Lecturer: Professor Daniel T. Fokum

Position: Senior Lecturer and Department Head

Email: daniel.fokum@uwimona.edu.jm

Phone: 1 (876) 702-4455 Ext. 385

Bio: Daniel Fokum is a Senior Lecturer and Head of the Department of Computing at The University of the West Indies, Mona Campus, Jamaica, where he has taught since 2011. He obtained his Ph.D. degree in Computer Science from the University of Kansas in 2010. Prior to joining the University of Kansas in 2006, he worked in the industry for six years. He received his M.S. degree from the University of Missouri-Kansas City in 2005, and his B.A. degree from Park University in 2000, both in Computer Science. He is a member of the IEEE Computer Society, IEEE Communication Society, and the ACM. His research interests include software-defined networking, sensor and wireless networks, information security, and concurrency control in databases.

Interests: Software-defined networking, Sensor networks, wireless networking, Computer Science education, concurrency control in databases, and information security.

Teaching interests:

- Introduction to Computer Networks
- Network Architecture
- Routing in the Internet
- Introduction to Database Management Systems
- Probability
- Introduction to Programming
- Introduction to Digital Logic Design
- Computer Architecture & Organisation
- Operating Systems
- Web Programming

Publications:

- Journal Articles:

D. T. Fokum, D. N. Coore, and C. Busby-Earle, “Learner Autonomy as a Means to Improve Pass Rates among First-Year Computing Students,” The UWI Quality Education Forum, vol. 21, pp. 1–19, Jan. 2016.

D. T. Fokum, V. S. Frost, D. DePardo, M. Kuehnhausen, A. N. Oguna, L. S. Searl, E. Komp, M. Zeets, D. Deavours, J. B. Evans, and G. J. Minden, “An Open System Transportation Security Sensor Network: Field Trial Experiences,” Transactions on Vehicular Technology, IEEE, vol. 59, no. 8, pp. 3942–3955, Oct. 2010.

D. T. Fokum and V. S. Frost, “A Survey on Methods for Broadband Internet Access on Trains,” Communications Surveys & Tutorials, IEEE, vol. 12, no. 2, pp. 171–185, Quarter 2 2010.

- Conference Papers:

D. Coore and D. Fokum, “Facilitating Course Assessment with a Competitive Programming Platform,” in Proc. 50th ACM Technical Symposium on Computer Science Education, ser. SIGCSE ’19. New York, NY, USA: ACM, 2019, pp. 449–455.

D. T. Fokum, D. N. Coore, E. Ferguson, G. Mansingh, and C. Beckford, “Student Performance in Computing Courses in the Face of Growing Enrollments,” in Proc. 50th ACM Technical Symposium on Computer Science Education, ser. SIGCSE ’19. New York, NY, USA: ACM, 2019, pp. 43–48.

Additional Roles: Curriculum coordinator for Department of Computing 2016 - 2019.

Lecturer: Professor Michael A. Taylor

Position: Dean of the Faculty of Science and Technology; Senior Lecturer; Professor

Email: michael.taylor@uwimona.edu.jm

Location: Room 224

Interests: Environmental Physics, Caribbean Climate Variability, Climatology, Climate Change

Professional Activities:

- Caribbean Climate Modellers Consortium.
- Science Panel Member, CLIVAR, Variability of the American Monsoon Systems (VAMOS) Panel. World Climate Research Programme (WCRP). (2011-2014)
- Board member, Water Resources Authority, Jamaica

Current Projects (Involvements):

- Pilot Programme for Climate resilience (PPCR): Regional Track
- Tropical Storm Modelling. For Caribbean Weather Impacts Generator (CARIWIG)
- Sustainable Water Management under climate change in small island states of the Caribbean (Water AccIS).
- Ensemble Climate Modeling in the Caribbean Region.

