Naomi Zimmerman, Ph.D., P.Eng.

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Appointments

Assistant Professor — Vancouver, Canada
University of British Columbia — 2018 – Present

Postdoctoral Fellow — Pittsburgh, PA
Carnegie Mellon University — 2015 – 2017

Education

University of Toronto — Toronto, Canada
Ph.D., Chemical Engineering & Applied Chemistry — 2011 – 2015

- **Thesis**: Linking laboratory engine studies to real-world observations: Assessing the air quality impacts of gasoline direct injection engines
- **Advisors**: Dr. Greg J. Evans, Dr. James S. Wallace

University of Waterloo — Waterloo, Canada
B.A.Sc., Chemical Engineering — 2006 – 2011

- **Distinctions**: Dean's Honours List, Sanford Fleming Foundation Award for Co-operative Proficiency

Selected Awards and Honours

UBC Sustainability Fellow	2019 – 2021
Canada Research Chair in Sustainability, *$500,000*	2018 – 2023
NSERC Postdoctoral Fellowship, *$90,000*	2015 – 2017
Student Discovery Award, University of Toronto, *$3,000*	2015
NSERC Postgraduate Scholarship, *$63,000*	2012 – 2015
NSERC Alexander Graham Bell Canada Graduate Scholarship, *$17,500*	2011 – 2012
Mary H. Beatty Fellowship, University of Toronto, *$5,000*	2011

Teaching

University of British Columbia

MECH431: Engineering Economics [enrollment∼100]	Winter 2018,2019,2020,2021,2022
MECH410U: Air Pollution, Technology, & Society [enrollment∼30]	Winter 2019,2020,2021,2022

University of Toronto

CHE230: Environmental Chemistry [enrollment∼150]	Winter 2015

Selected Research Grants

Total Funding = $6,347,125

CFI Innovation Fund, 2020-2025, "Rapid Air Improvement Network," $5,068,042, co-PI [w/ S. Rogak (co-PI) and A. Bertram, N. Borduas-Dedekind, M. Brauer, C. Carlsten, A. Giang , P. Kirchen, I. McKendry, A. Rysanek (co-Applicants)]

Rogers-UBC Foundry Grant, 2020-2022, "Advancing an Intelligent Transportation Data Platform," $499,000, PI [w/ M. Kennedy, D. Michelson, C. Woo, M. Fatmi, A. Chaaban (Co-PIs)]

New Frontiers in Research Fund - Exploration, 2020-2022, "Cannabis cultivation in Canada: Assessing the air, health and equity impacts of a growing and uncharted industry," $273,175, PI [w/ A. Giang (Co-PI) and S. Henderson (Co-Applicant)]

CFI John R. Evans Leaders Fund, 2018-2023, "High time-resolution mobile laboratory for quantification of emergent air pollutants," $308,657, PI

Canada Research Chairs - Research Stipend, 2018-2023, $100,000, PI

NSERC Discovery Grant, 2018-2024, "Quantifying the impact of renewable energy technology and policy interventions on air pollution and climate," $210,500, PI

Publications[1]

n = 29 [27 published, 2 in review], h-index = 16

29. Lee J, Dhulipala SV, **Zimmerman N**, Weimer M, Wright M, Rogak SN*. "The effect of air purifiers on aerosol dispersion and removal in multi-patient hospital rooms," (2021) *Indoor Air*. In review.

28. Henderson SB*, Yao J, Schwartz C, Fawkes J, **Zimmerman N**, Carlsten C. "Fine particulate matter (PM2.5) reduction by an improvised box fan air filter in a controlled environmental exposure facility designed for human trials," (2021) *Aerosol & Air Quality Research*. Revisions requested.

27. Song R, Presto AA*, Saha P, **Zimmerman N**, Ellis AA, Subramanian R. "Spatial variations in urban air pollution: Impacts of diesel bus traffic and restaurant cooking at small scales" (2021) *Air Quality, Atmosphere & Health*. In press.

26. Monticelli D, Bhandari S, Eykelbosh A, Henderson SB, Giang A, **Zimmerman N***. "Cannabis Cultivation Facilities: A Review of their Air Quality Impacts from the Occupational to Community Scale," (2022) *Environmental Science & Technology*. Accepted.

