Faculty Advisor: Anshu Arora

The COVID-19 (Coronavirus) outbreak worldwide has created a devastating impact on global supply chains. There is a dearth of research in the field of managing supply chains during a global health crisis (e.g., COVID-19). This paper presents a review of the literature regarding the impact of pandemic outbreaks on supply chains. There are six dimensions of examining COVID-19's impact on global supply chains: preparedness, digitization, recovery, ripple effect, adaptation, and sustainability. Currently, due to global pandemic, manufacturers around the world have been under major political pressure to increase their domestic production, increase employment in their home countries, and reduce or even eliminate their dependence on external sources. This study offers recommendations for advancing the research and literature on the effect of epidemic outbreaks on supply chains and provides guidelines for researchers and practitioners for possible future actions related to epidemic outbreaks.

UNDERGRADUATE ABSTRACTS

Keywords: COVID-19, global supply chains, preparedness, digitization, recovery, ripple effect, adaptation, sustainability, policy recommendations, uncover and address the hidden risks, political pressure, and vulnerability in manufactures

5. Is AI Assisting Us OR Replacing Us? Exploring Artificial Intelligence and Social Robotics

Dustin Scott, Lizeth Castro, Jada Foy, Raphael Pacano, and Dajae Scott

Faculty Advisor: Anshu Arora

Technology has become an integral part of our society. Businesses are taking advantage of technology in order to advance their growth globally. The next step in doing so is utilizing Artificial Intelligence (AI) in business applications worldwide. Marketers, accountants, doctors, and other business professionals are using AI to facilitate their daily lives. This technology gathers everyday information and processes solutions for the problems. Ethically, many red flags emerge in our mind because of negative media reports about robots and the destruction they can /may cause. Artificial intelligence has a broad meaning today as robots are becoming conscious of their environment around them. The current research addresses the following questions:

- How does AI help customers throughout their customer journey?
- What makes a robot as ‘conscious’? Can the robot outsmart humans?
- Is the rate of AI job replacement within mechanical/analytical intelligence proportional to the number of human workers replaced?
- How can the relationship between personality and anthropomorphization of

robots influence the acceptance of robots?

Our research focuses on AI influence in the world of business. The research presents managerial and theoretical implications for marketers while dealing with AI and robots.

Keywords: artificial intelligence, conscious, analytical intelligence, customer journey, anthropomorphization, AI job replacement

6. Robots in the Covid-19 Global Pandemic Crisis

Pierre La Noire

Faculty Advisor: Anshu Arora

The global tally for confirmed COVID-19 cases climbed to 46.6 million on November 2, 2020, according to data aggregated by Johns Hopkins University, while the death toll rose to 1.2 million. No one was prepared for any of this, but specifically those in healthcare. To this day, there has not been a confirmed vaccine to cure this deadly novel coronavirus. Although everyone awaits this vaccine as a potential cure, precautions are set globally to prevent the outbreak of this deadly disease. Those precautions included wearing masks all the time, social distancing, and even shutting cities / countries down. In the year 2020, technology has played a huge role in our everyday lives. We depend on it to complete daily tasks. In the situation that we are in now, technology such as robotics and autonomous systems are a great support for those in the healthcare professions. They play a huge and positive role in curtailing this disease. The digital system has reduced the amount of contact one can have, specifically within hospitals and those who work in healthcare. A big part of the plan to stop this virus is constant cleaning everywhere. Telerobots play a huge role in the cleaning services, reducing the

UNDERGRADUATE ABSTRACTS

amount of contamination in the outside world. The research discusses the implementation of technology, especially robotics, as a potential barrier to the spread of COVID-19 globally. Recommendations and policy suggestions are provided in the research.

Keywords: *robotics, autonomous systems, technology, artificial intelligence, COVID-19*

7. Beware: AI is Spying on You! Can Artificial Intelligence (AI) Be Ethical?

Alfonzo Belton

Faculty Advisor: Anshu Arora

Privacy is a thing of the past, when dealing with devices equipped with Artificial Intelligence (AI) software. Marketers and advertisers have found ways to use this technology to spy on your every move, and tailor-make their offerings accordingly. Something as simple as posting a selfie, can help marketers identify what are your favorite brands of clothing, shoes, and other products captured in the image. This is done through what is called 'image recognition'. Marketers can use this individual's AI data to forecast future consumer behavior. We all use these devices and apps to make our lives better, however, do we realize what price are we paying to achieve this minimal stress environment? Amazon was the first company to introduce voice recognition with their echo dot, Alexa. They market the echo dot, as becoming one's own personal assistant who can play music, order things for you, and even help in predicting weather patterns / getting your daily news digest --- just by saying a command. There are many ethical problems surrounding AI that deals with legal issues. Some of the issues revolve around who is responsible when these AI controlled machines make unwarranted mistakes, such as self-driving cars crashing, surgical robotic arms cutting an artery of a patient, job

replacement of the human workforce, phone operators, check-out line cashiers, and so on. There are even data breaching issues, putting one's personal information at risk, such as voice, fingerprints, and even optical recognition used to unlock mobile devices and other personal data storage places. The research addresses the following questions:

- What better precautions can consumers take to protect their privacy from advertising and marketing accessibility while interacting on social media, searching the web, and/or using smart, artificially intelligent devices?
- How can legislations and regulations help in protecting humans from AI controlled objects, when they malfunction and/or cause injury or harm?
- What can we, as consumers, do to reduce our dependence on AI, with so many devices in the marketplace?