Subjects Taught:

- PHYS1411 Mechanics
- PHYS 1421 Electricity and Magnetism
- P14A Introductory Physics
- P14B Introductory Physics
- P23F Optics and Oscillations
- P36B Atmosphere and Climate
- P33M Physics Research Project
- P63B Physics of Climate
- EM640 Water Resource Management

Publications:

- Dyer, J. et al. (2021). Challenges to Small Island Developing States in Accessing Climate Finance. [Online]. Available: https://www.preventionweb.net/publications/view/77383

- Taylor, M. et al. (2020). The Relevance of Small Island Developing States in Global Climate Change Negotiations. [Online]. Available: https://www.preventionweb.net/publications/view/73100
- Taylor, M. et al. (2019). Climate Change: Awareness and Attitudes in Jamaica. [Online]. Available: https://www.preventionweb.net/publications/view/68810

Contact Information:

- University of the West Indies, Mona Campus, Kingston 7, Jamaica, West Indies.
- Tel: (876) 702-4756/9400 | Fax: (876) 970-1479
- Email: michael.taylor@uwimona.edu.jm

Office Hours:

- Monday: 10:00am - 12:00pm
- Wednesday: 10:00am - 12:00pm
- Thursday: 2:00pm - 4:00pm

Lecturer: Professor Paul Goldsmith

Position: Professor of Computational Chemistry; Director of the Centre for Computational Chemistry

Location: Room 111

Email: paul.goldsmith@uwimona.edu.jm

Education:

- B.Sc. (Hons) in Chemistry, University of the West Indies, Mona, Jamaica.
- Ph.D. in Computational Chemistry, University of Cambridge, UK.

Research Interests:

- Computational studies of transition metal compounds.
- Molecular modeling of enzymatic reaction mechanisms.
- Quantum chemical studies of molecular properties.
- Development of software for computational chemistry.

Teaching Responsibilities:

- CHTM27: Introduction to Computational Chemistry (UG)
- CHTM50: Advanced Computational Chemistry (PG)
- CHTM63: Computational Spectroscopy and Electronic Structure (PG)

Publications:

- Goldsmith, P., & Jones, A. (2020). Quantum Mechanical/Molecular Mechanical Studies of Enzymatic Reactions. Annual Review of Physical Chemistry, 71(1), 221–245.
- Smith, J., & Goldsmith, P. (2018). Density Functional Theory Calculations of Transition Metal Compounds. Journal of Computational Chemistry, 39(12), 947–956.

Contact Information:

- University of the West Indies, Mona Campus, Kingston 7, Jamaica
- Tel: (876) 970-1656 | Fax: (876) 970-1656
- Email: paul.goldsmith@uwimona.edu.jm

Office Hours:

- Tuesday: 2:00pm - 4:00pm
- Friday: 10:00am - 12:00pm

Lecturer: Prof. Tannecia Stephenson

Position: Deputy Dean; Senior Lecturer; Professor

Email: tannecia.stephenson02@uwimona.edu.jm

Area of Specialization: Climate variability and seasonal prediction; Climate change studies using statistical downscaling techniques and the output of regional climate models; Climate Extremes; climate change impacts; solar energy.

Qualification & Granting Institution

- Doctor of Philosophy, Physics, The University of the West Indies (UWI), Mona, Jamaica, 2005.Dissertation Title: The Caribbean Dry Season: Modes, Circulation Features and Statistical Models
- Bachelor of Science, Physics, First Class Honours, UWI, Mona, Jamaica, 1999

Training

- Caribbean Regional Climate Outlook Forum (CarCOF) and training workshop (in application of the IRI Climate Predictability Tool), Barbados, February 27 - March 2, 2012.
- Statistical DownScaling Model Training Workshop, Loughborough University, United Kingdom, April 14-15, 2011.
- CARIBSAVE Pilot Workshop, Iberostar Hotel, Jamaica, May 12, 2009.
- ICTP Water Resources in Developing Countries: Planning and Management in a Climate Change Scenario Workshop, The Abdus Salam International Centre for Theoretical Physics, Italy, April 27 – May 8, 2009.
- WCRP and ICTP Interpreting Climate Change Simulations: Capacity Building for Developing Nations Seminar, The Abdus Salam International Centre for Theoretical Physics, Italy, November 26-30, 2007.
- CARICOM workshop on Renewable Energy in the Caribbean – Realities and Perspectives, Tobago, September 25–28, 2007
- PRECIS training workshop, University of Reading, United Kingdom, July 23-27, 2007
- Summer School in Statistical Downscaling, University of Lodz, Poland, June 18-22, 2007

Publications

- Short Monographs

  IPCC, 2021: Summary for Policymakers. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson[1]Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press. T. S. Stephenson. Lead Author

  Doblas-Reyes, F. J,. A. A. Sörensson, M. Almazroui, A. Dosio, W. J. Gutowski, R. Haarsma, R. Hamdi, B. Hewitson, W-T. Kwon, B. L. Lamptey, D. Maraun, T. S. Stephenson, I. Takayabu, L. Terray, A. Turner, Z. Zuo, 2021, Linking Global to Regional Climate Change. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press.

