

## ISEM FACULTY – Recent Publications

### Dr Iheb Abdellatif:

1. **Abdellatif, I.**, April, A., Abran, A. (Submitted - 2021): « Measuring and Representing the Multi-perspective of BPM Controls ». Information and Software Technology, Elsevier.
2. Eeshwaraju, S., Jakkula, P., **Abdellatif, I.** (2020): « An IoT based Three-Dimensional Dynamic Drone Delivery (3D4) system ». IEEE Cloud Summit
3. Khatri, H., **Abdellatif, I.** (2020): « A multi-modal approach for gender-based violence detection ». IEEE Cloud Summit
4. A Niture, N., **Abdellatif, I.** (2020): « AI based airplane air pollution architecture using satellite imagery ». IEEE Cloud Summit
5. **Abdellatif, I.** (2019): « Towards a novel approach for designing smart classrooms ». International Conference on Information and Computer Technologies
6. Bendavid, Y., **Abdellatif, I.**, Ben Naceur, M. (2019): « Using IoT in operational business intelligence ». Information and Management Association Conference.
7. **Abdellatif, I.**, Bendavid, Y. (2018): « Using a multi-perspective approach in the selection of an Internet-of-Things system ». *International Conference: Association of Global Management Studies*.

### Dr Siamak Aram

1. Fan, T., Sadeghian, R., & Aram, S. (2020, October). Deer-Vehicle Collisions Prevention using Deep Learning Techniques. In *2020 IEEE Cloud Summit* (pp. 97-102). IEEE.
2. Aram, S., Kornev, D., Han, Y., Ekramnia, M., Sadeghian, R., Sardari, S. E., ... & Gandjbakhche, A. (2020). Machine Learning in Cognitive Neuroimaging. *Data Analytics and AI*, 167.
3. R. Srivasta, M. Rahmathullah, S. Aram, N. Ashby , and R. Sadeghian, A Deep Learning Approach to Diagnose Skin Cancer Using Image Processing, CSCI 2020
4. Siamak Aram, Maria H. Rivero, Nikesh K. Pahuja, Roozbeh Sadeghian, Joshua L. R. Paulino, Michael Meyer, James Shallenberger. "Multi-Environmental Parameters Dashboard for Susquehanna River Basin using Machine Learning techniques" in IEEE Computer Society & Conference Publishing Services (CPS)
5. Venu, S. K., Sadeghian, R., Sardari, S. E., Dashtestani, H., Gandjbakhche, A., & Aram, S. (2020, July). Neural Correlation of Brain Activities and Gaming Using Functional Near-Infrared Spectroscopy and Iowa Gambling Task. In *International Conference on Applied Human Factors and Ergonomics* (pp. 16-22). Springer, Cham.
6. Cumhur Cosgun, Ozlem Cosgun, Roozbeh Sadeghian, Siamak Aram (2020). Prediction of Ultimate Load Capacity of Concrete-Filled Steel Tubes with Circular Sections under Axial Load by Using Predictive Analytics Methods. IEEE CSCI 2020 (International conference on Computational science and computational intelligence)

7. Sarah Hadipour, Siamak Aram, Roozbeh Sadeghian, Similar Multi-Modal Image Detection in Multi-Source Dermatoscopic Images of Cancerous Pigmented Skin Lesions. proceedings of the 24th International Conference on Image Processing, Computer Vision, & Pattern Recognition
8. Aram, S., Kornev, D., Sadeghian, R., Sardari, S. E., Venu, S. K., Dashtestani, H., & Gandjbakhche, A. (2020, July). Machine Learning Approaches and Neuroimaging in Cognitive Functions of the Human Brain: A Review. In *International Conference on Applied Human Factors and Ergonomics* (pp. 23-29). Springer, Cham.
9. Ethel Mensah, Musarath J. Rahmathullah, Pooja Kumar, Roozbeh Sadeghian, and Siamak Aram (2020), A Proactive Approach to Combating the Opioid Crisis using Machine Learning Techniques, The 6th International Conference on Health Informatics & Medical Systems
10. Aditya Vikram Singh, Roozbeh Sadeghian, Mike Meyer, John Quigley and Siamak Aram, "Analyzing and monitoring the effect of precipitation on Susquehanna River Basin using a dashboard and machine learning approaches: A pilot study," AI World Conference & Expo, Boston, MA, 2019.
11. Siamak Aram, Maria H. Rivero, Nikesh K. Pahuja, Roozbeh Sadeghian, Joshua L. R. Paulino, Michael Meyer, James Shallenberger (2019). "Data-driven Environmental Management: A Digital Prototype Dashboard to Analyze and Monitor the Precipitation on Susquehanna River Basin" in Springer Nature Research Book Series
12. Siamak, A., Sadeghian, R., Abdellatif, I., & Nwoji, S. (2019, December). Diagnosing heart disease types from chest x-rays using a deep learning approach. In *2019 International Conference on Computational Science and Computational Intelligence (CSCI)* (pp. 910-913). IEEE.
13. Aram, S., Levy, L., Patel, J. B., Anderson, A. A., Zaragoza, R., Dashtestani, H., ... & Tracy, J. K. (2019). The iowa gambling task: a review of the historical evolution, scientific basis, and use in functional neuroimaging. *SAGE Open*, 9(3), 2158244019856911.
14. Dashtestani, H., Zaragoza, R., Kermanian, R., Condy, E., Anderson, A., Chowdhry, F., ... & Gandjbakhche, A. (2019). The Quest for Functional Biomarkers in the Prefrontal Cortex Using Functional Near-Infrared Spectroscopy (fNIRS). In *Neurophotonics and Biomedical Spectroscopy* (pp. 123-136). Elsevier.
15. Anderson, A. A., Parsa, K., Geiger, S., Zaragoza, R., Kermanian, R., Miguel, H., ... & Gandjbakhche, A. H. (2018). Exploring the role of task performance and learning style on prefrontal hemodynamics during a working memory task. *PloS one*, 13(6), e0198257.

