

Kira J. M. Matus, Ph.D.

Hong Kong University of Science and Technology
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ACADEMIC APPOINTMENTS

Hong Kong University of Science and Technology **2017-Present**

- *Associate Professor, Division of Public Policy (2017-), Division of Environment & Sustainability (2017-), Division of Social Science (2017-2021); (Visiting Associate Professor January – August 2017; Parental leave July-September 2018)*
- *Associate Head of Division, Division of Public Policy (2017-)*
- *President, Women’s Faculty Association (Dec 2021-)*
- *Co-director, MPP Program (2018-2019, 2021-2022)*
- *Director, MPhil/PhD Program (2017-2021)*
- *Faculty Affiliate, Institute of Public Policy*
- *Faculty Affiliate, Institute of Emerging Market Studies*
- *Faculty Affiliate, Center for AI Research (CAiRE), Lab for AI Ethics and Governance (2019-)*
- *Faculty Affiliate, Innovation, Policy & Entrepreneurship (IPE) Thrust Area, HKUST-GZ (2020-)*
- *Advisory board, Center for Social and Economic Research (CASER)*

University College London **2015- 2017**

- *Senior Lecturer and Deputy Head of Department, Department of Science, Technology, Engineering and Public Policy (STePP) (Equivalent to Associate Professor in North America)*
- *Parental leave – December 2015 - October, 2016*
- *Honorary Associate Professor: 2017-present*

London School of Economics and Political Science **2010-2014**

- *Assistant Professor in Public Policy and Management, Department of Government*
- *Research Associate, Centre for the Analysis of Risk and Regulation (2010- present)*
- *Research Associate, Grantham Research Institute on Climate Change and the Environment (2013-2014)*
- *Program Convener: MSc Regulation (2013-2014)*

Harvard University **2012-2015; 2019-2020**

- *Visiting Scholar Research Fellow, Sustainability Science Program, Harvard Kennedy School’s Mossavar-Rahmani Center for Business and Government (2012-2015; 2019-2020)*
- *Co-Project Director, “Innovation and Access to Technologies for Sustainable Development,” Sustainability Science Program, Harvard Kennedy School’s Mossavar-Rahmani Center for Business and Government*

Yale University Center for Green Chemistry and Green Engineering **2009-2010**

- *Senior Policy Analyst*

EDUCATION

London School of Economics and Political Science **London, UK**

Post-graduate Certificate in Higher Education, June 2011

John F. Kennedy School of Government, Harvard University Cambridge, MA

PhD in Public Policy, June 2009

Concentration: Innovation for Sustainable Development

Dissertation: “Green Chemistry: A Study of Innovation for Sustainable Development”

Thesis Committee: Dr. William C. Clark (chair), Dr. William Hogan, Dr. Venkatesh Narayanamurti,
Dr. Paul Anastas (reader)

Fellowships:

- EPA STAR Fellow, 2007-2009
- Doctoral Fellow in Sustainability Science, Center for International Development, 2008-2009
- Giorgio Ruffolo Doctoral Fellow in Sustainability Science, Center for International Development, 2007-2008
- Vicki Norberg-Bohm Fellow, 2006

Massachusetts Institute of Technology Cambridge, MA

S.M. Engineering Systems Division - Technology Policy Program, June 2005

Thesis: “Health Impacts from Urban Air Pollution in China: The Burden to the Economy and the Benefits of Policy; Advisor: Dr. John Reilly

Brown University Providence, RI

Sc.B. with Honors in Chemistry, May 2003

Honors: Magna Cum Laude (highest academic honors), Phi Beta Kappa, Sigma Xi

PUBLICATIONS

Peer Reviewed Publications – Journal Articles

Iran, Samira., Martinez, Cosette Joyner., Vladimirova, Katia., Diddi, Sonali., Henninger, Claudia E., McCormick, Helen., Matus, Kira., Niinimaki, Kirsi., Sauerwein, Meike., Singh, Renu., Tiedke, Loredana., Wallaschkowski, Stephan (2022). **When mortality knocks: Pandemic inspired attitude shifts towards sustainable clothing consumption in six countries.** *International Journal of Sustainable Fashion & Textiles*. 1, 9–39. https://doi.org/10.1386/sft/0002_1

Gietel-Basten, Stuart., Matus, Kira JM, and Mori, Rintaro (2022). **COVID-19 as a trigger for innovation policy action for older persons? Evidence from Asia.** *Policy and Society*, 41 (1), 168–186.

Matus, Kira and Veale, Michael. (2022). **The use of certification to regulate the social impacts of machine learning: Lessons from sustainability certification.** *Regulation & Governance*, 16:177-196. <https://doi.org/10.1111/rego.12417>

Sivarudran Pillai, V. and Matus, KJM (2021). **Towards a responsible integration of artificial intelligence technology in the construction sector.** *Science and Public Policy*, 47 (5), 689-704.

Bernal, Marie N., and Matus, Kira JM. (2020). **Media Attention and Policy Response: 21st Century Chemical Regulation in the United States.** *Science and Public Policy*, 47 (4), 548-560 (published 07 October 2020)

Schröder, Patrick., Vergragt, Philip P., Brown, Halina S., Dendler, Leonie., Gorenflo, Neal., Matus, Kira., Quist, Jaco., Rupperecht, Christoph., Tukker, Arnold., Wennersten, Ronald R. (2019). **Advancing sustainable consumption and production in cities-A transdisciplinary research and stakeholder engagement framework to address consumption-based emissions and impacts.** *Journal of Cleaner Production*, 213, 114-125.2

Anadon, Laura Diaz., Chan, Gabriel., Harley, Alicia G., Matus, Kira., Moon, Suerie., Murthy, Sharmilla L., Clark, William C. (2016). **Making technological innovation work for sustainable development.** *Proceedings of the National Academy of Sciences*, 113 (35), 9682-9690.