  Ranasinghe, R., A. C. Ruane, R. Vautard, N. Arnell, E. Coppola, F. A. Cruz, S. Dessai, A. S. Islam, M. Rahimi, D. Ruiz Carrascal, J. Sillmann, M. B. Sylla, C. Tebaldi, W. Wang, R. Zaaboul, 2021, Climate Change Information for Regional Impact and for Risk Assessment. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson[1]Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press. T. S. Stephenson. Contributing Author

  Gutiérrez, J. M., R. G. Jones, G. T. Narisma, L. M. Alves, M. Amjad, I. V. Gorodetskaya, M. Grose, N. A. B. Klutse, S. Krakovska, J. Li, D. Martínez-Castro, L. O. Mearns, S. H. Mernild, T. Ngo-Duc, B. van den Hurk, J-H. Yoon, 2021, Atlas. In: Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J. B. R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)]. Cambridge University Press. In Press. [Atlas]. T. S. Stephenson - Contributing Author

  Taylor, M. A., A. Centella, J. Charlery, I. Borrajero, A. Bezanilla, J. Campbell, R. Rivero, T. Stephenson, F. Whyte, and R. Watson (2007). Glimpses of the Future: A Briefing from the PRECIS Caribbean Climate Change Project, Caribbean Community Climate Change Centre, Belmopan, Belize. 24 pp.

- Book Chapter - Submitted

  Taylor, M.A., M. K. Webber, T. S. Stephenson and F. S. Whyte (2020). Implications of climate change for Blue Economies in the Wider Caribbean. In The Caribbean Blue Economy. Peter Clegg et al. (eds.) Routledge. 262 p. ISBN 9780367263676

Taylor, M. A., A. Mandal, C. Burgess and T. Stephenson, 2013: Flooding in Jamaica: Causes and Controls. In Flooding and Climate Change: Sectorial Impacts and Adaptation Strategies for the Caribbean Region. Dave Chadee (editor). Nova Publishers

- Journal Articles since 2010

D. Rankine, J. Cohen, F. Murray, P. Moreno-Cadena, G. Hoogenboom, J. Campbell, M. Taylor and T. Stephenson (2021). Evaluation of DSSAT-MANIHOT-Cassava Model for potential irrigation benefits for cassava in Jamaica. Accepted. Agronomy Journal.

Mandal, T. Stephenson, J. Campbell, M. Taylor, S. Watson, L. Clarke, D. Smith, J. Darshan and M. Wilson (2021): An assessment of the impact of 1.5 vs 2 and 2.5 °C global temperature increase on flooding in Jamaica: A case study from the Hope Watershed. Accepted Philosophical Transactions A.

Stephenson, T.S., M. A. Taylor, A. R. Trotman, J. M. Spence, K. A. Stephenson, A. C. Joseph, C. J. Van Meerbeeck, J. D. Campbell and L. A. Clarke, 2020: [Regional Climates] Caribbean [in State of the Climate in 2019]. Bull. Amer. Meteor. Soc. 99, S340-S342. IF 9.384

Clarke, L. A., M. A. Taylor, A. Centella-Artola, M. St. M. Williams, J. D. Campbell, A. Bezanilla-Morlot, T. S. Stephenson (2020): The Caribbean and 1.5°C: Is SRM an option? Atmosphere. doi: 10.3390/atmos12030367 IF 2.397

de Suarez, J. M., T. Stephenson, A. Laing, and E. Holland (2020): Small Island Developing States' Response to Hazards, Vulnerabilities and emerging threats in IFRC's World Disasters Report 2019.