### **Dr Ozlum Cosgun:**

#### **Peer reviewed journal papers:**

1. **Ozlem Cosgun**, Gokhan Yurdakul, (2020). Performance evaluation of an apparel retailer's stores by using Stochastic Imprecise DEA, *Journal of Multiple Valued Logic and Soft Computing*, 34, 1/2, 59-75.
2. **Ozlem Cosgun**, Abdulrezzak Sener (2020-submitted). Investigating Supply Chain disruptions involving commercial truck accidents using predictive analytics methods. *Knowledge based systems*, (under review)

#### **Conference papers:**

3. **Ozlem Cosgun**, Abdulrezzak Sener (2020). Determination of Injury Severity Risk Factors in Commercial Crashes for Supply Chains Using Predictive Analytics Methods. *INFORMS 2020*, Washington DC.

4. Eyyub Kibis, **Ozlem Cosgun**, Kazim Topuz (2020). An Integrated Approach of Machine Learning and Optimization Model For Breast Cancer Chemotherapy Treatment. *INFORMS 2020*, Washington DC.
5. **Ozlem Cosgun**, Amjad Umar (2020). Smart Resource Allocation Advisor in the Cloud for COVID-19 and Other Pandemics. *IEEE Cloud Summit*.
6. Jarred Michael Carter, Husnu S. Narman, **Ozlem Cosgun**, Jinwei Liu (2020). Trade-off Model of Fog-Cloud Computing for Space Information Networks. *IEEE Cloud Summit*.
7. Cumhuri Cosgun, **Ozlem Cosgun**, Roozbeh Sadeghian, Siamak Aram (2020). Prediction of Ultimate Load Capacity of Concrete-Filled Steel Tubes with Circular Sections under Axial Load by Using Predictive Analytics Methods. *IEEE CSCI 2020 (International conference on Computational science and computational intelligence)*
8. **Ozlem Cosgun**, Eyyub Kibis, Kazim Topuz (2019). Stochastic Optimization Model with Bayesian Network update: The case of Breast Cancer Chemotherapy treatment, *INFORMS 2019*, Seattle, Washington.