Vergragt, Philip.J., Dendler, Leonie., de Jong, Martin., Matus, Kira. (2016). **Transitions to sustainable consumption and production in cities.** *Journal of Cleaner Production* 134, Part A, 1–12.

Lodge, Martin and Matus, Kira J. M. (2014) **Science, badgers, politics: advocacy coalitions and policy change in bovine tuberculosis policy in Britain.** *Policy Studies Journal*, 42 (3). pp. 367-390.

Matus, Kira JM, Anastas, Paul T. and Zimmerman, Julie B. (2012). **Barriers to the Implementation of Green Chemistry in the United States.** *Environmental Science & Technology* 46 (20), pp 10892–10899.

Matus, Kira J.M, Xin Xiao., and Zimmerman, Julie B. (2012). **Green Chemistry and Green Engineering in China: Trends, Policies and Barriers.** *Journal of Cleaner Production*, 32, 193-203.

Matus, Kira J. M., Nam, Kyung-Min., Selin, Noelle E., N Lamsal, Lok., Reilly, John M., and Paltsev, Sergey. (2012) **Health Damages from Air Pollution in China.** *Global Environmental Change*. 22(1) pp. 55-66.

Matus, Kira J. M. (2010) **Innovating for development: policy incentives for a cleaner supply chain: the case of green chemistry.** *Journal of International Affairs*, 64 (1). pp. 121-136.

Matus, Kira J. M., Zimmerman, Julie B., and Beach, Evan. (2010) **A proactive approach to toxic chemicals: moving green chemistry beyond alternatives in the "Safe chemicals act of 2010."** *Environmental Science & Technology*, 44 (16). pp. 6022-6023.

Matus, Kira J. M., Yang, Trent, Paltsev, Sergey., Reilly, John., and Nam, Kyung-Min. (2008) **Toward integrated assessment of environmental change: air pollution health effects in the USA.** *Climatic Change*, 88 (1). pp. 59-92.

Graham, Polly B., Matus, Kira J. M., and Stratt, Richard M. (2004) **The workings of a molecular thermometer: the vibrational excitation of carbon tetrachloride by a solvent.** *The Journal of Chemical Physics*, 121 (11). pp. 5348-5355.

Peer Reviewed Publications – Reports, Policy Briefs, and Book Chapters

Stephenson, Matthew., Lejarrage, Iza., Matus, Kira., Mulugetta, Yacob., Yarime, Masaru., Zhan, James. **AI as a SusTech Solution: Enabling AI and other 4IR technologies to drive sustainable development through value chains.** In “The Ethics of Artificial Intelligence for the Sustainable Development Goals.” SpringerNature (forthcoming) (*Accepted January, 2022*)

Stephenson, Matthew., Lejarrage, Iza., Matus, Kira., Mulugetta, Yacob., Yarime, Masaru., Zhan, James. (2021). **SusTech: enabling new technologies to drive sustainable development through value chains.** *Accepted for submission to the T20-Italy Task Force on Digital Transformations (September 2021).* (This is a policy brief “to offer clear and practical recommendations for G20 leaders from the perspective of the global G20 Think Tank community”) [Policy Brief- peer reviewed]

Matus, Kira. (2021). **Public Policy and Perception Considerations.** In “How to Commercialize Chemical Technologies for a Sustainable Future” Clark, Timothy J. and Pasternak, Andrew (eds). Wiley Publishing.

Donadelli, Flavia and Matus, Kira. (2019). **Using Private Regulation for the Public Good.** In *The Palgrave Handbook of the Public Servant*, Sullivan, Helen and Helen Dickson (eds). Palgrave Macmillan.

Matus, Kira. (2014) **Capacity, Innovation and their Interaction in Multistakeholder Sustainability Initiatives**. In M. Lodge and K. Wegrich, eds. 'Governance capacities of the contemporary state: HERTIE Governance Report 2014.' Oxford University Press, Oxford, UK.

Maguire, Steven., Iles, Alaistair., Matus, Kira., Mulvihill, Martin, Schwarzman, Megan R., and Wilson, Michael P. (2013). **Bringing new meanings to molecules by integrating green chemistry and the social sciences**. in ISSC and UNESCO (2013), World Social Science Report 2013, Changing Global Environments. OECD Publishing and UNESCO Publishing. Paris.

Barry, M., Cashore, B., Clay, J., Fernandez, M., Lebel, L., Lyon, T., Mallet, P., Matus, K., Melchett, P., Vandenberg, M., Vis, J.K., and Whelen, T (2012). **Toward Sustainability: The Roles and Limitations of Certification**. The State-of-Knowledge Assessment of Standards and Certification, Washington DC. 2012. <http://www.resolv.org/site-assessment/about/>.

Matus, Kira J. M. (2010) **Standardization, certification, and labeling: a background paper for the Roundtable on Sustainability Workshop January 19-21, 2009**. In: *Certiably sustainable? the role of third-party certification systems: report of a workshop*. The National Academies Press.