J. D. Campbell, M. A. Taylor, A. Bezanilla-Morlot, T. S. Stephenson, A. Centella-Artola, L. A. Clarke, K. A. Stephenson (2021). Generating Projections for the Caribbean at 1.5°C, 2.0°C and 2.5°C from a High-Resolution Ensemble. Accepted Atmosphere. IF 2.397

Charlton, Candice S., T. S. Stephenson, M. A. Taylor and C. Douglas (2021). Characterizing bushfire occurrences over Jamaica using the MODIS C6 Fire Archive 2001-2019. Accepted Atmosphere. IF 2.397

Stephenson, T.S., M.A. Taylor, A.R. Trotman, C.J. Van Meerbeeck, K.A. Stephenson, L.A. Clarke, G. Tamar, JM. Spence, A.C. Joseph and J.D. Campbell 2021: [Regional Climates] Caribbean [in State of the Climate in 2020]. Accepted Bull. Amer. Meteor. Soc. IF 9.834

Karmalkar, A. V., M. A. Taylor, J. Campbell, T. Stephenson, M. New, A. Centella, A. Benzanilla, J. Charlery, 2013: A review of observed and projected changes in climate for the Islands in the Caribbean. Atmosfera, 26(2), 283-309.

Hall, T. C., A. M. Sealy, T. S. Stephenson, M. A. Taylor, A. A. Chen, S. Kusunoki and A. Kitoh, 2012: Future climate of the Caribbean from a super-high resolution atmospheric general circulation model. Theoret. Appl. Climatol., DOI 10.1007/s00704-012-0779-7.

Taylor, M. A., T. S. Stephenson, A. Trotman, J. Spence, O. Martínez-Sánchez, G. Votaw, I. González-García, R. Pérez-Suárez, B. Lapinel-Pedroso, A. León-Lee, D. Boudet-Rouco, and N. González-Rodríguez, 2012: [The Caribbean] Regional Climates [in State of the Climate in 2011]. Bull. Amer. Meteor. Soc, 93 (7), S170-S173.

Taylor, M. A., F. S. Whyte, T. S. Stephenson, and J. D. Campbell, 2012: Why Dry? Investigating the future evolution of the Caribbean Low Level Jet to explain projected Caribbean drying. Int. J. Climatol. doi: 10.1002/joc.3461.

González, I. G., R. P. Suárez, L. Pedrosso, V. C. Cancino, D. B. Rouco, A. L. Lee, V. G. Velazco, T. S. Stephenson, M. A. Taylor, J. M. Spence, and S. Rossi (2011), The Caribbean [in State of the Climate 2010]. Bull. Amer. Meteor. Soc., 92(6), S183-S186.

Taylor, M. A., T. S. Stephenson, A. Owino, A. A. Chen and J. D. Campbell, 2011: Tropical Gradient Influences on Caribbean Rainfall. J. Geophys. Res. doi:10.1029/2010JD015580

Campbell, J. A, M. A. Taylor, T. S. Stephenson, F. S. Whyte and R. Watson (2010), Future Climate of the Caribbean from a Regional Climate Model. Int. J. Climatology, DOI:10.1002/joc.2200.

Fonseca Rivera, C., R. P. Suárez, A. C. Romero, A. L. Lee, V. C. Cancino, I. G. García, T. S. Stephenson, M. A. Taylor, J. M. Spence, and S. Rossi (2010), The Caribbean [in State of the Climate 2009]. Bull. Amer. Meteor. Soc., 91(6), S144-S146.

Accepted for Publication

Bachelor, T., T. S. Stephenson, M. A. Taylor, P. Brown, D Amarakoon, 2012: Influence of Climate Variability on Human Leptospirosis Cases in Jamaica. Accepted. Climate Research.

Taylor, M. A., T. S. Stephenson, A. A. Chen and K. Stephenson, 2012: Climate Change and the Caribbean: Review and Response. Caribbean Studies (Accepted for Special Issue – Invited Paper).

Taylor, M. A., A. Centella, J. Charlery, I. Borrajero, A. Benzanilla, J. Campbell, T. Stephenson, R. Nurmohamed, 2012: The PRECIS-Caribbean Story: Lessons and Legacies. (Accepted). Bull. Amer. Meteor. Soc.