Keywords: *Artificial Intelligence, privacy, voice and image recognition, advertising, smart devices*

8. The Social Spread of COVID-19: Analyzing How Artificial Intelligence and Mass Cyber Connections Help Officials Navigate the Global Pandemic

Aminata Jarr

Faculty Advisor: Anshu Arora

The COVID-19 global pandemic has been coexisting with us since December 2019 and it has led to continuous open conversations online. Understanding and analyzing these conversations (as data points) by using artificial intelligence can help governments and individuals all over the world to navigate the pandemic as well as investigate the sentiments toward COVID-19. Amongst those conversations, popular conspiracies on Twitter linked 5G to the

UNDERGRADUATE ABSTRACTS

spreading of COVID-19, which also led to the burning of a 5G tower in United Kingdom. Furthermore, based on research from aggregated data on social networks like Facebook, it is shown that coronavirus was more likely to spread between regions with stronger social network connections. The research addresses the following questions:

- Who are the cyber authorities during global crises and how do they process inappropriate comments on the social platforms?
- How can artificial intelligence analyze data related to global crises (e.g., COVID-19) for providing emotional support to individuals worldwide?
- How can AI help government officials worldwide navigate the COVID-19 pandemic for better (future) economy and social change?

In this research, the focus is on how COVID-19 has permitted an excessive amount of room for conversations online leading to conspiracy theories and spreads between regions with stronger social network connections in addition to social ties. With an underlying focus on cyber privacy protections and artificial intelligence, the research provides recommendations health care and government officials to navigate through the current global pandemic.

Keywords: Artificial intelligence, 5G, Aggregated data, Social approach, Social Connectedness

9. The ‘New Age’ of Educational Robots: Understanding Robotics in Mathematics

Chevell Parnell and Savena Fuller

Faculty Advisor: Anshu Arora

This research aims to review evidence on the usefulness of educational robotics in teaching

and learning mathematics, as well as to identify teachers and students' attitude toward the robots. As an alternative to using calculus as in comprehensive works on motion planning, students can achieve remarkable results by using simple linear regression tools and trigonometric analyses from the robots. A systematic search showed 20 experimental studies on how to teach and learn mathematical knowledge through robotics. In one of the educational robotics' research studies, the robot taught graphics, geometry, algebra and approximately half the mathematical course by engaging students in recreation-like interaction. The students' performance was predominantly taken through observations and questions, test, and verbal interviews. Another educational robotics' research highlighted trials with one robotics platform indicating that the use of these tools can lead to satisfactory navigation through dead calculation regardless of whether students have any experience with sensors, programming and or mathematics. In another study, the students were divided into two different groups; group A of students were taught by the robots as tools to visualizing numbers, shapes, distance etc. while group B were taught regularly. The results revealed that robot generally play an extensive role in mathematics education except in cases where there is no substantial improvement in the students mathematically learning. This research discusses the pros and cons of using a robot for mathematics education.

Keywords: Trigonometry, Algebra, Linear, Robotics, Mathematics, Educational, Technology in classroom, Mathematics skills

UNDERGRADUATE ABSTRACTS

10. Examining Artificial Intelligence (AI): Positives and Negatives

Byrce Kalembo

Faculty Advisor: Anshu Arora

In the current, unprecedented COVID-19 global pandemic crisis, people are heavily dependent on technology. One of the main types of technology, we are heavily dependent on today is Artificial Intelligence (AI). We use AI on an everyday basis when we talk to Alexa / Siri / other intelligent digital assistants on our smart devices. The big question is whether this rapid advancement of technology transforming human lives leading to a progression of society or is it harmful to adapt to them. The research addresses the following questions.

- What are the pros and cons of AI in today's world?
- Can AI be developed to suppress human expectations and govern society?
- Is AI really good for the global society?

This research discusses artificial intelligence (AI) for the advancement of human society along with highlighting the negative effects of AI delving into privacy and ethics.

Keywords: *artificial intelligence, four types of human intelligences, mechanical intelligence, analytical intelligence, intuitive intelligence, empathetic intelligence, job replacement*

11. Artificial Intelligence in a Virulent World

Emmanuel Saint-Jean

Faculty Advisor: Anshu Arora

With the growth of Artificial Intelligence (AI), humans have become more aware of the benefits and downsides of global technological revolution. Approximately in January 2020, COVID-19, the

new air-borne disease that has ravished and killed 1.2 million globally (as of November 2, 2020 according to the Johns Hopkins University), forever changed our world and AI as we know it. The world's economies (including people and governments globally) are affected drastically by this air-borne disease. With countries precautions and prevention control focused on the suppression of this disease, healthcare organizations have re-evaluated their operational procedures around the world. AI utilization has ramped up in majority of countries, especially in their healthcare facilities. The prime usage of AI applications and robotics are to limit individual-to-individual contact and guarantee cleaning, sanitization and backing in clinics and comparative offices. This research focuses on the benefits and risks of healthcare organizations operating with and without AI in the means of battling COVID-19, and potentially other deadly diseases in the future. The research addresses the following questions:

- Is AI trustworthy enough to help us fight COVID-19?
- With AI algorithms systems created by humans, can data be free off biases and societal inequities?
- How can AI help in preventing COVID-19 and potential global crises in the future?

