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### Journal Papers

#### a. Published or in press

The impact factor corresponds to the one reported by Clarivate's Journal Citation Report (JCR) for the year in which the paper was published. For articles where JCR results are not yet available, the value corresponds to the most recent available result.

Average impact factor of journals at the time of publication: **6.65**

- [P11]. Dioha, M., Lukuyu, J., [Virguez, E.](#), & Caldeira, K. (2022). Guiding the deployment of electric vehicles in the developing world. *Environmental Research Letters*, 17, 071001 (Perspective – I.S.I. & Scopus Register; ISSN: 1748-9326). Impact Factor: 6.95. <https://doi.org/10.1088/1748-9326/ac765b>
  
- [P10]. Wang, X., [Virguez, E.](#), Mei, Y., Yao, H., & Patino-Echeverri, D. (2022). Integrating wind and photovoltaic power with dual hydro-reservoir systems. *Energy Conversion and Management*, 257, 115425 (Research Paper – I.S.I. & Scopus Register; ISSN: 0196-8904). Impact Factor: 11.53. <https://doi.org/10.1016/j.enconman.2022.115425>
  
- [P9]. Li, M., Shan, R., [Virguez, E.](#), Patino-Echeverri, D., Gao, S., & Ma, H. (2021). Energy storage reduces costs and emissions even without large penetration of renewable energy: the case of China's Southern Power Grid. *Energy Policy*, 112711. (Research Paper – I.S.I. & Scopus Register; ISSN: 0301-4215). Impact Factor: 7.58. <https://doi.org/10.1016/j.enpol.2021.112711>
  
- [P8]. Li, M., [Virguez, E.](#), Shan, R., Tian, J., Gao, S., & Patino-Echeverri, D. (2021) High-resolution data shows China's wind and solar energy resources are enough to support a 2050 decarbonized electricity system. *Applied Energy*, 306, Part A, 117796. (Research Paper – I.S.I. & Scopus Register; ISSN: 0306-2619). Impact Factor: 11.45. <https://doi.org/10.1016/j.apenergy.2021.117796>

- [P7]. Sykora-Bodie, S., Jones, L., Hastings, Z., Barnett, M., Davis, O., Ferrari, O., Garcia, V., Hofner, A., Hunter, B., Ippolito, T., Krantz, W., Lombardi, E., Neyra, O., Perez-Figueroa, O., Raub, K., Sou, J., Virguez, E., Waters, T., & Whitten, J. (2021). Graduate student perspectives on transforming academia. *Conservation Science and Practice*, 556. (Perspective Paper – I.S.I. & Scopus Register; ISSN: 2578-4854). Impact Factor: 3.57. <http://doi.org/10.1111/csp2.556>
- [P6]. Virguez, E., Wang, X., & Patiño-Echeverri, D. (2021). Utility-scale photovoltaics and storage: Decarbonizing and reducing greenhouse gases abatement costs. *Applied Energy*, 282, 116120. (Research Paper – I.S.I. & Scopus Register; ISSN: 0306-2619). Impact Factor: 11.45. <https://doi.org/10.1016/j.apenergy.2020.116120>
- [P5]. Wang, X., Virguez, E., Xiao, W., Mei, Y., Patino-Echeverri, D., & Wang, H. (2019). Clustering and dispatching hydro, wind and photovoltaic power resources with a multiobjective optimization of power generation fluctuations: a case study in southwestern China. *Energy*, 189, 116250. (Research Paper – I.S.I. & Scopus Register; ISSN: 0360-5442). Impact Factor: 6.08. <https://doi.org/10.1016/j.energy.2019.116250>
- [P4]. Wang, X., Virguez, E., Chen, L., Duan, K., Dong, Q., Ma, H., Mei, Y., & Wang, H. (2019). New index for runoff variability analysis in rainfall-driven rivers in the southeastern United States. *Journal of Hydrologic Engineering*, 24 (12). (Research Paper – I.S.I. & Scopus Register; ISSN: 1943-5584). Impact Factor: 1.59. [https://doi.org/10.1061/\(ASCE\)HE.1943-5584.0001826](https://doi.org/10.1061/(ASCE)HE.1943-5584.0001826)
- [P3]. Wang, X., Virguez, E., Kern, J., Chen, L., Mei, Y., Patino-Echeverri, D., & Wang, H. (2019). Integrating wind, photovoltaic, and large hydropower during the reservoir refill period. *Energy Conversion and Management*, 198, 11178. (Research Paper – I.S.I. & Scopus Register; ISSN: 0196-8904). Impact Factor: 8.21. <https://doi.org/10.1016/j.enconman.2019.111778>
- [P2]. Rodriguez, R., Virguez, E., Rodriguez, P., & Behrentz, E. (2016). Influence of driving patterns on vehicle emissions: a case study for Latin American cities. *Transportation Research Part D*, Volume 43, pp. 192-206 (Research Paper – I.S.I. & Scopus Register; ISSN: 1361-9209). Impact Factor: 2.34. <https://doi.org/10.1016/j.trd.2015.12.008>
- [P1]. Fischer, K., Virguez, E., Sánchez-Silva, M., & Faber, M.H. (2013). On the assessment of marginal life-saving costs for risk acceptance criteria. *Structural Safety*, 44, pp. 37-46 (Research Paper – I.S.I. & Scopus Register; ISSN: 0167-4730). Impact Factor: 2.39. <https://doi.org/10.1016/j.strusafe.2013.05.001>