Technical Reports

IPPC Secretariat. 2021. Scientific review of the impact of climate change on plant pests – A global challenge to prevent and mitigate plant pest risks in agriculture, forestry and ecosystems. Rome. FAO on behalf of the IPPC Secretariat.https://doi.org/10.4060/cb4769en. T. Stephenson - Drafting Co-author

CGRVA Hazard Risk Profile Report 2021. For Building Resilience of the Electricity Sector Infrastructure to Geophysical and Climate Related Hazards Project. Commissioned by St. Vincent Electricity Services Limited. (VINLEC). Executed by CBCL Limited. Tannecia Stephenson and Jayaka Campbell - Contributors

Climate Studies Group, Mona (CSGM), 2012: State of the Jamaica Climate: Past and Future. Information for Resilience Building. For Pilot Project for Climate Resilience. GOJ. 180 pp.

Non-print/Multimedia

Time to Adapt – 3 Jamaican Stories. 2011. 26 minute documentary chronicling the story of three Jamaican communities and their efforts to adapt to climate change. Produced by the Climate Studies Group, Mona under the directorship of M. A. Taylor. Sponsors: UNDP/GEF and EFJ. Aired TVJ. 12/12/2011 and 16/12/2011. Shown: UNFCC Durban Climate change

Conference (Nov. 2011). Youtube link: http://www.youtube.com/watch?v=pkAlp-ozjUc&feature=youtu.be Views as at 21/06/12: 116

Research Grant

- Tell It - Disseminating Caribbean Climate Change Science & Stories Project. UNDP GEF Small Grants Programme. (2009-2010). T. S. Stephenson and M. A. Taylor (Co-PI).
- Caribbean Climate Dynamics and Global Warming: A Regional Climate Model Intercomparison Project. Research Fellowship Committee, U.W.I. (2009-2010). T. S. Stephenson (PI); M. A. Taylor and A. A. Chen.
- Caribbean Climate Dynamics and Global Warming: A Regional Climate Model Intercomparison Project. Caribbean Community Climate Change Centre (2009-2011). T. S. Stephenson (PI); M. A. Taylor and A. A. Chen.

Other Work Experience

- Climatic Research Unit, University of East Anglia, Norwich, United Kingdom: Visiting Fellow, 2006 - 2007
- The University of the West Indies, Department of Physics, Mona, Jamaica: Research Fellow, 2005-2006

Lecturer: Dr. Curtis Busby-Earle

Position: Senior Lecturer

Phone: 1 (876) 970-0923

Email: curtis.busbyearle@uwimona.edu.jm

Bio: Curtis Busby-Earle joined the Department (and University) as a member of the academic staff in 2006. He has taught at both the undergraduate and graduate levels. Prior to joining the UWI, he spent over a decade in the private and public sector Information Technology industry in roles that encompassed programming and software analysis to Director of management information systems units.

Employment history:

- 1994-1996 : Caribbean Home Insurance Company (Trinidad)
- 1996-1997: Fujitsu-ICL Caribbean (Jamaica)
- 1997-2000: NEM Insurance Company (Jamaica)
- 2000-2003: Issa Transport Group (Jamaica)
- 2003-2006: Ministry of National Security (Jamaica)
- 2006-present: Department of Computing, UWI Mona, Jamaica

Publications:

Busby-Earle, C. , France, R. B. and Ray, I.: 'Analysing Requirements to Detect Latent Security Vulnerabilities'. Proceedings of the IEEE Eighth International Conference on Software Security and Reliability – Companion (SERE-C), San Francisco, California, 2014, pp. 168-175

Busby-Earle, C., France, R., and Ray, I. : 'Analysing Requirements to Detect Latent Security Vulnerabilities'. Computer science technical report, Colorado State University, Fort Collins, Colorado, 2013

Busby-Earle, C. and Mugisa, E.K:`Identifying potential security flaws using loophole analysis and the SECREt'. in GSTF International Journal on Computing, 1(2), February 2011

Busby-Earle, C. and Mugisa, E.K.:`SECREt: potential vulnerability discovery using loophole analysis'. Proceedings of the Annual International Conference on Information Technology Security (ITS2010), Phuket, Thailand, 2010, pp.I39-I46

Busby-Earle, C. and Mugisa, E.K.:`Web security: a cross-sectional view of businesses operating in Jamaica'. Proceedings of the Conf-IRM 2010 Conference, Montego Bay, Jamaica, 2010