Matus, Kira J. M. (2009) **The ACS Green Chemistry Institute®: a case study of partnerships to promote sustainability in the chemical enterprise**. In: *Enhancing the effectiveness of sustainability partnerships: summary of a workshop*. The National Academies Press, pp. 263-292.

Creech, Heather., Vetter, Tony., Matus, Kira J.M., and Seymour, Ian R. (2008) **The governance of non-legal entities: an exploration into the challenges facing collaborative, multistakeholder enterprises that are hosted by institutions**. International Institute for Sustainable Development, Winnipeg, Canada.

Submitted, or to-be Submitted for Peer Review (Including manuscripts underway as part of confirmed SI projects)

Matus, Kira., Sharif, Naubahar., Li, Alvin., Cai, Zhixin., Lee, Wai Haang., and Song, Max. **From SARS to Covid-19: The role of experience and experts in Hong Kong's policy response to an emerging pandemic**" (under review for *Humanities and Social Sciences Communications* (Nature Group), invited as part of special issue on "Science Advice through Covid-19"; Major Revisions April 2022)

Golden, Jay; Lebel, Louis; Matus, Kira; Timmer, Vanessa; Doran, Elizabeth; van 't Zelfde, Maarten; and de Koning, Anouk. **The emerging role of mega-urban regions in the sustainability of global production-consumption systems**. (under review at *njp: Urban Sustainability*; Major Revisions April 2022)

Wang, Ranran., Hertwich, Edgar., Fishman, Tomer., Chen, Weiqian., Deetman, Sebastian., Koning, Arjen., Matus, Kira., Xu, Ming., and Zimmerman, Julie B. **The legacy environmental footprint of manufactured capital accumulation**. (in preparation)

Veale, Michael and Kira Matus. **Global Governance of Machine Learning Algorithms**. Invited to *Annual Review of Social Science* (due October 2022)

Matus, Kira JM., Anastas, Paul, and Sivarudran Pillai, Vishnu. **Green Chemistry Policy Review: Unlocking the Policy Drivers of a Sustainable Chemical Transformation**. For *Green Chemical Engineering* (* new journal published by the Chinese Academy of Science) – invited for 2021/22.

Doeme, Viktoria., Cycak, Weronika., and Matus, Kira. "The role of government and public policy in innovation for sustainable development: A comparative analysis of small countries" (*working paper in preparation for submission to Research Policy*)

Doeme, Viktoria., Cycak, Weronika., and Matus, Kira. "Energy transition in the Visegrád Four countries: The role of government in clean energy technology innovation" (*working paper in preparation for submission to the Journal of European Public Policy*)

Lo, Gloria., Doeme, Viktoria., Cycak, Weronika., and Matus, Kira. “A Comparative Perspective on Innovation Policies and Strategies in Small Open Economies: Implications for Hong Kong’s Sustainable Transition” (*working paper in preparation for submission to the Journal of Cleaner Production*)

Working Papers, Reports, Book Reviews, and Other Publications

Matus, Kira JM., Sharif, Naubahar., Cai Zhixin., Lee, Kristy., Li Alvin. and Song, Max. (2021). **Science Advice and Government Response to COVID-19 in Hong Kong**. ESCaPE COVID Whitepaper (*Submitted, under review*)

Matus, Kira. “Let’s make start toward cleaner society.” The Hong Kong Standard, June 19, 2021. (Op-Ed) <https://www.thestandard.com.hk/section-news/section/5/210169/Let's-make-start-toward-cleaner-society>

Sivarudran Pillai, Vishnu and Matus, Kira (2019). **Regulation of AI Technologies in the Construction Industry** HKUST IEMS Working Paper No. 2019-65. Available at SSRN: <https://ssrn.com/abstract=3439826> or <http://dx.doi.org/10.2139/ssrn.3439826>

Matus, Kira. (2014). **The Limits of Being an ‘Honest Broker.’** The 1st international conference on science advice to governments. Auckland, NZ. <https://www.ingsa.org/conference-news/the-limits-of-being-an-honest-broker/> [Blog post]

Matus, Kira. (2014). **Existential Risk**. *Risk & Regulation: carr Review*. No. 28. Centre for Analysis of Risk and Regulation, London School of Economics and Political Science, London, UK.

Matus, Kira. (2014). **Book Review: Green Consumption: The Global Rise of Eco-Chic** edited by Bart Barendregt and Rivke Jaffe. LSE Review of Books. <https://blogs.lse.ac.uk/lsereviewofbooks/2014/06/25/book-review-green-consumption-the-global-rise-of-eco-chic/>

Matus, Kira., Timer, Vanessa., and Appleby, Dwayne. **Manufacturing Sector Discussion Paper: Background Paper for the Project on Innovation and Access to Technologies for Sustainable Development** (2013). Sustainability Science Program Working Paper No. 2013-04. Sustainability Science Program, Kennedy School of Government, Harvard University, Cambridge, MA.

Matus, Kira. (2011). **China and Green Chemistry: Developing Technology for a More Sustainable Chemical Industry**. *Risk & Regulation: carr Review*. No. 21. Centre for Analysis of Risk and Regulation, London School of Economics and Political Science, London, UK.