25. **Zimmerman N***. "Tutorial: Guidelines for implementing low-cost sensor networks for aerosol monitoring," (2022) *Journal of Aerosol Science*. 159: 105872.

24. Nguyen PDM, Martinussen N, Mallach G, Ebrahimi G, Jones K, **Zimmerman N**, Henderson SB*. "Using Low-Cost Sensors to Assess Fine Particulate Matter Infiltration (PM2.5) during a Wildfire Smoke Episode at a Large Inpatient Healthcare Facility," (2021) *International Journal of Environmental Research and Public Health*. 18(18): 9811.

23. Eykelbosh A*, Maher R, Monticelli D, Ramkairsingh A, Henderson SB, Giang A, **Zimmerman N**. "Elucidating the community health impacts of odours using citizen science and mobile monitoring," (2021) *Environmental Health Review*. 64(2): 24-27.

22. Jain S, Presto AA, **Zimmerman N***. "Spatial modeling of PM2.5, CO and NO2 concentrations measured by a low-cost sensor network: Comparison of linear and machine learning enabled land use models," (2021) *Environmental Science & Technology*. 55 (13): 8631-8641.

21. Liu B, **Zimmerman N***. "Fleet-based vehicle emission factors using low-cost sensors: Case study in parking garages," (2021) *Transportation Research Part D: Transport and Environment*. 91: 102635.

20. Le Hong Z, **Zimmerman N***. "Air Quality and Greenhouse Gas Implications of Connected and Autonomous Vehicle Diffusion Scenarios." (2021) *Transportation Research Part D: Transport and Environment*. 91: 102676.

19. **Zimmerman N***, Li HZ, Ellis A, Hauryliuk A, Robinson ES, Gu P, Shah RU, Ye Q, Snell L, Subramanian R, Robinson AL, Apte JS, Presto AA. "Improving correlations between land use and air pollutant concentrations using wavelet analysis: Insights from a low-cost sensor network." (2020) *Aerosol and Air Quality Research*. 20(2): 314-328.

18. Li HZ, Gu P, Ye Q, **Zimmerman N**, Robinson ES, Subramanian R, Apte JS, Robinson AL, Presto AA*. "Spatially dense air pollutant sampling: Implications of spatial variability on the representativeness of stationary air pollutant monitors." (2019) *Atmospheric Environment: X*. 2: 100012.

17. Malings C*, Tanzer R, Hauryliuk A, Kumar SPN, **Zimmerman N**, Kara LB, Presto AA, Subramanian R. "Development of a General Calibration Model and Long-Term Performance Evaluation of Low-Cost Sensors for Gas Monitoring with RAMPs." (2019) *Atmospheric Measurement Techniques*. 12(2): 903-920.

16. Saha PK, **Zimmerman N**, Malings C, Hauryliuk A, Li HZ, Snell L, Subramanian R, Lipsky E, Apte JS, Robinson AL, Presto AA*. "Quantifying High-resolution Spatial Variations and Local Source Impacts of Urban Ultrafine Particle Concentration." (2019) *Science of the Total Environment*. 655: 473-481.

15. **Zimmerman N***, Rais K, Jeong CH, Pant P, Delgado-Saborit JM, Wallace JS, Evans GJ, Brook JR, Godri-Pollitt KJ. (2019) "Carbonaceous aerosol sampling of gasoline direct injection engine exhaust with an integrated organic gas and particle sampler." (2019) *Science of the Total Environment*. 652: 1261-1269.

14. Omara M*, **Zimmerman N**, Sullivan MR, Li X, Ellis A, Cesa R, Subramanian R, Presto AA, Robinson AL. "Marginally economic wells dominate methane emissions from U.S. natural gas production." (2018) *Environmental Science & Technology*. 52(21): 12915-12925.

[1] underline denotes member of Zimmerman group, * denotes corresponding author

13. Saha PK, Robinson ES, Shah RU, **Zimmerman N**, Apte JS, Robinson AL, Presto AA*. "Reduced Ultrafine Particle Concentration in Urban Air: Changes in Nucleation and Anthropogenic Emissions." (2018) *Environmental Science & Technology.* 52(12): 6798-6806.

12. Wang JM*, Jeong CH, **Zimmerman N**, Healy RM, Evans GJ. "Real World Vehicle Fleet Emission Factors: Seasonal and Diurnal Trends in Traffic Related Air Pollutants." (2018). *Atmospheric Environment.* 184: 77-86.