The research discusses the prevention control benefits of increased usage of AI by healthcare organizations, while possible risk exposure is present and potential AI algorithms may include human biases and societal inequities.

Keywords: *artificial intelligence, prevention control, utilization, robots, healthcare organizations, air-borne disease, operational procedures*

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12. Robots and Artificial Intelligence

Isie Collins

Faculty Advisor: Anshu Arora

In the future, Robots and Artificial Intelligence (AI) will play a significant role in the World economies with profound economic, social and political implications for societies. The advances in technology have now made it possible for artificially intelligent robots to help consumers as intelligent digital assistants, home cleaning robots, cook robots, etc. For example, Amazon Alexa (an intelligent digital assistant) can do all sort of things like order food, get an uber, play music, control small appliances at home, etc. Marketing will need to adjust its strategies for the consumer robots. The default setting of robots could be based on what the human consumer may want to buy, but the final decisions must be vested in humans. The problems encountered by humans in the development of artificial intelligence (AI) and robots are conducive to the elimination of many legal disputes. However, AI brings a lot of ethical issues at the same time as it brings about crises. The ethical issues brought about by the application of technology are concerned with the development of artificial intelligence and robots, and they should aim to make individual lives better and work for the 'overall good' of the mankind.

Keywords: *Robots, Artificial Intelligence, Market Mix, Macro Marketing, Technology, Economic, Consumers, Employee, Product, Scientific Research*

13. A Study of the Changes in Primary Care Medicine during the COVID-19 Global Pandemic

My Lam

Faculty Advisor: Anshu Arora

Historically, pandemics, wars, famines, and other global crises have had long lasting impacts on society. The recent Covid-19 global pandemic has led to behavior changes including sheltering in place, self-quarantine, isolation, and social distancing. These recent behavior changes have transformed not only social behavior, but workplace behavior. This research examines specifically how the Covid-19 crisis is transforming workplace behavior in medicine, specifically primary care. Due to the need to isolate and practice social distancing during the pandemic, primary care doctors are practicing medicine virtually and meeting with patients for check-ups remotely through video consultations. Technology has supported this change. 80% of primary care practices in England are currently using AccuRx, a technology platform that enables SMS, video consulting, and exchanging of personal patient documents and images. This clinical exchange can take place on personal smartphones and computers, and maintains doctor and patient confidentiality. Additionally, the pandemic has led to more self-care and self-monitoring among primary care patients experiencing chronic conditions, including diabetes and pulmonary disease. Patients, with the aid of smart phone mobile applications and telemedicine with primary care clinicians, can monitor their chronic symptoms using their own personal medical equipment, including oximeters and blood pressure machines. Although the pandemic has resulted in successful self-care, self-management, and telemedicine, primary care appointments have declined by 30%. This sudden drop in annual health checks, and prevention and

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screening activity could lead to increased mortality from undiagnosed health conditions unrelated to COVID-19. This study investigates whether these pandemic-related changes in primary care practices among clinicians and patients will result in improved overall health or more negative health outcomes. The research addresses the following questions:

- Will the pandemic permanently or temporarily change the landscape of primary care medicine? What will be the post-pandemic new normal?
- Do patients need a human touch from their doctor(s) in order to stay healthy, or is telemedicine sufficient?
- Will the inequities of access to technology (cell phones, personal computers) prevent some patients from benefiting from the telemedicine they need from primary care doctors?

Keywords: *Telemedicine, primary care, COVID-19, pandemic, technology, social distance, AccuRx, chronic disease, remote, medicine*

14. Artificial Intelligence (AI) and How AI Prevents the COVID-19 Global Pandemic

Olivia Simms

Faculty Advisor: Anshu Arora

COVID-19 is a health crisis that has brought new challenges and problems in the healthcare aspects across the globe. Covid-19 is a global pandemic, and health workers and world organizations are trying to find innovative ways of detecting, treating, preventing, and curing the disease. Research has shown that interactions between people including health workers and patients increase the chances of spread of Covid-19. In the past, artificial intelligence (AI) has

been used in medicine to diagnose and manage illnesses. AI technologies and applications can help in minimizing the contact between people infected and others, thus controlling the outbreak of this pandemic. The research investigates whether increased use of AI technology can help nurses and doctors, examines various forms of AI available in healthcare, and explores how technology is useful to healthcare providers. The research will utilize available resources on the use of artificial intelligence in medicine and its importance. The research highlights methods of the adoption of AI technology, and how AI has the potential to exterminate Covid-19 crisis globally.