Matus, Kira J.M, James E Hutchison, Robert Peoples, Skip Rung and Robert Tanguay. (2011) **Green Nanotechnology Challenges And Opportunities**. American Chemical Society. http://portal.acs.org/portal/PublicWebSite/greenchemistry/CNBP_027847

Stuart Chapin III, Carole L. Crumley, Carla P. Gomes, Thomas E. Graedel, Jacob Levin, Pamela A. Matson, Kira Matus, Samuel Myers, and V. Kerry Smith (2010). **Working Group IV: Managing Human-Environment Systems for Sustainability**. In F. Levin, Simon A., and William C. Clark, eds. “Toward a Science of Sustainability: Report from Toward a Science of Sustainability Conference.” CID Working Paper Series 2010.196, Harvard University, Cambridge, MA, May 2010

Matus, Kira J. M., Evan Beach and Julie B.Zimmerman. (2010) **Integrating green chemistry and green engineering into the revitalization of the toxic substances control act**. Center for Green Chemistry and Green Engineering, New Haven, USA.

Matus, Kira. (2010) **Assessing Challenges for Implementation of Biofuels Sustainability Criteria**. Workshop Report in “Seminar on Assessing the Challenges for Implementation of Biofuels Sustainability Criteria of the Inter-American Development Bank and United Nations Environment Program”, Washington DC, 25-26 January 2010.

Matus, Kira J. M., Anastas, Paul T., Clark, William C., and Itameri-Kinter, Kai. (2007) **Overcoming the challenges to the implementation of green chemistry**. CID Working Paper, 155. Center for International Development, Cambridge, USA.

Selected Conference Papers

Matus, Kira; Li, Alvin; Sharif, Naubahar; Liang, Xin; and Zhang, Cheng. **Pay No Attention to the Politicians Behind the Curtain: The Role of Hong Kong's Public Facing Science Advisors**. Political Studies Association, Executive Policy and Governance Track, York, UK (April 2022).

Matus, Kira JM, Gietel-Basten, Stuart, and Mori, Rintaro. **COVID-19 as a Spur to Develop More Sustainable Responses to Population Aging**. The Post-Covid State: Author's Workshop. (May 21, 2021)

Matus, Kira and Veale, Michael. **The use of certification to regulate the social impacts of machine learning: Lessons from sustainability certification**, AP-PPN, Hong Kong (2019) and (Re) Imagining Policy Tools in Future: New Directions in Theory and Practice, Yonsei University, Seoul, South Korea (2019).

Sivarudran Pillai, Vishnu and Matus, Kira. **Regulation of AI Technologies in the Construction Industry**, AP-PPN, Hong Kong (2019).

Matus, Kira and Bernal, Marie. **Science-based Policy of Narratives of Fear? 21st Century Chemical Regulation in the US**. Public Management Research Conference. National University Singapore. June 2018.

Lodge, Martin and Matus, Kira. **On the Boundary Between Science and Badgers: Comparing Cattle Tb Control in the United Kingdom and New Zealand**. UCL STEaPP Workshop 'The Roles of Science Advice' (June 2015).

Anadon, Laura Diaz ., Matus, Kira., Moon, Suerie et. al. **The Global Innovation System: Diagnosing Ways to Promote Innovation and Access to Technologies for Sustainable Development** at 'Innovation and Access to Technologies for Sustainable Development: A Global Systems Perspective,' Weatherhead Center for International Affairs, Harvard University (April 2014).

Lodge, Martin and Matus, Kira. **The Politics of Science: The case of badgers** at Political Studies Association (April 2014).

Lodge, Martin and Matus, Kira. **Science, Uncertainty, and Badgers: The Politics of Expertise** at the Midwest Political Studies Association (April 2013).

Matus, Kira., Timmer, Vanessa., and Appleby, Dwayne. **Manufacturing Governance: Centralized and Decentralized Pathways to Sustainability** Second Biennial Conference of the Global Research Forum on Sustainable Production and Consumption, Shanghai, June 2014.

Selected Conference Papers from Externally Supported Research Presented by Doctoral Students

Doeme, Viktoria., Cycak, Weronika., and Matus, Kira. **"The role of government and public policy in clean energy technology innovation: The case of Central European countries"** European Forum for Studies of Policies for Research and Innovation (Eu-SPRI) Early Career Research Conference (ECC) – Transformative Innovation Policy: Concepts, Methods and Policy Practices, Eu-SPRI Forum, Paris, France, October 2021

Doeme, Viktoria., Cycak, Weronika., and Matus, Kira, **"The role of government and public policy in innovation for sustainable development: A comparative analysis of small countries"** European Forum for Studies of Policies for Research and Innovation (Eu-SPRI) PhD- school: Advancing Mission-Oriented Innovation Policy, Utrecht University, August 2021

Doeme, Viktoria., Cysak, Weronika., and Matus, Kira, “Policy interventions supporting clean energy innovation of small countries and the role of public policy makers” 6th Annual Conference of Asia-Pacific Public Policy Network, Education University of Hong Kong, March 2021

Doeme, Viktoria., Cysak, Weronika., and Matus, Kira, “Policy interventions supporting clean energy innovation of small countries and the role of public policy makers” 2021 Australasian Public Policy Network Conference, University of Melbourne, February 2021