### Dr Arvind Ravikumar

1. Kemp, C.E., and Ravikumar, A.P. (2021). New Technologies can Cost-effectively Reduce Oil and Gas Methane Emissions, but Policies will Require Careful Design to Establish Mitigation Equivalence. in review at Environmental Science & Technology.
2. Yang, S., Hastings-Simon, S., and Ravikumar, A.P. (2020). Global Liquefied Natural Gas industry expansion may imperil Paris Agreement temperature targets. in review at Nature Energy.
3. Wang, J., Nadarajah, S., Wang, J., and Ravikumar, A.P. (2020). A machine learning approach to methane emissions mitigation in the oil and gas industry. NeurIPS 2020 Workshop on Tackling Climate Change with AI. Best Overall Paper Award
4. Sherwin, E.D., Chen, Y., Ravikumar, A.P., and Brandt, A.R. (2020). Single-blind test of airplane-based hyperspectral methane detection via controlled releases. in review at Elementa: Science of the Anthropocene.
5. Rutherford, J.S., Sherwin, E.D., Ravikumar, A.P., Heath, G., Englander, J., Cooley, D., Lyon, D., Omara, M., Langfitt, Q., and Brandt, A.R. (2020). Closing the gap: Explaining persistent underestimation by US oil and natural gas production-segment methane inventories. in review at Nature Communications.
6. Liu, R.E., Bergerson, J.A., Ravikumar, A.P., Nie, Y., Brandt, A.R., Woloschuk, K., Zhang, S., and Bi, T. (2019). Greenhouse gas emissions of western Canadian natural gas: A proposed method for life-cycle emissions tracking. accepted at Environmental Science & Technology.
7. Singh, D., Barlow, B., Hugenholtz, H., Funk, W., Robinson, C., and Ravikumar, A.P. (2020). Field performance of new methane detection technologies: Results from the Alberta Methane Field Challenge. in review.
8. Nie, Y., Zhang, S., Liu, R.E., Roda-Stuart, D., Ravikumar, A.P., Bradley, A., Masnadi, M.S., Brandt, A.R., Bergerson, J., and Bi, X.T. (2020). Greenhouse-gas emissions of Canadian liquefied natural gas for use in China: Comparison and synthesis of three independent life cycle assessments. *Journal of Cleaner Production* 258 120701.
9. Klise, K.A., Nicholson, B.L., Laird, C.D., Ravikumar, A.P., and Brandt, A.R. (2020). Sensor placement optimization software applied to site-scale methane emissions monitoring. *Journal of Environmental Engineering*. 146 04020054.
10. Wang, J., Tchapmi, L.P., Ravikumar, A.P., McGuire, M., Bell, C., Zimmerle, D., and Brandt, A.R. (2020). Machine vision for natural gas methane emissions detection using an infrared camera. *Applied Energy* 257 113998.

11. Ravikumar, A.P., Roda-Stuart, D., Liu, R., Bradley, A., Bergerson, J., Nie, Y., Zhang, S., Bi, X., and Brandt, A.R. (2019). Repeated Leak Detection and Repair Surveys Reduce Methane Emissions Over Scale of Years. *Environmental Research Letters* 15 034029.
12. Lyman, S.N., Tran, T., Mansfield, M.L., and Ravikumar, A.P. (2019). Comparison of optical gas imaging surveys at oil and gas wells in Utah. *Elementa: Science of the Anthropocene* 7 43. A.P. Ravikumar Publication List 1
13. Ravikumar, A.P., Sreedhara, S., Wang, J., Englander, J., Roda-Stuart, D., Bell, C., Zimmerle, D., Lyon, D., Mogstad, I., Ratner, B., and Brandt, A.R. (2019). Single-blind inter-comparison of methane detection technologies results from the Stanford/EDF Mobile Monitoring Challenge. *Elementa: Science of the Anthropocene* 7 37.
14. Fox, T., Ravikumar, A.P., Hugenholtz, C.H., Zimmerle, D., Barchyn, T.E., Johnson, M.R., Lyon, D., and Taylor, T. (2019). A methane emissions reduction equivalence framework for alternative leak detection and repair programs. *Elementa: Science of the Anthropocene* 7 30.
15. Fox, T., Barchyn, T., Risk, D., Ravikumar, A.P., and Hugenholtz, C. (2019). A review of current and emerging technologies for monitoring methane emissions in upstream oil and gas. *Environmental Research Letters* 14 053002.
16. Ravikumar, A.P., Wang, J., McGuire, M., Bell, C., Zimmerle, D., and Brandt, A.R. (2018). Good versus Good Enough? Empirical tests of methane leak detection sensitivity of a commercial infrared camera. *Environmental science & Technology* 52 2368.

### **Dr Amjad Umar**

1. Umar, A., "Computer Aided Strategic Planning of Digital Enterprises", Ingram, June 2020
2. Umar, A., "Computer Aided Architectures and Integration of Smart Enterprises", Ingram, Target, Sep 2022 (currently available as a coursepack through Paypal)
3. Umar, A., "Computer Aided Strategic Planning for the United Nations Sustainable Development Goals (SDGs)", *International Journal of Engineering and Applied Sciences*, Jan 2018
4. Umar, A., "A Software Factory in the Cloud for Pandemics and other Disasters – Initial Results and Future Directions", *IEEE Cloud Summit*, Oct 2020
5. Cosgun, O. and Umar, A., "Smart Resource Allocation Advisor in the Cloud for COVID-19 and Other Pandemics", *IEEE Cloud Summit*, Oct 2020
6. Umar, A., "Smart Collaborating Hubs and a Smart Global Village – An Alternative Perspective on Smart Cities", *IEEE Conference on Technology and Engineering Management*, June 2018.
7. Umar, A., and Darr, E., "Graduate Studies in Information Systems Engineering and Management (ISEM) for Digital Enterprises", *IEEE Conference on Technology and Engineering Management*, June 2018.
8. Umar, A., "Strategic Planning of Manufacturing 4.0" for Developing Countries", *British Commonwealth Research Report*, June 2021.
9. Umar, A., "An eFactory for Rapid Development of Blue Economies", *eSociety Conference*, Jan 2021