Keywords: *COVID-19, Artificial intelligence, Robotics, Healthcare, Global crisis (pandemic)*

15. How Can Robotics Help in Combatting the Covid-19 Virus?

Shanise Rose and Novae Sylva

Faculty Advisor: Anshu Arora

Robotics play a vital role in healthcare and aim to manage and control the current issue of the coronavirus pandemic. They help to promote a healthy and sterile environment for the medical professionals by reducing face to face interaction while the concept of quarantine is being reinforced. To minimize the risk of spreading the virus within the hospitals, robots need to be implemented to actively control the pandemic. Moreover, as a method of control, persons who are currently undergoing or are expected to undergo surgery in this unfortunate time, will be treated as patients who are infected, regardless of their status of the severe respiratory syndrome coronavirus 2 (SARS - CoV-2). Furthermore, robot assisted surgery (RAS) will be used to reduce the duration of operations for the patients that need complex oncology surgery to create more space for persons who have the virus. RAS

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will help to reduce the risk of contamination with body fluids, surgical gases of the surgical area and the number of medical personnel who will be present while doing laparoscopic surgery. Under the circumstances of COVID-19, general surgical safety precautions must be adhered to. In essence, the research emphasizes the role of robotics that include telemedicine, decontamination, and logistics.

Keywords: *quarantine, coronavirus, robotics, sterile environment, laparoscopic surgery, respiratory syndrome, oncology surgery, telemedicine, decontamination, robot assisted surgery*

16. Business Ethics: The Normalization of ‘Bad’ Business Ethics

Olabanji Akintunde

Faculty Advisor: Anshu Arora

The entire notion of ‘entrepreneurship’ has changed drastically in the modern-day world of business. The implementation of technology and political influence has created an entirely different business environment that is far from being ethical. Business ethics has been the focal area of business research for over 20 years. The lack of proper regulations and penalty against crimes related to business ethics has created little incentive for businesses to maintain order in their operations. For instance, housing crisis in the past and the lack of regulations for social media organizations (e.g., Twitter, Facebook, Google, etc.) has proven time and again that business ethics has been sacrificed by big corporations. The new age of business ethics draws strength on the fact that people and global businesses are becoming intrigued with the social responsibility CEOs portray now more than ever before. Millennials have played a vital role in establishing a census that condemns businesses for their

malpractices. This research addresses the following questions:

- What is the impact of business ethics on millennials?
- In what way does business ethics differ in the present versus the past?
- What is the relationship between the millennials and the business world today?
- What way has businesses defied business ethics with little to no punishment?

Keywords: *business ethics, millennials, entrepreneurs, capitalism, social responsibility*

17. Marketing Strategies Utilized in Smart Speakers

Grace Yepez

Faculty Advisor: Anshu Arora

Alexa is one of many artificial intelligence (AI) devices that can be activated by voice command. Many people know Alexa for being a smart speaker that can play music, but Alexa can do so much more than that. This artificially intelligent device is a wireless smart speaker that interacts as a virtual personal assistant. Its possibilities are diverse and range from controlling the home's lighting, temperature, providing today's weather forecast news to setting the alarm clock! Various companies are in the process of making voice-powered apps for smart speakers that allow customers to use the artificial intelligence personal assistant to conduct tasks, such as getting information from the internet and purchasing items. This is the beginning of a new type of interaction between a company's brand and its customers. Companies should learn to understand this new vision and build useful content for AI technology. This study examines different marketing strategies that customers find acceptable on smart speakers. It was found that a cognitive message strategy is advantageous

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with smart speakers. This research outlines three kinds of frameworks that are best suited for the format of a cognitive text: authoritative, testimonial, and slice-of-life. The best criteria for marketing products and services on smart speakers is that the message must grant value to the customer.

Keywords: Alexa, smart speakers, marketing, artificial intelligence, voice-powered device, cognitive message strategy

18. Advantages of ‘Automation’ - During and After a Global Pandemic

Christopher Duncan

Faculty Advisor: Anshu Arora

The research states the benefits and growing uses that autonomous and robotic systems will have in the health and wellness industry during the Covid-19 pandemic and beyond. Artificial intelligence is continuing to provide early diagnosis and help in contact tracing the spread of the virus. AI is a tool that is utilized in the current COVID-19 times to lessen the spread / advance of infection and is proving how AI will be of pivotal importance in forecasting the next outbreak. There is an evolving clinical need for finding new and innovative tools that can be used to help eliminate situations such as the spread of viral infection. The world was not prepared for the level of automation that a crisis, the magnitude of COVID-19 global pandemic, placed upon us. Wearable technology, such as bracelets monitoring temperature for early screening and/or RFID required to track immunity status useful for contact tracing are examples of how autonomous systems will benefit mankind today and in the future. AI and robotic systems are the perfect ally in moving towards the swift responses a healthy future requires.

Keywords: Artificial Intelligence, Research, Technology, Covid-19, Pandemic, Syndrome, Robotics, Autonomous Systems

19. 3D Manufacturing in the Aviation Industry

Lizeth Castro and Jimi Page

Faculty Advisor: Amit Arora

This research primarily focuses on the importance of creating a more resilient supply chain in the Aviation Industry. There is an increasing likelihood of disruption in global supply chains due to incidents such as natural disasters. This research takes a close look at the aviation supply chain and analyzes its strengths and weakness. It intends to connect these factors to the reason why the industry was so negatively affected by the COVID-19 pandemic in 2020. We aim to develop a model that will help restructure the supply chain to operate in a more preventive and resilient way.

The research paper answers the following questions:

- What impacts does 3D printing have on the aviation industry?
- What challenges in the aviation manufacturing industry could be alleviated using 3D printing?
- How could 3D printing in aviation industry shape how we fly?