PROFESSIONAL ACTIVITIES, and HONOURS

- Affiliate, Dynamic Sustainability Lab at Syracuse University
- Science Advisory Board, C40 “Thriving Cities Initiative”
- Editorial Advisory Board, ACS Sustainable Chemistry and Engineering, December 2020-December 2022
- SCORAI (Sustainable Consumption Research and Action Institute) Trans-Covid Sustainable Consumption Working Group
- Member, Executive Politics Section, Political Studies Association
- Expert judge, Roy Award for Environmental Partnership, Harvard Kennedy School (2020)
- Member, Future Earth Knowledge Action Network: Sustainable Production and Consumption in Cities; Sustainable Value Chains
- Member, SCORAI (Sustainable Consumption Research and Action Institute)
- Executive Committee Member, The Global Research Forum on Sustainable Production and Consumption, 2014-present
- Co-Project Director and Lead Investigator, Manufacturing Sector, “Innovation and Access to Technologies for Sustainable Development,” Sustainability Science Program, Harvard University, 2012-2015
- Guest Editor, Special Volume on ‘Transitions to Sustainable Consumption and Production within Cities,’ *Journal of Cleaner Production*, published 2016
- Member, Health and Environmental Sciences Institute (HESI) Sustainable Alternatives Subcommittee, 2012-2016
- LSE ‘Environmental Hero’ for 2013-2014 for integration of sustainability into teaching, research, and service to the university (first faculty member to receive this award)
- Organizing Committee, 17th Annual Green Chemistry and Engineering Conference, 2013
- Organizing Committee, 16th Annual Green Chemistry and Engineering Conference, 2012
- Steering Committee Member and Report Author, “Certification Systems and Sustainable Production: An Independent Assessment of Knowledge, Practice and Potential.” Sponsors include MARS, Inc., the David and Lucile Packard Foundation, and the Walton Family Foundation, June 2009-2012
- Founding Participant: Interdisciplinary Network for Green Chemistry (IN4GC): Integrating Green Chemistry into the Business School and Social Science Curriculum; Workshops - Washington DC, June 2011, McGill University, Montreal, Quebec, October 2011, University of California Berkeley, May 2012

- Participant (invited) and Report Co-Author, “Towards a Science of Sustainability Conference,” sponsored by the National Science Foundation (USA). The purpose of this multidisciplinary conference was to identify crucial open research questions of sustainability science, with the expectation that a document emerging from it would serve as a touchstone for the funding of sustainability science within the Foundation and other agencies, November 2009
- Co-author and Co-editor of a graduate level, open-source sustainability science curriculum, “The Ruffolo Curriculum on Sustainability Science.” This is an on-going project sponsored and published by the Sustainability Science Program at Harvard University’s Center for International Development, 2008-2009

Conferences and Workshops Organized

Risk Perception of Artificial Intelligence (AI) in Indian Construction Industry. 2019. Hosted by the Institute for Emerging Market Studies, HKUST, November 14-15, 2019

Transforming Production and Consumption: Bridging Sustainability Research with Policy and Practice. 2019 Hong Kong Conference of the Global Research Forum on Sustainable Production and Consumption 4th International Conference, HKUST, June 26- 29, 2019

Making Technological Innovation Work for Sustainable Development – UCL STEaPP and Harvard Sustainability Science Program, May 11, 2016 – Co-organizer.

Roles of Science Advice – UCL STEaPP, June 18, 2015 – Co-organizer

LSE CARR Workshop: *Existential Risk*, June 27, 2014 – Co-organizer

Harvard Sustainability Science Program & The Weatherhead Center for International Affairs: *“Innovation and Access to Technologies for Sustainable Development: A Global Systems Perspective.”* April 24, 2014 – Co-organizer.

17th Annual Green Chemistry and Engineering Conference, Bethesda, MD, July 2013 – Organizing Committee.

16th Annual Green Chemistry and Engineering Conference, Washington, DC, July 2012 – Organizing Committee.

Selected Presentations and Guest Lectures

Asia Productivity Organization (APO) Productivity Talk – “Innovation Systems for Sustainable Development” Recorded Dec. 13, 2021– Featured Expert.

“Harnessing Innovation Systems for Sustainable Development” Digital Multicountry Workshop on Developing National Innovation Systems. Vietnam National Productivity Institute (VNPI) and the Asia Productivity Organization (APO). November 23, 2021 – Invited Speaker

“Trusted Scientists in a low-trust environment: Hong Kong’s Public Facing Science Advisors during Covid-19” UCL STEaPP Departmental Seminar: October 13, 2021

“Science-Policy-Society: A Virtuous Cycle?” The fourth biennial International Conference on Science Advice to Governments, Montreal, Canada/Online, September 1, 2021 – Invited Plenary Panelist

“Transforming Production and Consumption: Bridging Sustainability Research with Policy and Practice.” The Hong Kong Conference of the Global Research Forum on Sustainable Production and Consumption. Hong Kong, June 2019 – Invited Keynote speech

“The use of certification to regulate the social impacts of machine learning: Lessons from sustainability certification.” The Fourth Annual AP-PPN Conference, Hong Kong, March 2019

“The use of certification to regulate the social impacts of machine learning: Lessons from sustainability certification.” Seoul Policy Tools Workshop Yonsei University Policy Instruments and Policymaker/Taker Behaviour, Seoul, Republic of Korea, March 2019

“Future Insights into Smart Green Transport & 5G/IoT” Panel Moderator. Finland-HK Smart Mobility & Communication Day, Business Finald, Intelligent Transport System HK, Smart City Consortium, and Connected City Alliance. City University, Hong Kong, November 28, 2018

“Resilience against Climate Extremes” Panel moderator. CaRE 2018: Climate Adaptation and Resilience Hong Kong Conference, HKUST, October 27, 2018

“The Emerging Role of Mega-Urban Regions in the Sustainability of Production-Consumption Systems” (invited workshop talk) City University, Hong Kong, August 22, 2017

“Circular economy, lifestyles and livelihoods in cities” (invited plenary panel) Global Research Forum on Sustainable Production and Consumption. Brighton, UK, June 28, 2017

“Science in Service of Society: The Role of Chemistry in Sustainable Development.” Research Colloquium, School of Chemical and Physical Sciences, Victoria University of Wellington. Wellington, NZ, April 2016

“Innovative approaches: How can we learn from experiences across sectors? The Case of Industrial Symbiosis in Tianjin, China.” Making Technological Innovation Work for Sustainable Development (workshop), London, May 2016.