Busby-Earle, C. and Mugisa, E.K.:`Metadata for boilerplate placement values for secure software development using derived requirements'. Proceedings of the IASTED International Conference on Software Engineering and Applications (SEA2009), Cambridge, Massachusetts, 2009, pp.196-201

Busby-Earle, C. and Mugisa, E.K.:`Towards writing secure software requirements'. Proceedings of the IASTED International Conference on Software Engineering (SE2009), Innsbruck, Austria, 2009, pp.101-105

Lecturer: Dr. Marvadeen Singh-Wilmot

Position: Senior Lecturer

Email: marvadeen.singhwilmot@uwimona.edu.jm

Section: Inorganic Chemistry

Bio: Dr. Marvadeen Singh-Wilmot is a lecturer in Inorganic Chemistry and Crystallographer at UWI, Mona. Her research group currently consists of two graduate students and an undergraduate researcher and aims to make new molecules from a group of metals called rare earths (or lanthanides). The rare earths are metals with exciting and unique light emitting and magnetic properties. They have applications in phosphors (substances which give off visible light when exposed to radiation, for example those substances that make your television glow with various colors), light-emitting diodes (responsible for the displays on various electronic devices and the light in traffic signals etc), sensors and MRI contrast enhancement agents (enhances an MRI image), to name a few. While Singh-Wilmot has published on a variety of new lanthanide containing molecules and still continues work on rare earth nanoclusters (multiple lanthanides in a cluster whose dimensions are in the nanometer range), most of her attention is currently focused on using lanthanides to assemble Metal Organic Framework Materials (MOFs).

Professional Activities: Singh-Wilmot has a passion for science and is committed to the promotion of science as a tool for development. She served as co-chair of the Young Scientist Ambassador Program (YSAP) which is an initiative of The Young Scientists from the 2010 Annual Meeting of the New Champions (AMNC), Summer Davos. This program involves Young Scientists from 55 different countries representing every section on the Globe and will promote the efforts of AMNC Young Scientists to bridge the international scientific gap by facilitating cultural, scientific, intellectual, or educational interactions.

Awards and Recognitions: Singh-Wilmot is a mentor and a motivator. She has been recognized various times for her contribution to teaching at UWI as determined by excellent scores in teaching assessment done by students. She spends at least one hour per week working with children from various Primary and Prep Schools in St. Andrew, getting them excited about science and its opportunities. In October 2010 she was inducted as a Young Affiliate Fellow of the Academy of Sciences for the Developing World (TWAS) in Hyderabad India. She is the first Young Affiliate to be selected from the Caribbean Region.

Lecturer: Dr. Andre Coy

Position: Associate Dean; Senior Lecturer

Email: andre.coy02@uwimona.edu.jm

Location: Electronics Building

Area of Specialization: Speech and Language Technology and Signal Processing

Research Interests: Automatic Speech Recognition, Assistive Technologies, Application of Speech and Language Technologies to Education, Machine Learning, Pattern Recognition, Signal Processing

Current Research Projects:

- Dialect Mapping for Non-traditional Varieties of English
- Automated detection and Quantification of Coffee Leaf Rust Disease
- A speech-enabled Literacy Tutor for Caribbean Dialects
- Jump Start (Jamaican English)
- Bright Start (Trinidadian English)
- Using Spoken Language Technology to integrate the deaf in hearing only classrooms.
- Using Computational Auditory Scene Analysis to improve hearing aid performance.

Previous Research Projects:

- PhD “Exploiting Primitive Grouping Constraints for Noise Robust Automatic Speech Recognition: Studies with Simultaneous Speech” - My thesis employed techniques inspired by human auditory processing to recognise speech corrupted with non-stationary noise. The approach is an extension of the Speech Fragment Decoding approach to robust Automatic Speech Recognition (ASR) developed at the University of Sheffield.
- Corpus Collection for Development of an Automated Literacy Tutor
- Capacity Building in Medical Physics/Bio-medical Engineering Research and Teaching
- A statistical machine translation tool to facilitate translations between English and Samoan for tourists.
- A Cloud-based computational resource for Clinical and educational Applications of Speech Technology.
- Enhancing the Robustness of Non-contact Video-based Monitoring of Vital Signs

Publications

Coy, Emulating Human Speech Recognition: A Scene Analysis Approach to Improving Robustness in Automatic Speech Recognition, 2012, Nova Science Publishers, New York

Coy, Y. Hayashi, M. Chang (Editors). (2019). Intelligent Tutoring Systems:15th International Conference, ITS 2019. Springer: Lecture Notes in Computer Science book series (LNCS, volume 11528). Springer, Switzerland.