11. **Zimmerman N**, Presto AA, Kumar SPN, Gu J, Hauryliuk A, Robinson ES, Robinson AL, Subramanian R*. "A machine learning calibration model using random forests to improve sensor performance for lower-cost air quality monitoring." (2018) *Atmospheric Measurement Techniques.* 11(1): 291-313.

10. Maikawa C, **Zimmerman N**, Ramos M, Shah M, Wallace JS, Godri-Pollitt KJ*. "Comparison of airway responses induced in a mouse model by the gas and particulate fractions of gasoline direct injection engine exhaust." (2018) *International Journal of Environmental Research and Public Health.* 15(3): 429-442.

9. Wang JM*, Jeong CH, **Zimmerman N**, Healy RM, Hilker N, Evans GJ. "Real-World Emission of Particles from Vehicles: Volatility and the Effects of Ambient Temperature." (2017) *Environmental Science & Technology.* 51(7): 4081-4090.

8. **Zimmerman N***, Wang JM, Jeong CH, Wallace JS, Evans GJ. "Assessing the climate trade-offs of gasoline direct injection engines." (2016) *Environmental Science & Technology.* 50(15): 8385-8392.

7. Maikawa CL, **Zimmerman N**, Rais K, Shah M, Hawley B, Pant P, Jeong CH, Delgado-Saborit JM, Volkens J, Evans GJ, Wallace JS, Godri-Pollitt KJ*. "Murine precision-cut lung slices exhibit acute responses following exposure to gasoline direct injection engine emissions." (2016) *Science of the Total Environment.* 568: 1102-1109.

6. **Zimmerman N**, Wang JM, Jeong CH, Hilker N, Healy RM, Sabaliauskas K, Wallace JS, Evans GJ*. "Field measurement of gasoline direct injection emission factors: spatial and seasonal variability." (2016) *Environmental Science & Technology.* 50(4): 2035-2043.

5. Healy RM*, Wang JM, Jeong CH, Lee AKY, Willis MD, Jaroudi E, **Zimmerman N**, Hilker N, Murphy M, Eckhardt S, Stohl A, Abbatt JPD, Wenger JC, Evans GJ. "Light-absorbing properties of ambient black carbon and brown carbon from fossil fuel and biomass burning sources." (2015) *Journal of Geophysical Research: Atmospheres.* 120(13): 6619-6633.

4. Wang JM*, Jeong CH, **Zimmerman N**, Healy RM, Wang DK, Ku F, Evans GJ. "Plume-based analysis of vehicle fleet air pollutant emissions and the contribution of high emitters." *Atmospheric Measurement Techniques.* 8(8): 3263-3275.

3. **Zimmerman N**, Jeong CH, Wang JM, Ramos M, Wallace JS, Evans GJ*. "A source-independent empirical correction procedure for the fast mobility and engine exhaust particle sizers." *Atmospheric Environment.* 100: 178-184.

2. **Zimmerman N**, Godri-Pollitt KJ, Jeong CH, Wang JM, Jung T, Cooper JM, Wallace JS, Evans GJ*. "Comparison of three nanoparticle sizing instruments: the influence of particle morphology." (2014) *Atmospheric Environment.* 86: 140-147.

1. Epling WS*, Yezerets A, Currier N, Hess HS, Chen HY, Russell A, Venkov M, **Zimmerman N**. "Spatially-Resolved Thermal Degradation Induced Temperature Pattern Changes along a Commercial Lean NOx Trap Catalyst." (2010) *SAE International Journal of Fuels and Lubricants.* 3(1): 723-732

Selected Conference Presentations[2]

12. Liu B, **Zimmerman N***. "Determining Fleet-based Vehicle Emission Factors Using Low-cost Sensor Packages: A Case Study across Three Parking Garages" (2020). American Association for Aerosol Research 38th Annual Conference, Online.

11. Jain S*, Presto AA, **Zimmerman N**. "Spatiotemporal Modeling of $PM_{2.5}$, CO and NO_2 Concentrations Measured by a Low-cost Sensor Network: Comparison of Linear and Machine-learning Enabled Land Use Models" (2019). American Association for Aerosol Research 37th Annual Conference, Portland, OR.