“Innovation and Access to Technologies for Sustainable Development.” Invited seminar. IISC CNRS, Paris, France. November 3, 2014

“Systems Change in the Manufacturing Sector: Innovation and Access to Technologies for Sustainable Development.” Global Research Forum on Sustainable Production and Consumption. Shanghai, June 2014.

“Systems Change in the Manufacturing Sector: Innovation and Access to Technologies for Sustainable Development.” Institute for Governance and Policy Studies. Victoria University of Wellington. Wellington, NZ, April 2014

“Science, Uncertainty and Badgers: The Politics of Expertise.” Midwestern Political Science Association (MPSA), Chicago, April 2013

“Green Chemistry”: Local progress, global needs. 17th Annual Green Chemistry and Engineering Conference, Washington D.C., June 2013

“Science, Solution, Paradigm: Green Chemistry and the Nexus of Innovation and Policy.” (Invited Research Seminar) Mossavar-Rahmani Center for Business and Government, Harvard Kennedy School of Government, Cambridge, MA, November 2012

“Science, Solution or Paradigm? The Many Roles of ‘Green Chemistry’ in Policy.” 16th Annual Green Chemistry and Engineering Conference. Washington D.C., June 2012

“Green Nanotechnology: Challenges and Opportunities.” SETAC Annual Meeting. Berlin, May 23, 2012

“Green Chemistry and Engineering in China: Drivers, Policies and Barriers to Innovation” (Invited Seminar) Stanford University School of Earth Sciences. Palo Alto, CA, May 2012

“Manufactured capital / industrial ecology.” (Guest Lecture) Sustainability Science Distributed Graduate Seminar, Harvard University, Arizona State University, University of Minnesota and Columbia University (via web), October 2011

“Green Chemistry: The Future of Science for Sustainable Development.” Institute of Process Engineering, Chinese Academy of Sciences, Beijing. July 2011

"Green Chemistry: A Comparative Look at Barriers, Drivers and Policies." University of York, Department of Chemistry, July 2011

“Green and Sustainable Innovation in the Chemical Industry: A Survey of Practices and Perceptions.” Green Chemistry and Engineering Conference. Washington, DC., June 2011

“Green and Sustainable Innovation in the Chemical Industry: A Survey of Practices and Perceptions.” OECD Environmental Directorate, Paris, June 2011

“Understanding Innovation for Sustainable Development: A Comparison Study of Green Chemistry in the United States, India and China.” Industrial Green Chemistry Workshop. Mumbai, India, December 2009

“Pulling down the Barriers: Lessons from Local and International Variations in Green Chemistry Policy.” 12th Annual Green Chemistry and Engineering Conference. Washington, D.C., June 2008

“You are what you measure: Key considerations in the creation of green metrics.” 234th American Chemical Society National Meeting. Boston, MA. August 2007

“Moving beyond barriers: actions and policies to promote green chemistry.” 11th Annual Green Chemistry and Engineering Conference, Washington, D.C., June 2007

“Exploring the Barriers to the Implementation of Green Chemistry in the United States.” 8th International Symposium on Green Chemistry in China. Beijing, China, May 2007

Grants

Ongoing

- Co-I: “The Persistence of Behavioral Changes in Post-Pandemic Hong Kong: Implications for Transportation, Housing and Economic Development Policies.” (December 2021-November 2022) \$658,087 HKD. Hong Kong Policy Coordination Office - Public Policy Research Grant
- PI: HKUST VPRDO Equipment Funding 2021-22. \$93,970 HKD
- Co-PI: “Post-Covid Consumption: Searching for Hong Kong’s Sustainability ‘Hotspots’.” (July 2021-June 2022) \$140,000 HKD. HKUST Interdisciplinary Programs Office: Interdisciplinary and Showcase Projects
- Co-I: “Assessing Climate Policies of Nations with Enhanced Measurement of Decarbonization of Energy Systems” (July 2021-June 2024) \$741,704 HKD RGC GRF [withdrawn due to PI leaving HKUST]
- PI: “Risk Perception of AI in Indian Construction Industry” (July 2019-July 2021) \$110,000 HKD. HKUST Institute for Emerging Market Studies
- PI: “Innovation and Access to Technology for Sustainable Development: The Role of Public Policy Actors” (January 2019-June 2022) \$687,484 HKD RGC GRF + \$30,000 HKD HKUST internal support

- PI: “Sustainable production and consumption in Asia: Lessons for the Greater Bay Region” (August 2018-December 2021) \$100,000 HKD. HKUST Internal Grant for New Faculty