- Book Chapters

Coy. (2022). Barriers to Technology-enabled Education for the Deaf in the Caribbean. In S. N. J. Blackman (Ed.). Equitable Education for Marginalized Youth in Latin America and the Caribbean. New York: Routledge.

A. Coy, Perceptually Motivated Approach to Achieving Robustness in Automatic Speech Recognition, in A. Stavros, Editor, Advances in Communications and Media Research, Volume 6, 2011, Nova Science Publishers, New York.

- Refereed Journal Articles

A. Coy, P. S. Mohammed, A. Hosein, P. Skerrit, A. Mohammed, Y. Lewis-Fokum. Increasing the Integration of Computer-Assisted Language Learning in Caribbean Schools: Lessons from the Use of an Intelligent Spelling Tutor During COVID-19. Journal of Eastern Caribbean Studies. (In Press).

A. Coy and S. Watson (2020). Acoustic Similarity of Inner and Outer Circle Varieties of Child-Produced English Vowels. Journal of Speech, Language, and Hearing Research, 63(3), 722-737.

A. Coy, S. James-Williamson, S. Bramwell-Lalor, N. Sadler-McKnight, N. McLean, V. R. Penugonda and M. Rainford. (2019). A Review of a Tertiary Level Institution's Initiative for Enhancing Education in STEM at the Secondary School Level. Journal of Education and Development in the Caribbean. Vol. 18(1), 132-182.

G. Yan, L. Li, A. Coy, X. Mu, S. Chen, D. Xie, W. Zhang and H. Zhou. (2019). Improving the Estimation of Fractional Vegetation Cover from UAV RGB Imagery by Colour Unmixing. ISPRS Journal of Photogrammetry and Remote Sensing. Vol 158, 23-34.

S. Cunningham, P. Green, H. Christensen, J.J. Atria, A. Coy, M. Malavasi, L. Desideri and F. Rudzicz, 2017. Cloud-Based Speech Technology for Assistive Technology Applications (CloudCAST), Studies in Health Technology and Informatics, 242, pp.322-329.

M. Malavasi, E. Turri, J.J. Atria, H. Christensen, R. Marxer, L. Desideri, A Coy, F. Tamburini, P. Green, 2017. An Innovative Speech-Based User Interface for Smarthomes and IoT Solutions to Help People with Speech and Motor Disabilities. Studies in Health Technology and Informatics, 242, pp.306-313.

R. Irvine, A. Coy, M. Voutchkov. (2016) An Overview of Cardiac Pacing in Jamaica. Part I: Demographic Factors, West Indian Medical Journal. DOI: 10:7727/wimj.2016.1431

R. Irvine, A. Coy, M. Voutchkov. (2016). An Overview of Cardiac Pacing in Jamaica. Part II: Indications, Modes and Arrhythmia Prevalence, West Indian Medical Journal. DOI:10:7727/wimj.2016.432

A. Coy, D.R. Rankine, M.A. Taylor, J.E. Cohen, D. Nielsen. Increasing the Accuracy and Automation of Fractional Vegetation Cover Estimation from Digital Photographs, Remote Sensing, 8(7), 474, 2016

D.R. Rankine, J.E. Cohen, M.A. Taylor, A. Coy, L.A. Simpson, T. Stephenson, and J.L. Lawrence, Parameterizing the FAO AquaCrop Model for Rain-fed and Irrigated Field Grown Sweet Potato (Ipomoea batatas), Agronomy, 107:1-13, 2015

A. Coy, On the Use of Automatic Speech Recognition to Facilitate Increased Literacy Rates in Jamaica, International Journal for Cross-Disciplinary Subjects in Education (IJCDSE), Special Issue Volume 3, Issue 1, 1379-1386, 2013. ISSN 2042 6364

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