10. **Zimmerman N***, Li HZ, Ellis A, Hauryliuk A, Robinson ES, Gu P, Snell L, Subramanian R, Robinson AL, Apte JS, Presto AA, "Integrating Spatiotemporal Variability and Modifiable Factors into Air Pollution Estimates" (2018). Air Sensors International Conference, Oakland, CA.

[2] underline denotes member of Zimmerman group, * denotes presenting author

9. Jain S, **Zimmerman N**, Presto AA*, "Spatial Modeling of $PM_{2.5}$ Concentrations Measured by a Low-Cost Sensor Network: Comparison of Linear and Machine-Learning Enabled Land Use Models" (2018). 10th International Aerosol Conference, St. Louis, MO.

8. **Zimmerman N***, Li HZ, Robinson ES, Ellis A, Subramanian R, Robinson AL, Apte JS, Presto AA, "Characterizing Intra-Urban Air Pollution Gradients with a Spatially-Distributed Network of Lower Cost Sensors". American Association for Aerosol Research 36th Annual Conference, Raleigh, NC.

7. **Zimmerman N***, Presto AA, Kumar SPN, Gu J, Robinson ES, Robinson AL, Subramanian R, "Improved Community Air Quality Monitoring Networks: Achieving Sensitivity to Pollutant Gradients Using Lower-Cost Sensors and Machine Learning" (2017). International Society of Exposure Science 27th Annual Meeting, Research Triangle Park, NC.

6. **Zimmerman N***, Robinson ES, Li HZ, Ellis A, Subramanian R, Robinson AL, Apte JS, Presto AA, "Characterizing intra-urban air quality gradients with a spatially-distributed network" (2017). Air & Waste Management Association's 110th Annual Conference and Exhibition, Pittsburgh, PA.

5. **Zimmerman N***, Aklin M, Sengupta R, "Solar micro-grid electrification in rural India: Quantifying air, climate and socio-economic co-benefits" (2017). Clean Technologies in Developing Countries: Challenges and Opportunities Workshop, Pittsburgh, PA.

4. **Zimmerman N***, Pant P, Jeong CH, Rais K, Delgado-Saborit JM, Wallace JS, Brook JR, Evans GJ, Godri-Pollitt KJ, "Phase-partitioned PAHs in Gasoline Direct Injection Engine Exhaust Sampled with an Integrated Organic Gas and Particle Sampler" (2016). American Association for Aerosol Research 35th Annual Conference, Portland, OR.

3. **Zimmerman N***, Wang JM, Jeong CH, Hilker N, Sabaliauskas K, Healy RM, Evans GJ, "Assessing the impact of driving pattern on real-world emission factor variability using a gasoline direct injection light-duty passenger vehicle" (2014). American Association for Aerosol Research 33rd Annual Conference, Orlando, FL.

2. **Zimmerman N***, Wang JM, Jeong CH, Hilker N, Sabaliauskas K, Healy RM, Evans GJ, "Measuring real-world emission factor variability in urban and remote environments using a gasoline direct injection light-duty passenger vehicle" (2014). North Country Aerosol Summer Conference, Clarkson University.

1. **Zimmerman N***, Godri-Pollitt KJ, Jeong CH, Jung T, Cooper JM, Wallace JS, Evans GJ, "Accurate measurement of particle size and number concentration for meeting regulatory Limits on vehicle emissions: Inter-comparison of three particle sizing instruments" (2013). American Association for Aerosol Research 32nd Annual Conference, Portland, OR.

Selected Conference Posters[3]

9. Liu, B*, Flores KC, Jain S, Chakraborty M, **Zimmerman N**, "Low-cost Sensor Packages in Parking Garages to Determine Emission Factors and Assess the Relative Importance of Cold Start Operation on Air Quality" (2019). American Association for Aerosol Research 37th Annual Conference, Portland, OR.

8. Chakraborty M*, Meiklejohn J, Babaee K, Rogak S, Giang A, **Zimmerman N**, "Portable Real-time Black Carbon Monitoring Using the MA300: Performance Characterization in Laboratory and Real-world Environments" (2019). American Association for Aerosol Research 37th Annual Conference, Portland, OR.

7. Jain S*, Presto AA, **Zimmerman N**, "Spatiotemporal modeling of PM2.5 using machine-learning enabled land use models" (2019). Machine Learning in Science and Engineering Conference, Atlanta, GA.