Under Review

- PI: “Towards 1.5C Lifestyles: What motivates sustainable consumption choices in Hong Kong?” *Under review*. HKD \$902,850 (36 months). Hong Kong Research Grants Council- General Research Fund (GRF)
- Co-I: “The Persistence of Behavioral Changes in Post-Pandemic Hong Kong: Implications for Transportation, Housing and Economic Development Policies.” (*Second Phase*) (January 2022-December 2025) \$1067000 HKD. Hong Kong Research Grants Council- General Research Fund (GRF)

Complete

- Co-PI: “Trans-regional Air Pollution Control in the Guangdong-Hong Kong-Macau Greater Bay Area: The Interplay between Science and Policy.” (March 2019-March 2020) \$631,966 HKD (Public Policy Research (PPR) Funding Scheme)
- Co-PI: Weatherhead Center for International Affairs Conference Grant for “Innovation and Access to Technologies for Sustainable Development.” April 2014 \$25,000 USD

TEACHING: COURSES TAUGHT

HKUST

Undergraduate

- *ENVR 3010I/SOSC3000H: Sustainability Science and Policy: Problems and Perspectives*
- *SOSC 3260: Sustainability Science: Policy Problems and Perspectives (Common Core)*
- *SOSC 3600: Public Policy Analysis*

Postgraduate

- *SOSC 5770: Policy Analysis and Design for Sustainable Development*
- *SOSC 5780/PPOL 5110: Foundation of Public Policy (RPG section and MPP section)*
- *PPOL 5111: Foundation in Public Policy II (MPhil/PhD Seminar)*
- *PPOL 5770: Public Management and Leadership*
- *PPOL 6100B: Technology Disruptions and Public Policy*
- *IIMP 6030: Cross-Disciplinary Design Thinking I*

Executive Education: HKUST Leadership and Public Policy Executive Education Program (2-3 day short course programs)

- Building an Innovative Economy: Smart Policies and Good Practices (2017) – lecturer
- Innovation in Governance: Smart and Sustainable Cities (2017) – lead faculty, lecturer
- Leadership in Policy Development (2018) – lecturer
- Making Innovation Systems Work: Transformative Policies and Good Practices (2018)- lecturer

UCL

Undergraduate:

- *How to Change the World: Two Week Intensive Interdisciplinary Challenge Scenario for Engineers (2nd Yr) (Life Cycle Analysis Challenge Lead)*
- *Introduction to Science, Engineering and Public Policy*
- *Introduction to Risk: Module for Chemical Engineers (Yr 1) in the ‘Integrated Engineering Program’*

Postgraduate:

- *Policy Analysis*
- *Analytic Methods for Public Policy*
- *Public Management for the 21st Century*

Executive Education: Pilot for 'Vodafone Africa School for Policy' (Launch November, 2015)

- The Pilot module was a one-week professional education program for Vodafone employees from their Emerging Markets Team, to raise their internal regulatory capacity (November, 2015).

LSE

Undergraduate:

- *GV305: Sustainability Science & Policy: Problems and Perspectives*

Postgraduate

- *GV 483: Public Management Theory and Doctrine*
- *GV 488: Law and Politics of Regulation*
- *GV 477: Public Policy Change*
- *GV 4F4: Politics of Policy Advising*

TEACHING: Professional Development Activities

Center for Educational Innovation: Training Courses and Workshops (HKUST)

- Canvas: Basics and Extended (Assessments and Grading; Turnitin)
- VidGrid Workshop
- iPeer Workshop
- Virtual Engagement Workshop Series: Increasing Collaboration in a Virtual Session
- Pre-recorded Video Workshop – Turning your slideshows into educational videos
- Mixed-Mode Teaching- Experience Sharing
- Member: Community for Enhancing Intercultural Learning Experiences

LSE – Postgraduate Certificate in Higher Education (July, 2011)

ADMINISTRATIVE EXPERIENCE

Hong Kong University of Science and Technology

2017-present

Division of Public Policy, Division of Social Science, Division of Environment and Sustainability

Departmental and School-Level (Interdisciplinary Programs Office -IPO) Leadership

- Associate Head of Division, Public Policy (2017-)
- Executive Committee (IPO) (2021-)
- Executive Committee (Division of Public Policy) (2017-)
- Faculty Mentor: Dr. Renu Singh (RAP); Prof. Magdalena Klemun (AP); Prof. Xiaofan Zhang (AP)
- Co-Director, Master of Public Policy Program (2018-2019; 2021-2022)
- Program Director, MPhil/PhD in Public Policy (2017-2021)
- Chair, Taught Postgraduate Committee (Division of Public Policy) (2021-)
- Chair, Departmental Seminar Committee (Division of Public Policy) (2021-)
- Chair, Research Postgraduate Committee (Division of Public Policy) (2017-2021)
- Recruitment and Substantiation Committee of the Innovation, Policy and Entrepreneurship (IPE) thrust area at the Guangzhou Campus Member (2020 -)
- Ad-Hoc Recruitment and Substantiation Committee of the Division of Emerging Interdisciplinary Areas (EMIA) Member (2021-)

- Substantiation and Promotion Committee (Division of Social Science) (2020-2021)
- Divisional Seminar Series Committee (Division of Social Science) (2018 - 2020)
- Post-graduate Studies Committee (IPO) (2020-)
- Member, Committee for Internal Review of the Interdisciplinary Programs Office (2019)
- Taught Postgraduate Committee (IPO) (2017 -2020)