#### b. Submitted or in preparation

- [PS1]. Virguez, E., Wang, X., Johnson, T., Fay, J., & Patino-Echeverri, D. Assessing the effect of incorporating land-use parcel-level data and local zoning ordinances when quantifying renewable energy resources potential. **Submitted to *Joule*** (Under review).
- [PP5]. Virguez, E., Wang, X., & Patino-Echeverri, D. Low-temperature induced failures in unwinterized wind power plants: Assessing the benefits of a continued operation under extreme weather. **Intended Journal:** Renewable Energy (In preparation).
- [PP4]. Virguez, E., Gabrielli, P., Duan, L., Davies, S. & Caldeira, K. Assessing feedstock-dependent pathways to provide residential & commercial thermal services in low-carbon energy systems. **Intended Journal:** Energy and Environmental Science (In preparation).

- [PP3]. Keeler, B., Locke, C., Bennett, E., Gerber, L., Grimm, N., Guerry, A., Hellmann, H., King, E., Mason, S., Nibbelink, N., Olander, O., Ricketts, T., Rowell, K., Schively, C., Secord, D., Sykora-Bodie, S., Ticktin, T., Vira, B., & Virguez, E. Reforming academic structures to promote engaged scholarship: Scaling bright spots to systemic change. **Intended Journal:** Nature Sustainability (In preparation).
- [PP2]. Virguez, E., Gabrielli, P., Ruggles, T., & Caldeira, K. The Influence of carbon pricing and system flexibility on the production and supply of grid-tied electrolytic hydrogen. **Intended Journal:** Applied Energy (In preparation).
- [PP1]. Virguez, E., Antonini, E., Duan, L., Ruggles, T., Davies, S. & Caldeira, K. (2022). Storage requirements as a metric of global geographic variability of wind and solar resources. **Intended Journal:** Nature Energy (In preparation).

### **Conference Proceedings (indexed and peer-reviewed)**

- [C5]. Antonini, E., Virguez, E., Ruggles, T., Ashfaq, S., Duan, L., & Caldeira, K. (2022). Wind resources over the North Sea: Characterizing wind variability and droughts over 71 years. *Proceedings of the International Mechanical Engineering Congress & Exposition (IMECE) 2022 Conference*. **Under review**.
- [C4]. Virguez, E. & Patiño, E. (2019). Abating carbon emissions by means of utility-scale photovoltaics and storage: The Duke Energy Progress/Carolinas case study. *FISE-IEEE/CIGRE Conference*, pp. 1-6 (Conference Paper – I.S.I. & Scopus Register; ISBN: 978-172814230-2). <https://doi.org/10.1109/fiscigre48012.2019.8985012>
- [C3]. Valenzuela, M., Espinosa, M., Virguez, E., & Behrentz, E. (2017). Uncertainty of greenhouse gas emission models: a case in Colombia's transport sector. *Transportation Research Procedia*, Volume 25, pp. 4610-4626 (Conference Paper – I.S.I. & Scopus Register; ISSN: 2352-1465). <https://doi.org/10.1016/j.trpro.2017.05.380>
- [C2]. Faber, M.H., & Virguez-Rodríguez, E. (2011). Supporting decisions on global health and life safety investments. 2011. *Applications of Statistics and Probability in Civil Engineering - Proceedings of the 11<sup>th</sup> International Conference on Applications of Statistics and Probability in Civil Engineering*, pp. 434-443 (Conference Paper – Scopus Register; ISBN: 978-0-415-66986-3). <https://doi.org/10.1201/b11332>
- [C1]. Fischer, K., Virguez-Rodríguez, E., Sánchez-Silva, M., & Faber, M.H. (2011). Defining guidelines for the application of the marginal life-saving costs principle for risk regulation. *Applications of Statistics and Probability in Civil Engineering - Proceedings of the 11<sup>th</sup> International Conference on Applications of Statistics and Probability in Civil Engineering*, pp. 444-451 (Conference Paper – Scopus Register; ISBN: 978-0-415-66986-3). <https://doi.org/10.1201/b11332>