Keywords: Resilient Supply Chain, Prevention, Implementation, Risk Assessment, COVID-19, Aviation Supply Chain

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20. COVID-19 and its Impact on Disruptions of the Food Supply Chain

Brea Ellis and Mehdi Rtabi

Faculty Advisor: Amit Arora

In the age of the Coronavirus, new disruptions have impacted supply chain management. As many Americans shift to remote work and schooling, consumer behaviors have rapidly changed. With the added pressure of satisfying consumer demand, many businesses are also unable to source the materials and resources required to operate. As a result, companies are now assessing their own supply chain management methods. Companies across various industries and sizes are being impacted in very different ways. Although each company is different, challenges regarding talent gaps, flexibility, sustainability, and rising costs have plagued many organizations. The impact of Covid-19 will be long lasting; therefore, companies must be able to manage risks going forward. Additionally, embracing artificial intelligence, machine learning and analytics may be pivotal in mitigating future supply chain disruptions. This study will examine the supply chain disruption factors that businesses face during the Covid-19 crisis, and to understand the differences of impact based on industry and size. The questions that will be addressed in this research paper are: What are the factors that have negatively impacted the food supply during the pandemic? How do small and large businesses react to supply chain disruptions? What are the solutions to supply chain risks that may be applicable to businesses of all sizes?

Keywords: *agility, consumer behavior, risk management, consumer demand, artificial intelligence, supply chain disruptions*

21. Supply Chain Complications In 2020: How Grocery Delivery Services Manage In the COVID-19

Shanell McNamee and Britany Smallwood

Faculty Advisor: Amit Arora

The Coronavirus pandemic of 2019 brought about varying changes to multiple industries. From the cancelation of brands that were deemed to be not as profitable, to restaurants struggling to stay alive on a day-to-day basis, the pandemic greatly disrupted the supply chains. This study aims to further examine how grocery delivery services have struggled in their management of supply chains with the increasing demand from both new and old customers. The questions to be addressed in this research paper are: What old challenges resurfaced when customers switched from instore to online grocery shopping? Is shopping online for groceries more beneficial?

Keywords: *supply chain, e-commerce, grocery services*

22. Impact of COVID-19 on Logistics in the Food Retail Industry

Natasha Hamilton, Nathania Hamilton, and Tyreek Thompson

Faculty Advisor: Amit Arora

Logistics is the process of planning and executing the efficient transportation and storage of goods from the point of origin to the point of consumption. The goal of logistics is to meet customer requirements in a timely, cost-effective manner. The purpose of this research is to investigate the impact COVID 19 pandemic had on logistics in the food retail industry while also focusing on food safety. The paper also discusses problems related to labor shortage,

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increased transportation time, increased cost, and short supply of food items during the pandemic. Specific research questions that the research focuses on are: How did the outbreak affect the food retail industry? What changes had to be made to accommodate restrictions because of COVID 19?

Keywords: *supply chain, logistics, pandemic, supply risk*

23. COVID 19 5G Conspiracy Theory and Violence

Maria Alejandra Garcia

Faculty Advisor: *Anshu Arora*

The coronavirus disease (COVID-19) has spread progressively worldwide since December 2019. The pandemic led to increased debates across online platforms, famously Facebook and Twitter. Social media users shared numerous conspiracies. Among them, 5G has been linked to the spread of COVID-19 by a standard theory, leading to misinformation, and 5G towers burned in the United Kingdom and globally. Keys to battling it are the awareness of false news generators and swift strategies aimed at isolating and rebating disinformation. The in-depth tracing through social networks of COVID-related misinformation provides valuable new insights into the nature of the propagation of online information and points to opportunities to delay and avoid the dissemination of false information or, at least, to fight it more explicitly with accurate counter-information. Previous research has found strong correlations between 5G COVID-19 conspiracy theories with COVID-19, with a more significant justification of real-life and hypothetical violence, along with a greater intention to participate in similar behaviors in the future. Also, for those most elevated in paranoia, these correlations were greatest. This research aims to

understand the drivers of the theory and tactics 5G COVID-19 conspiracy deal with such misinformation. It traces the dynamics of spreading rumors that the pandemic outbreak was somehow linked to the deployment of 5G mobile telephony technology in Wuhan and worldwide.

Keywords: *COVID 19, 5G towers, conspiracy theory, false news, violence, social media, Facebook, Twitter*

24. Testing Leaders during COVID Crisis

Mohamed Ahmed and YahiaEl Boukili

Faculty Advisor: *Sergey Ivanov*

This paper explores and tests an aspect of a new leadership theory, originally developed by Dr. Elliott Jaques (1964, 1994, 2000), applying the theoretical principles to assessing present leaders. In particular, this paper analyzes a political leader during the 2020 COVID crisis in the United States. The findings are exploratory and not flattering. The authors explain the leadership test, and then report information from the ground, through personal observation. In particular, one author describes his personal experiences overcoming COVID, and another traveling through the United States, reporting information how he saw it. The paper concludes with a new theoretical proposition that could be applied to all current leaders in most situations to evaluate their fitness to their leadership role.

