PARTH VAISHNAV

7206 Raymond St., Pittsburgh, PA 15218, USA * parthv@cmu.edu * +1 (412) 512 2038 * www.parthv.com

SUMMARY

- Two years of post-doctoral experience in renewables and climate change; five years of oil and gas experience
- Strong quantitative analysis background and skilled in using software tools such as R for statistical analysis
- Worked or studied in five countries on three continents; native English fluency, working knowledge of German

EDUCATION

Carnegie Mellon University, Pittsburgh, PA
PhD in Engineering and Public Policy — May 2015
- Dissertation on reducing air pollution from international aviation and ocean shipping

University of Cambridge, United Kingdom
MPhil in Technology Policy — Jul 2011
- Assessed business models to supply energy to the rural poor; commendation for outstanding performance

National University of Singapore and Eindhoven University of Technology, Netherlands
Master of Technological Design — May 2005

National University of Singapore
Bachelor of Engineering (Mechanical), Minor in Bioengineering — Jun 2003

EXPERIENCE

Carnegie Mellon University
Associate Director, Center for Climate and Energy Decision-Making, Pittsburgh, PA — Nov 2015 – present
Research Engineer, Pittsburgh, PA — Nov 2015 – present
Post-doctoral fellow, Pittsburgh, PA — Jun 2015 – Oct 2015
- Lead author of five and co-author of nine critically-reviewed research papers, including on the equity issues associated with distributed solar photovoltaic systems in the United States
- Co-advising four PhD students on projects related to the energy transition and advanced manufacturing
- Manage an annual workshop to educate high school students and teachers about energy and climate change, with responsibilities including recruitment and budget
- Co-organized three invitational workshops with participants from industry, government, and academia to frame research problems relating to new technologies for climate change mitigation, and sustainable freight
- Developed and taught a graduate course on Climate Change Science and Adaptation, earning a rating of 4.5/5 for overall quality and 4.6/5 for quality of teaching from students

Environmental Defense Fund
Aviation Policy Intern, Washington, DC — May 2014 – Aug 2014
- Contributed to improving the International Civil Aviation Organization's (ICAO) scheme to cap carbon dioxide emissions from international aviation by estimating and publishing the impact on airlines of ICAO's proposals
- Mentored a graduate recruit, who went on to provide excellent analytical support to the team

Royal Dutch Shell
Strategy & Portfolio Analyst, The Hague, Netherlands — Apr 2008 – Sep 2010
- Triggered profitable trading decisions though analysis of long- and short-term evolution of market fundamentals for European natural gas and global liquefied natural gas (LNG)
- Provided key inputs to strategic decisions (e.g., whether to invest in gas transmission pipelines) by producing analyses and briefing materials for senior management, including the CEO of Shell

Deployment Analyst, Singapore — Oct 2006 – Mar 2008
- Managed stakeholders across functions and lines of business to improve supply chain planning processes and reduce inventory at Shell Lubricants, Singapore, by 15%

Production Planner, Singapore — Aug 2005 – Oct 2006
- Ensured >95% supply reliability to customers at an industrial lubricant oil plant operating at near-full capacity

National University of Singapore
Research Assistant, Singapore — May 2004 – Aug 2004
- Co-founded a company to commercialize techniques to facilitate rapid exploration of product forms in the concept generation phase

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CORE SKILLS

- Analytical: Decision analysis, Monte Carlo simulation, optimization, cash flow analysis, survey design
- Languages: English – native language; German – intermediate (reading, writing) basic (speaking)