6. Chakraborty M*, **Zimmerman N**, Giang A, "Framework for assessing air quality and health impacts of rural emissions in the Indo Gangetic Plain through measurement and modeling" (2019). International GEOS-Chem Meeting, Cambridge, MA.

5. **Zimmerman N***, Li HZ, Ellis A, Hauryliuk A, Robinson ES, Gu P, Snell L, Subramanian R, Robinson AL, Apte JS, Presto AA, "Integrating Spatiotemporal Variability and Modifiable Factors into Air Pollution Estimates" (2018). The Joint Annual Meeting of the International Society of Exposure Science and the International Society for Environmental Epidemiology, Ottawa, ON.

4. **Zimmerman N***, Ellis A, Shurman M, Subramanian R, Robinson AL, Apte JS, Presto AA, "Characterizing intra-urban air quality gradients with a spatially-distributed network in Pittsburgh, Pennsylvania" (2016). American Geophysical Union Fall Meeting, San Francisco, CA.

[3] underline denotes member of Zimmerman group, * denotes presenting author

3. **Zimmerman N***, Lipsky E, Subramanian R, Robinson AL, Presto AA, "Assessment of Compact, Real-time PM2.5 and Ultrafine Particle Counting Instrumentation with a Spatially-distributed Network in Pittsburgh, Pennsylvania" (2016). American Association for Aerosol Research 35th Annual Conference, Portland, OR.

2. **Zimmerman N***, Wang JM, Jeong CH, Hilker N, Sabaliauskas K, Healy RM, Evans GJ, "Field measurement of gasoline direct injection particle number emission factors: spatial and temporal variability in particle size and concentration". 11th International Conference on Carbonaceous Particles in the Atmosphere, Berkeley, CA.

1. **Zimmerman N***, Ramos M, Jeong CH, Godri-Pollitt KJ, Wallace JS, Evans GJ, "Physicochemical assessment of conventional and ethanol blended exhaust emissions from a light-duty gasoline direct injection (GDI) engine" (2014). American Association for Aerosol Research 33rd Annual Conference, Orlando, FL.

Invited Talks

- Air Sensors International Conference, Virtual Fall Series Session 2, "Determining fleet-based vehicle emission factors using low-cost sensors: A case study in three parking garages" (2020) [virtual]
- Harvard University, "Low-cost sensing: Applications in fleet-based vehicle emission factors" (2020) [virtual]
- Environment and Climate Change Canada Interagency Meeting, "Low-cost sensing: Applications in vehicle emissions and spatial mapping of air pollution" (2020)
- Environment and Climate Change Canada AQSU West Mini-Symposium, "Using time-resolved data from low-cost PM monitors to improve spatial models of $PM_{2.5}$" (2019)
- Strathcona Residents Association Air Quality Forum, "Perspectives on Low-Cost Sensors and Research in the Region" (2020)
- Methane Emissions Panel, Canada Gas & LNG Exhibition and Conference, "Assessing fugitive methane using mobile monitoring techniques" (2019)
- National Air Pollution Surveillance Program (NAPS) Managers Meeting, "iREACH Laboratories at UBC: Quantifying the impact of technology and policy interventions on air pollution and climate" (2019)
- SensingNetworks.org Global Air Quality Sensing Network Forum, "Understanding aerosols: Observations and modelling - Using sensor data to build higher time resolution air quality-land use models" (2019)
- 100th Canadian Chemistry Conference and Exhibition, Special Symposia: Atmospheric Chemistry in a Changing Climate, "Regional differences in methane emissions from oil and gas production sites in three US basins" (2017)
- Diverse Voices in Climate Change Innovation, Panelist: "Climate Change at Work: Perspectives from leaders in their field", The Consulate General of Canada & Perkins Coie, (2017)
- University of Toronto, "In Search of Fresh Air: Characterizing the Sources and Impacts of Air Pollution in Urban Areas" (2017)
- University of British Columbia, "In Search of Fresh Air: Characterizing the Sources and Impacts of Air Pollution in Urban Areas" (2017)
- Carleton University, "In Search of Fresh Air: Characterizing the Sources and Impacts of Air Pollution in Urban Areas" (2016)
- University of Toronto, Sigma Xi Distinguished Lecture Series, "Vehicle emissions regulations: are we chasing our own tailpipes?" (2015)
- Carnegie Mellon University, "From Cylinder to City: Linking controlled engine studies to real-world measurements of exhaust pollutants" (2015)