### **Books and book chapters**

- [BC2]. Reisinger, D., Liu, Y., Valnes, S., & Virguez, E. (2021). Sustainability across the curriculum: A multilingual and intercultural approach. In M. J. De la Fuente (Ed.). *Education for Sustainable Development in Foreign Language Learning: Content-Based Instruction in College Level Curricula* (pp 197-214). New York: Routledge Research in Language Education. ISBN: 978-0-36753-032-7. **Book Chapter**.
- [BC1]. Virguez, E. (2021). Embracing the value of cultural wealth from underrepresented groups. In K.L. Armstrong, L.A. Genova, J.W. Greenlee, & D.S. Samuel (Eds.). *Teaching Gradually: Practical*

*Pedagogy and Classroom Strategies for Graduate Students by Graduate Students* (pp 190-196). Sterling, Virginia: Stylus Publishing L.L.C. ISBN: 978-1-64267-160-5. **Book Chapter.**

- [B1]. Behrentz, E., Benavides, J., Bocarejo, J., Canal, M., Espinosa, M., Rodríguez, R. ... Virguez, E. (2011). *Plan Decenal de Descontaminación del Aire para Bogotá*. Bogotá, Colombia: Secretaría Distrital de Ambiente. ISBN: 978-980-6810-45-7. **Book.**

### **Feature Articles, Op-Eds, and Columns**

- [D10]. Virgüez, E. & Echeverri, A. Succeeding in a competition-oriented environment: The paradigm of collaboration for emergent scholars trained in the South. (*In preparation*)
- [D9]. Virgüez, E. Improving your scholarly integrity while advancing professional development goals. (*In preparation*)
- [D8]. Virgüez, E. The value of a diversified mindset for an early-career scientist. (*In preparation*)
- [D7]. Virgüez, E. Parenting during a world in climate crisis: The value of assigning a personal meaning to your research. (*In preparation*)
- [D6]. Virgüez, E. The world is changing: As an early-career scholar, I need the academy to change with it. *Inside Higher Ed* (*Under review*).
- [D5]. Virgüez, E. (2022). How I balanced my Ph.D. research with opening doors for others. *Science*. <https://doi.org/10.1126/science.abq8440>
- [D4]. Virgüez, E. (2022). Bring more early early-career scholars into the administrative fold. *Higher Ed Dive*. [Link](#).
- [D3]. Virguez, E., Stantial, N, & Zhang, Y. (2019). Understanding Duke Health Insurance: An Emerging Leaders Institute project. *Duke University's Graduate School Professional Development Blog*. [Link](#)
- [D2]. Virgüez, E. (2018). Enhancing my network of mentors. *Duke University's Graduate School Professional Development Blog*. [Link](#)
- [D1]. Virgüez, E. (2018). Organizing your personal and professional OPTIONS. *Duke University's Graduate School Professional Development Blog*. [Link](#)

### **Selected Oral Presentations**

- [O21]. Antonini, E., Virguez, E., Ashfaq, S., & Davies, S. (2022). Net-zero emissions energy systems: Geophysical constraints, consequences, and opportunities (session moderator). *American Geophysical Union (AGU) Annual Meeting*. Chicago, Illinois, United States. December.
- [O20]. Antonini, E., Virguez, E., Ruggles, T., Ashfaq, S., Duan, L., & Caldeira, K. (2022). Wind resources over the North Sea: Characterizing wind variability and droughts over 71 years. *International Mechanical Engineering Congress & Exposition (IMECE) 2022*. Columbus, Ohio, United States. November.
- [O19]. Virguez, E., Gabrielli, P., Ruggles, T., & Caldeira, K. (2022). The Influence of carbon pricing and system flexibility on the production and supply of grid-tied electrolytic hydrogen. *Institute for*

*Operations Research and the Management Sciences (INFORMS) Annual Meeting*. Indianapolis, Indiana, United States. October.