Keywords: *COVID 19, leadership*

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1. Digital Technology Roles for Crisis Management: Lessons from the COVID-19

Prim Patanachaisiri

Faculty Advisor: Dr. Anshu Arora

The Coronavirus disease (COVID-19) has taken the world abruptly since late 2019. The nature of the newfound pandemic allows the disease to spread wide and fast at an alarming rate and has raised public concerns globally. The support of digital technologies can play an important role in assisting with the situation. Technologies can aid and improve every stage of the pandemic ranging from - before the contact of the disease and till after the treatment of the disease. By utilizing AI, robotics and big data, this research focuses on the new and efficient methods in handling the situation. This research serves as a guideline for policymaking in digital technology roles for handling the COVID-19 global pandemic.

Keywords: COVID-19, Digital technology, Big Data, AI, Robotics, Policymaking

2. Recalibrating Anthropomorphized Robotic Interactions during COVID-19: Understanding Human Robotic Interactions and Its Impact on Social Isolation

Ndifreke Akpan

Faculty Advisor: Dr. Anshu Arora

Human behavior and emotional intelligence add to the backdrop for social interactions. Robots are becoming more human-like with every new update, remodel, and release. In a time where

human interaction is minimized, anthropomorphic recalibrations have emerged as a baseline for new robot designs. The COVID-19 pandemic has forced technology engineers to re-focus on touchless human-technology. Lately, where single adults are less likely to engage in new social connections, human-robot interactions have become the norm. All cultures and demographics alike are affected. Robot/technology with human personality traits, facial recognition, inflection in tone, and many other human-like features are all part of a demand in current upgrades. This research dives into the degrees of varying changes and adjustment timeframes when robots are introduced to new experiences. The research focuses on human personality dimensions in human-robot interaction situations and examines the relationships between human personality traits and robotic anthropomorphism along with overall robot likeability and acceptance.

Keywords: anthropomorphic recalibrations, COVID-19 pandemic, human-robot interaction, social robotics, human personality traits, robot likeability, robot acceptance

3. Artificial Intelligence in Marketing: Past, Present and Future

Leniqua'dominique Jenkins

Faculty Advisor: Dr. Anshu Arora

In the future, artificial intelligence (AI), also referred to as machine intelligence, will impact marketing strategies and challenge the way humanity prioritizes human labor. Prior research indicate that AI can be used as an effective response to the external contingencies of high volumes of data and uncertain environmental conditions, as well as being an effective response

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to the external contingencies of limited managerial cognition. As global economy learns how to incorporate AI/ robots into systems, our institutions of higher learning will be forced to educate human workers on ways to utilize AI in various marketplaces. The research addresses the following questions:

- What is AI and its future for marketing and management?
- What are different kinds of AI and how do they impact humans in terms of job replacement?
- What are the policy recommendations for AI and future of work?

This research examines how AI will challenge human labor and importance, future of work, customer interactions, and privacy.

Keywords: *Artificial Intelligence, mechanical intelligence, analytical intelligence, intuitive intelligence, empathetic intelligence, managerial cognition, human labor, privacy.*

4. The Role of Digital Marketing Towards Growth of Multinational Corporations

Bosson-Sora M. Ahouti and Aya Boukhari

Faculty Advisor: Dr. Amit Arora

Digital Marketing is a term that is well known for today's situation, especially in business and technological facets. Digital marketing is convenient as it utilizes the Internet, social networking, mobile gadgets, search engines, and other networks to reach clients. Various marketing specialists consider digital marketing a completely new venture that requires a different way of looming consumers and new ways of understanding how customers behave compared to traditional marketing. One of the primary

reasons why digital marketing is taking over traditional marketing channels is because the Internet has allowed businesses to intermingle with affected audiences in real-time. Clients have grown accustomed to engaging and cooperating with one's brand or business. Another similarly crucial reason is its affordability. Digital Marketing is considerably more affordable when compared to traditional marketing channels. Moreover, the popularity in the usage of social media by all classes of people, from scholars to parents, business professionals are all using one or more social media platforms to communicate, get the news, remain in touch with others, and express their opinions.

Hence, social media offers an opportunity for the business organizations to get information on their competition, customers' feedback, new developing trends that may develop a business idea, the status and achievements of the competition, and the views of the employees on the organization and market. This paper focuses on describing digital marketing growth in multinational firms and the strategies adopted by Trupay and Nike to grow their business.

Keywords: *Digital Marketing, Social media, International Business, growth, technology, internet*

5. Robotic Systems in Healthcare Digitalization during the COVID-19 Pandemic

Mustafa Kakar

Faculty Advisor: Dr. Anshu Arora

COVID-19 global pandemic has spread rapidly and infected millions of people in the United States and other parts of the world. In order to

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respond to this pandemic, the existing healthcare system has proven to be insufficient. On the other side, the close contact of healthcare professionals with infected patients have increased the number of COVID-19 cases globally. In order to overcome this issue, healthcare officials decided to digitalize the health assessments, and use robots and artificial intelligence (AI) applications in response to global crises. This research summarizes the role of robotics in healthcare. Robotic and telerobotic systems significantly reduce the risk of infectious disease transmission to frontline healthcare workers by making it possible to triage, evaluate, monitor, and treat patients from a safe distance. Robots helped hospitals in sterilizing rooms through UV rays, eradicate contaminations, and connect patients to the healthcare team through digital methodologies for health assessment. Monitoring patients virtually and through robotic telehealth helped the healthcare system to maximize the coverage and use manpower and resources in emergency situations. The control of virus is not possible without state-of-the-art medical technology. This study proposes steps in controlling global crises (e.g., COVID-19) through robotics, framework for the use of robotics in healthcare digitization, and policy implications in robotic systems' use for healthcare digitization.