University-Level Leadership

- President, Women's Faculty Association (2021-)
- HKUST Net-Zero 2050 Carbon Core Working Group (2021-)
- Executive Committee, Institute for Emerging Market Studies (HKUST) (2020-2021)
- Working Group on Female Experience at HKUST (2020 –); Mentor and Judge, LEAP program
- Member, Selection Committee for the Michael G. Gale Medal (highest teaching award at HKUST) (2020-2021)
- Search Committee, Director of Center for Education Innovation (2021-2022)
- Search Committee, Head of ENVR (2020)
- Search Committee, Director of Interdisciplinary Programs Office (DIPO) (2020)
- Search Committee, Head of PPOL (2017-2018)
- Working Group on the Development of Core courses for HKUST(GZ) (2020)
- Member, Steering Committee on the Review of the Common Core (HKUST) (2019-2020)
- Sustainability Education Advisory Committee (2017 - 2020)
- Human Subjects Research Panel (University-wide) (2017-2019)

Professional Development

- APRU Asia-Pacific Women in Leadership Mentoring Program (mentee) (2020-2021)

University College London

2015-2017

Department of Science, Technology, Engineering and Public Policy

Deputy Head of Department (Academic) (2015)

- Member of the Department Executive Management Team, and Department Senior Staff Committee, which provide oversight and approvals for all departmental activities.
- Responsible for oversight of all departmental teaching activities.
- Coordinate all teaching allocations for faculty and staff in the department.
- Work with MPA Course director and Head of Department on design and implementation of the MPA curriculum.
- Manage core teaching support team: MPA and Undergraduate Teaching Fellows; Educational Administrator; and Learning Technologist.
- Work with the teaching team to manage the development and delivery of a variety of electronic teaching materials, including online resources, distance learning, and other tools to support the delivery of departmental programs.
- Work with the Senior Staff Committee to develop STEaPP's Five-Year Strategic Plan.
- Chair of STEaPP Teaching Committee.

London School of Economics and Political Science

2010-2014

Department of Government

Teaching groups: Public Policy and Administration; Regulation

- *Convener, MSc Regulation (2013-2014)*

- Responsible for lectures and seminars at the graduate level for students in one-year master's programs in Public Policy and Administration (PPA) and Regulation programs.
- Developed and taught a new curriculum for one of the core PPA options ("The Politics of Policy Advising").

- Developed and taught a new, advanced seminar for third year undergraduates, “Sustainability Science and Policy: Problems and Perspectives.” In its first year, this was the second highest rated course by undergraduates in the Department of Government.
- Supervised ~12 MSc students per year. Duties included dissertation advising and supervision, and pastoral care.
- Supervised 12 BSc Government and Economics students per year. Duties included course choice advising and pastoral functions.
- Responsible for admissions decisions for MSc Regulation (for 2014-2015 program intake).

Departmental Activities

- Co-leader, Department of Government Green Impact Team (2011-2014). Faculty and student committee responsible for coordinating departmental participation in the LSE’s voluntary sustainability certification program, including coordinating departmental activities to foster sustainable practices in energy use, transportation, and procurement.

Venice International University/Harvard University

2014

Faculty: Sustainability Science Summer School, May 2014

- One of six faculty for a highly selective summer school program of 30 international scholars in sustainability science (advanced doctoral students, post-doctoral scholars and early-career faculty).
- Developed and delivered advanced lectures on state-of-the-art topics in manufactured capital, innovation, voluntary standards and governance, and policy analysis.

Journal Reviewing:

Journal of Cleaner Production, Policy and Society, Journal of Asian Public Policy, Nature Applied Science, Public Administration, Regulation and Governance, PNAS, Science and Public Policy, Environmental Science and Technology, Energy Policy, Green Chemical Engineering

Research Student Advising (PhD unless otherwise noted)

HKUST/ HKUST GZ

Marie Bernal, PPOL, HKUST (Yr 5)

Vishnu Sivarudran Pillai, PPOL, HKUST (Yr 4 – Passed with corrections 12/2021)

Mathias Bimir, ENVR, HKUST [co-supervisor, Laurence Delina] (Yr 4)

Viktoria Doeme, PPOL, HKUST (Yr 4)

Shubham Sharma, PPOL, HKUST (Yr 3)

C. Joy Cruz, IIP/PPOL, HKUST-GZ [co-supervisor, Stuart Gietel-Basten] (Yr 3)

Alvin Li, PPOL, HKUST (Yr 2)

Max Song, PPOL, HKUST (part time) [co-supervisors Pengyu ZHU, Qi YE] (Yr 2)

Xinyi Wang, IPE, HKUST-GZ [co-supervisor, Laurence Delina] (Yr 2)

Wei Li, IPE, HKUST-GZ [co-supervisor Amber LI] (Yr 2) (MPhil)

Joulan Abdul Khalel, CMA, HKUST-GZ [co-supervisor Huamin QU] (Yr 1)

LSE

Dr. Flavia Donadelli (co-advisor); graduated 2017

Master’s Student Advising:

~25 MSc Public Policy and Administration (LSE)

~25 MSc Regulation (LSE)

5 MPA Capstone students (UCL)

3 MPP PAE groups (4-5 students per group) (HKUST)

1 MPM Capstone student (HKUST)

Undergraduate Advising

1 UG Capstone student: BS Global Business (HKUST/University of Southern California/Bocconi)

4 UG Capstone students: BS Global China Studies (HKUST)

1 UG Capstone group (5 students): BS Environmental Management and Technology (HKUST)