- [O18]. Virgüez, E., & Patino-Echeverri, D. (2022). Assessing the effect of incorporating land-use parcel-level data and local zoning ordinances when quantifying renewable energy resources potential, *American Association of Geographers Annual Meeting*. New York, New York, United States. February. **\*Recognized with the Best Student Paper Award by AAG's Energy and Environment Specialty Group.**
- [O17]. Valnes, S., Liu, Y., Reisinger, D., & Virgüez, E. (2021). Language and culture for sustainability: Voices in the Environment., *ACTFL Annual Convention*. San Diego, California, United States. November.
- [O16]. Virgüez, E. (2021). Who pays the price for our actions? The toll of the environmental problems for members of developing countries. *Duke Environmental Justice Symposium*. Durham, North Carolina, United States. March.
- [O15]. Virgüez, E. (2020). Utility-scale photovoltaics and storage: Decarbonizing and reducing greenhouse gases abatement costs. *Energy Data Analytics Symposium: Transforming Energy Systems with Data Science Techniques*. Durham, North Carolina, United States. December.
- [O14]. Virgüez, E. & Patiño-Echeverri, D. (2020). Enabling utility-scale photovoltaics integration via storage to abate carbon dioxide emissions., *Electric Power Conference*. Denver, Colorado, United States. April (canceled because of COVID-19 pandemic).
- [O13]. Virgüez, E., Castillo, J., & Patiño-Echeverri, D. (2020). Estimating health and economic benefits of Bogota's air quality management plan., *North Carolina Conference on Latin American Studies (NC-CLAS)*. Charlotte, North Carolina, United States. March (canceled because of COVID-19 pandemic).
- [O12]. Virgüez, E. (2020). Voices of changemakers: how commitments to learning, community, and equity shape future faculty (panelist), *Annual Meeting of the Association of American Colleges & Universities (AAC&U)*. Washington, D.C., United States. January.
- [O11]. Virgüez, E. & Patiño-Echeverri, D. (2019). Abating carbon emissions by means of utility-scale photovoltaics and storage: The Duke Energy Progress/Carolinas case study, *FISE IEEE CIGRE Conference*. Medellin, Colombia. December.
- [O10]. Virgüez, E. & Patiño-Echeverri, D. (2019). Utility-scale photovoltaics and storage: Economic and environmental trade-offs. *INFORMS Annual Meeting*. Seattle, United States. October.
- [O09]. Virgüez, E. & Patiño-Echeverri, D. (2019). Utility-scale photovoltaics plus storage: a cost-effective alternative for decarbonization? *Carnegie Mellon University Center for Climate and Energy Decision Making (CEDM) Annual Meeting*. Pittsburgh, Pennsylvania, United States. May.
- [O08]. Virgüez, E. (2019). Supporting utility-scale photovoltaics with storage: The Duke Energy Carolina and Duke Energy Progress case study. *Nicholas School of the Environment Annual Ph.D. Symposium*. Durham, North Carolina, United States. April.
- [O07]. Valenzuela, M., Espinosa, M., Virgüez, E. & Behrentz, E. (2016). Uncertainty of greenhouse gas emission models: Colombian transportation sector as a case of study., *14th World Conference on Transport Research*. Shanghai, China. July.

- [O6]. Amaya, R., Gutierrez, A., Muñoz, F. & Virguez, E. (2014). Experience of Universidad de los Andes teaching process safety., *6th CCPS Latin American Conference on Process Safety*. Buenos Aires, Argentina. September.
- [O5]. Virguez, E., Olaya, L. & Behrentz, E. (2013). Convenience of updating the emission standards for heavy-duty vehicles., *IV Congreso Colombiano y Conferencia Internacional de Calidad del Aire y Salud Pública*. Bogotá, Colombia. August.
- [O4]. Faber, M.H. & Virguez-Rodríguez, E. (2012). Supporting decisions on global health and life safety investments., *LQI Symposium, Denmark Technical University*. Lyngby, Denmark. August.
- [O3]. Faber, M.H. & Virguez-Rodríguez, E. (2011). Supporting decisions on global health and life safety investments. *11<sup>th</sup> International Conference on Applications of Statistics and Probability in Civil Engineering*. Zurich, Switzerland. August.
- [O2]. Fischer, K., Virguez-Rodríguez, E., Sánchez-Silva, M. & Faber, M.H. (2011). Defining guidelines for the application of the marginal life-saving costs principle for risk regulation. *11<sup>th</sup> International Conference on Applications of Statistics and Probability in Civil Engineering*. Zurich, Switzerland. August.
- [O1]. Behrentz, E. & Virguez, E. (2011). Compressed natural gas on Colombia: study case for public transport vehicles., *XIV Congress of the Colombian Association of Natural Gas (Naturgas)*. Cartagena, Colombia. April.