Keywords: *Human-robot interaction, Telerobotic system, COVID-19, Telehealth assessment, State of the art Medical technology, Robotics*

6. Reverse Innovation, Open Innovation, and Sustainability: An Implication for Innovation-Ready Environment

Prim Patanachaisiri

Faculty Advisor: Dr. Amit Arora

Shifting focuses to economic emerging countries, reverse innovation has been a subject of interest for many years. Reverse innovation, an innovation that is developed for the purpose of emerging market then later brought over to the developed world, has proved to be a challenging matter as requirements found in developing countries are different - highly diverse and typically values lower-cost products. To penetrate the market successfully, a unique strategy that developed on local networks that can deliver the right value proposition to the market is needed. To be able to create a prolific strategy for the long run, sustainability management and open innovation have distinctive characteristics that can build, support, and sustain an innovation-friendly environment crucial for new solutions to surface.

This paper explores the following questions:

- How can sustainability management and open innovation add value to reverse innovation?
- How do the three concepts complement each other and co-contribute to create an innovation-ready environment?
- What are the key success factors of the three concepts?

Keywords: *Reverse Innovation, Sustainability Management, Open Innovation, Frugal Innovation, Emerging Economies*

7. Recovering from the COVID-19 Pandemic: An Economic Approach to Innovation

Aya Boukhari and Marcus Mottley

Faculty Advisor: Dr. Anshu Arora

The impact of the COVID-19 pandemic has proved strenuous on public health systems and

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governments. It has burdened both businesses and consumers due to the lack of productivity around the world. This research seeks to investigate how global crises like the current COVID-19 affect us, and the role innovation plays in the reopening of businesses for economic recovery worldwide. We propose steps needed for the initial recovery stages and how this initial recovery affects the management of future innovations. Managers can survive the global crises (e.g., Coronavirus) using the social exchange theory (SET) view. We present crisis-comparative dimensions for economic recovery during crises: (a) formation, (b) focus, (c) temporality, (d) government jurisdiction, (e) preparedness, (f) normality, (g) business, and (h) operational deployment. Our proposed innovative, economic recovery approach outlines four intertwined managerial areas for global businesses and organizations: (a) digital transformation, (b) decision-making processes, (c) leadership, and (d) emotions and stress. We propose guidelines to managers and policymakers for economic recovery during the current turbulent times.

Keywords: *Innovation, Economic recovery, Social Exchange Theory, Global crises, Crisis-comparative dimensions, Digital Transformation, Covid-19 Pandemic*

8. Viable Supply Chains and Production Frameworks for Survivability During and Post Covid-19 Global Pandemic

Paula Avellan

Faculty Advisor: Dr. Anshu Arora

The COVID-19 global pandemic shifted standard working systems and integrated restrictive

measures of social interaction that include self-quarantining, avoiding large gatherings, practicing remote working, online learning, reduced travel, limited visits to physical stores, and many others. These adjustments contradict normal routines. Companies and firms worldwide are now trying to identify ways to enhance the survivability of Sustainable Supply Chains (SSCs). This study presents a conceptual framework to improve survivability for SSCs during and post-COVID-19 pandemic. The author utilizes the Stepwise Weight Assessment Ratio Analysis (SWARA) method to identify the significant factors for enhancing the survivability of SSCs. The study theorizes a new notion of viable supply chains (VSCs). In the study's approach, 'viability' is an underlying supply chain property that encompasses agility, resilience, and sustainability. The research provides guidelines for stakeholders and researchers to focus and guide their decisions on the recovery and rebuilding of their viable supply chains after global long-term crises, such as, the COVID-19 pandemic.

Keywords: *Viable Supply Chains; Sustainable Supply Chains; Stepwise Weight Assessment Ratio Analysis (SWARA); Agility; Resilience; Survivability; Viability; COVID-19*

9. Artificial versus Human Intelligence: Creating a Partnership during COVID-19

Ijada Fields

Faculty Advisor: Dr. Anshu Arora

As artificial intelligence(AI), machine learning, robotics, and automation are rapidly evolving they are quickly changing industries and societies globally raising the question: Can robots replace

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humans? Naturally, humans have cognition, action and perception skills while robots are limited and cannot always distinguish an object or a being, navigate a terrain, and/or comprehend written or verbal language and instructions. To bridge the gap between robotic technologies and people, humans need to embrace AI rather than shy away from it. This research examines how AI, machine learning, robotics, and automation are currently transforming global organizations, as well as how humans and robots can work together during global crises (e.g., COVID-19 global pandemic). The research proposes managerial and policy implications for AI applications during critical situations around the world.