Media and Press Coverage

- **Global News – National**, segment on air quality in India, "India pollution: Air quality reaches 'hazardous' levels in Delhi", air date: November 6, 2019
- **CBC News – National**, segment of air quality on cruise ships "Cruise ship air quality as bad as 'world's most polluted cities'", air date: January 25, 2019
- **Xploration Awesome Planet** (television show broadcast on Fox, Hulu and Amazon), segment on low-cost air quality monitoring as part of Season 4, Episode 8, "Pennsylvania", air date: October 28, 2017

- **90.5FM WESA**, Web and Radio Story: "Why the EPA Wants Data from Pittsburgh Rooftops", Interview with Liz Reid, February 6th, 2017
- **Scientific American**, 60-Second Science Podcast: "Fuel-Efficient Engines Have A Sooty Flaw", Interview with Christopher Intagliata, July 16th, 2016
- **NPR Science Friday**, Segment: "A Climate Tradeoff for Fuel-Efficient Engines?", Interview with Ira Flatow, July 15th, 2016
- **Chemical & Engineering News (C&EN)**, Story: "Fuel efficiency alone does not bring climate benefits for eco-engines" Interview with Melissae Fellet, July 15th, 2016
- **University of Toronto News**, Story: "Think a more fuel-efficient engine is the green choice? Not so fast, U of T engineers say" Interview with Marit Mitchell, July 13th, 2016
- **The Daily Mail**, Story "Not so green after all! Fuel efficient cars may be churning out MORE pollutants than previously thought", July 13th, 2016
- **American Chemical Society**, Press Release, "Could more fuel-efficient engines lead to more global warming?" July 13th, 2016
- **The Allegheny Front**, Web and Radio Story: "The Hunt for Methane Leaks Goes High-Tech", Interview with Reid Frazier, July 8th, 2016

Committees and Panels

- Education Committee, American Association for Aerosol Research (2020–2023)
- Expert Panelist, Council of Canadian Academies, Connected and Autonomous Vehicles and Shared Mobility (2019–2020)
- Chair, Combustion Working Group, American Association for Aerosol Research Annual Conference (2018–2019)
- Vice-Chair, Combustion Working Group, American Association for Aerosol Research Annual Conference (2017–2018)
- Session Co-Chair: American Association for Aerosol Research Annual Conference (2016,2017,2018,2019); International Society of Exposure Science (2018)

Peer Review

- **Academic Journals:** Transportation Research Record, Environmental Science: Processes & Impacts, Journal of Aerosol Science; Sensors; Environment International; Environmental Pollution; Transportation Research Part D: Transport and Environment; Environmental Science & Technology; Environmental Science & Technology Letters; Atmospheric Environment; Atmospheric Measurement Techniques; Aerosol Science & Technology
- **Granting Agencies:** European Research Council; National Science Foundation (NSF); Social Sciences and Humanities Research Council (SSHRC); Natural Sciences and Engineering Research Council (NSERC); National Oceanic and Atmospheric Administration (NOAA)
- **Book Publishers:** Cambridge University Press

Membership

- American Geophysical Union
- American Chemical Society
- American Association for Aerosol Research

Students Supervised

n = 15 total

- **Postdoctoral Fellows**

    1. Dr. Surya Dhulipala, 2021 – present

- **Ph.D. Students**

    3. Davi Monticelli, 2021 – present
    2. Mrinmoy Chakraborty, 2018 – present [w/ A Giang]
    1. Sakshi Jain, 2018 – present

- **Masters Students**

    3. James Hindson, 2021 – present
    2. Melanie MacArthur, 2019 – present
    1. Bingqi Liu, 2018 – 2020 [next: Policy Analyst, Metro Vancouver]

- **Undergraduate Researachers**

    8. Rachel Habermehl, 2022
    7. Chris Kelly, 2021 – 2022
    6. Stefan Colbow, 2021
    5. Nika Martinussen, 2021
    4. Jacob Rose, 2020 – 2021
    3. Julian Fawkes, 2020
    2. Zoe Le Hong, 2019 – 2020 [now: Intern, Integral Group and Francl Architecture]
    1. Katia Cantu Flores, 2019 [now: Commercial Data Analyst, Home Depot Mexico]