AWARDS

- Grant ($2,500) by Carnegie Mellon University to support experiential learning for high-school students participating in a summer workshop on energy and climate that I organize with a graduate student *(2015)*
- Third prize (team) at the US Association of Energy Economics' (USAEE) Case Competition at USAEE's 32nd North American Conference, and second prize at the 31st Conference *(2012–13)*
- Airport Co-operative Research Program Graduate Research Award ($10,000) on public-sector aviation issues by the Transportation Research Board of the U.S. National Academy of Sciences *(2012)*
- Hughes Hall Scholarship covering tuition fees associated with pursuing a PhD at the University of Cambridge. Each year, only one of over 300 graduate students at Hughes Hall is offered this award. *(2011)*
- Vice President's awards from Shell Energy Europe in 2008 for work on modeling the impact of the 2009 recession in Europe on natural gas demand, and in 2009 for identifying of potential bottlenecks in Europe's gas transmission pipeline system. Three awardees were selected each quarter from 500 staff. *(2008-9)*

PROFESSIONAL SERVICE & DEVELOPMENT

- Ad-hoc reviewer for the journal *Transportation Research Part C: Emerging Technologies*
- Chair, USAEE Case Competition. Leading a team to design and write the case, liaise with sponsors, publicize the competition to ensure wide participation, and to organize judging of entries *(2016–)*
- Summer course on environmental law at Vermont Law School, South Royalton, VT *(2013)*
- Internal courses at Royal Dutch Shell on project economics and natural gas *(2008-9)*

SELECTED PUBLICATIONS

Vaishnav, P., Horner, N., Azevedo, I.L., 2017. "Location-specific Costs and Benefits of Residential Solar Photovoltaics" Accepted at *Environmental Research Letters*. Available: http://tinyurl.com/solar-pv-cba

Morgan, M.G., **Vaishnav, P.**, Dowlatabadi, H., Azevedo, I.L., 2017. "Rethinking the Social Cost of Carbon" *Issues in Science and Technology*, Summer 33(4): 43-50.

Bonnín Roca, J., Fuchs, E.R.H., **Vaishnav, P.**, Morgan, M.G., Mendonça, J., 2017. "When Risks Cannot Be Seen: Regulating Uncertainty in Emerging Technologies" *Research Policy* 46, no. 7: 1215–33.

Bonnín Roca, J., **Vaishnav, P.**, Mendonça, J., Morgan, M.G., 2017. "Getting Past the Hype About 3-D Printing" *MIT Sloan Management Review* 58, 57–62.

Vaishnav, P., 2016. "Design of a Global Market Based Measure · ICAO's Market Based Mechanism: Keep It Simple." *Carbon & Climate Law Review* 10, 120–126.

Vaishnav, P., 2016. "Plug the Loopholes in ICAO's Plan." *Aviation Week & Space Technology* 178, 66.

Bonnín Roca, J., **Vaishnav, P.**, Fuchs, E.R.H., Morgan, M.G., 2016, "Policy needed for additive manufacturing." *Nature Materials* 15, 815–818. Available: http://rdcu.be/jo9n

Vaishnav, P., Petsonk, A., Avila, R.A.G., Morgan, M.G., Fischbeck, P.S., 2016, "Analysis of a proposed mechanism for carbon-neutral growth in international aviation." *Transportation Research Part D: Transport and Environment, Special Issue on Climate Change and Transport* 45, 126–138

Vaishnav, P., Fischbeck, P.S., Morgan, M.G., Corbett, J.J., 2016, "Shore Power for Vessels Calling at U.S. Ports: Benefits and Costs." *Environmental Science & Technology* 50, no. 3 (February 2, 2016): 1102–10

Vaishnav P., 2014. "Greenhouse gas emissions from international transport." *Issues in Science and Technology*, Winter 30(2): 25-28. Available: http://issues.org/30-2/parth/

Vaishnav, P., 2013. "Costs and Benefits of Reducing Fuel Burn and Emissions from Taxiing Aircraft." *Transportation Research Record: Journal of the Transportation Research Board* 2400 (December): 65–77

Vaishnav, P., 2011. "Innovation for Emerging Markets: Novel Business Models to Supply Energy to the Rural Poor." Dissertation (M.Phil.), University of Cambridge. Available: http://bit.ly/2uEV9LL