Keywords: *Artificial Intelligence, Automation, Human-robot interaction, Robotics, COVID-19*

10. How Can AI and Robotics Change Humans and Businesses Globally?

Wanya Hamlett

Faculty Advisor: Dr. Anshu Arora

The advancing technologies of artificial intelligence (AI), machine learning, robotics, and automation outputs are transforming industries and societies everywhere. This research discusses the promises, challenges, and future research implications of these impactful AI-related technologies. Not only are the technological aspects investigated, but changes in behavioral, societal, policy, and governance are also reviewed. The author discusses AI, automation, machine learning, robotics, and their impacts on global economies. This study hopes to raise awareness of the importance of understanding these AI technologies as a basis for formulating policies that can maximize the

benefits of these advancements for humanity and curtail negative impacts.

Keywords: *Artificial intelligence, Machine learning, Robotics, Automation, AI Technologies, Negative Impacts of AI, Global economies*

11. Artificial Intelligence: Impact on Humans, Innovation, and Organizations

Linwood Thomas

Faculty Advisor: Dr. Anshu Arora

Artificial intelligence (AI) has been evolving over the years. AI has been inspired by both humans and animals. "Artificial" means counterfeit or something that is made or produced by humans. "Intelligence" is the ability to apply knowledge and skills. Machines have become increasingly, more capable of taking on a task that requires "intelligence" over time. In artificial intelligence, there are four kinds of AI that is required for service tasks, such as mechanical, analytical, intuitive, and empathetic. Today, artificial intelligence is constantly reshaping organizations by performing various tasks, creating a major source of innovation, which seems to threaten human jobs, careers, and business. This paper focuses on how artificial intelligence has changed over; and how modern-day technology, such as robots and machines, are used in both organizations and human-dominated social spheres.

Keywords: *Artificial Intelligence, Mechanical Intelligence, Analytical Intelligence, Intuitive Intelligence, Empathetic Intelligence, Innovation*

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12. Artificial Intelligence: Future Implications for Management of Human-Machine Interactions

Rok Bozic

Faculty Advisor: Dr. Anshu Arora

Artificial intelligence (AI) has its tentacles in almost every corner of the world. This evolving ecosystem is bringing many changes at all socio-economic levels. AI is predicted to have a global transformative influence on economic and social structures, similar to the effect that other general-purpose technologies, such as steam engines, railroads, electricity, electronics, and internet, have had. AI is in early development phases and operates mechanically, analytically, and intuitively, to some extent. Empathetic AI capabilities are currently researched globally. People can operate in all phases while AI is currently restricted to mostly mechanical, and somewhat, analytical, and intuitive. Future AI will be capable of exhibiting intuitive and empathetic capabilities. This can be viewed as a threat for human employment. The research presents managerial and policy implications that relate to AI and job replacement, future of work arising from the use of AI applications, management of human-machine interactions, and changes needed to ensure smooth transition to automation of services.

Keywords: Artificial intelligence, mechanical intelligence, analytical intelligence, intuitive intelligence, empathetic intelligence, services, job replacement

13. Advantages of Multiculturalism through the Eyes of International Business Management

Rok Bozic

Faculty Advisor: Dr. Amit Arora

A business that wants to ensure long-term success must create distinctive environment for its employees that would allow for their optimal well-being along with growth of the company. World is inevitably interconnected in international cooperation whether economic, political, or cultural nature. Those who started building and investing on the matter have most likely already reaped the benefits. Multiculturalism is an important dimension of global organizations that adds value to the company, hence it allows for different minds, eyes, and backgrounds to work on matter and present it to the world in the best possible way. Managers need to be well versed on culture of all their subsidiaries to ensure a friendly and productive environment.

Keywords: Multiculturalism, international business management, diversity, organization

14. Digital Marketing: A Guiding Force in Global Business Innovation

Michael Kendrick

Faculty Advisor: Dr. Amit Arora

Globalization is no longer a term concerned specifically with academics: it is a real and growing phenomenon affecting most people and businesses all over the world. In the digital marketing realm, this means that an organization's website also needs to be a part of

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the global spectrum. If firms would like to focus on trading and exporting products and services worldwide, they need to have a solid international digital marketing strategy in place. The aim of highlighting a wide range of considerations that need to be addressed in order to tailor a firm's strategy to a global target market. The areas that will be focused on a firm's website include design, international SEO, international PPC, and international social media marketing. This paper will examine the importance of digital marketing in international business and trade. Also, it will highlight the digital marketing process as well as the marketing strategy process where digital technologies are having or will have a significant impact. The research will look at historically successful digital marketing campaigns and what they did to separate themselves from their competitors. Lastly, the paper will look at the future of digital marketing and the consumer's role in it.

Keywords: *Digital Marketing, Globalization, International Business, growth, technology*

15. The Relationship Between Workplace Gender Diversity and Organizational Productivity

Marcus Mottley

Faculty Advisor: Dr. Amit Arora

This paper delves into the importance of workplace diversity (WPD) and its effect on organizational environment. Specifically, this research focuses on the impact that women have on the labor force. It also analyzes the role of Corporate Social Responsibility (CSR) in ensuring that specific policies are put in place to implement WPD and protect female workers from any sort of discrimination. Furthermore, the paper

compares the differences within the workplace both with and without the critical element of WPD. The study seeks to answer the question: How does Workplace Gender Diversity influence organizational productivity?

Keywords: *Workplace Diversity, Corporate Social Responsibility, gender equality, affirmative action, paternalism, empowerment*

NOTES





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