# Kartik Chandran, Ph.D.

Earth and Environmental Engineering, Columbia University, New York, NY 10027 Phone: (212) 854 9027; Fax: (212) 854 7081; E-mail: <u>kc2288@columbia.edu</u> URL: <u>http://www.columbia.edu/~kc2288</u>

#### (a) **Professional Preparation:**

| Indian Institute of Technology, Roorkee | Chemical Engineering      | B.S.,     | 1991-1995 |
|---|---------------------------|-----------|-----------|
| University of Connecticut, Storrs, CT   | Environmental Engineering | Ph.D.,    | 1995-1999 |
| University of Connecticut, Storrs, CT   | Environmental Engineering | Postdoc., | 1999-2001 |
| Virginia Tech, Blacksburg, VA           | Environmental Engineering | Postdoc., | 2004-2005 |

### (b) Appointments:

| 2016 -    | Professor, Columbia University  |
|-----------|---|
| 2011-2015 | Associate Professor, Columbia University                                      |
| 2005-2010 | Assistant Professor, Columbia University                                      |
| 2004-2005 | Research Associate, Virginia Tech, Blacksburg, VA                             |
| 2001-2004 | Director of Research, Senior Technical Specialist, Metcalf and Eddy, New York |
| 1999-2001 | Postdoctoral Fellow, University of Connecticut, Storrs                        |
| 1995-1999 | Research Assistant, University of Connecticut, Storrs                         |
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(c) Selected Publications: (Student and Post-Doctoral advisees <u>underlined</u>)

- 1. <u>Lee, J.; Jeong, S.; Long, C.</u>; **Chandran, K.\***, Size dependent impacts of a model microplastic on nitrification induced by interaction with nitrifying bacteria. *J. Hazard. Mater.* **2022**, *424*, 127363.
- Podmirseg, S. M., Gómez-Brandón, M., Muik, M., Stres, B., Hell, M., Pümpel, T., Murthy, S., Chandran, K., Park, H., Insam, H., Wett, B. (2022) Microbial response on the first full-scale DEMON<sup>®</sup> biomass transfer for mainstream deammonification Water Research 218, 118517
- Agrawal, S., Weissbrodt, D. G., <u>Annavajhala, M.</u>, Jensen, M. M., Arroyo, J. M. C., Wells, G., **Chandran, K.**, Vlaeminck, S. E., Terada, A., Smets, B. F. and S. Lackner (2021). Time to act–assessing variations in qPCR analyses in biological nitrogen removal with examples from partial nitritation/anammox systems. Water Research 190, 116604
- <u>Kosgey, K.</u>, Chandran, K., Gokal, J., Kiambi, S. L., Bux, F and S. Kumari (2020). Critical Analysis of Biomass Retention Strategies in Mainstream and Sidestream ANAMMOX-Mediated Nitrogen Removal Systems. Environmental Science and Technology 55(1) 9-24.
- <u>Annavajhala, M. K.</u>; Kapoor, V.; Santo-Domingo, J.; K. Chandran\*. 2018. Comammox Functionality Identified in Diverse Engineered Biological Wastewater Treatment Systems. *Environmental Science & Technology Letters* 5 (2), pp 110–116.
- 6. <u>Lu, H.</u>, **K. Chandran\***, H. D. Stensel, **2014** "Microbial ecology of denitrification in biological wastewater treatment", *Water Research*, 64, 237-254

## (d) Publications, Other Significant: (Student and Post-Doctoral advisees underlined)

- 1. <u>Park, M-R.</u>, <u>Park, H.</u>, **K. Chandran\*. 2017**. Molecular and kinetic characterization of planktonic *Nitrospira* spp. selectively enriched from activated sludge. *Environmental Science and Technology* 51(5): 2720-2728.
- Park, H., Brotto, A. C., van Loosdrecht, M. C. M., K. Chandran\*. 2017. Discovery and metagenomic analysis of an anammox bacterial enrichment related to *Candidatus* "Brocadia caroliniensis" in a full-scale glycerol-fed nitritation-denitritation separate centrate treatment process. *Water Research* 11: 265-273.
- 3. <u>Park, H., S. Sundar, Y. Ma</u> and **K. Chandran\***, **2015** "Differentiation in the microbial ecology and activity of suspended and attached bacteria in a nitritation anammox process", *Biotechnology and Bioengineering*, 112(2), 272-279
- 4. <u>Ma, Y., S. Sundar, H. Park</u>, and **K. Chandran<sup>\*</sup>**, **2015**, "The effect of inorganic carbon on microbial interactions in a biofilm nitritation-anammox process", *Water Research*, 70, pp 246-254
- Regmi, P., Bunce, R., Miller, M.W., <u>Park, H.</u>, Chandran, K., Wett, B., Murthy, S. and Bott, C.B. 2015 Ammonia-based intermittent aeration control optimized for efficient nitrogen removal. *Biotechnol. Bioeng.* 112(10), 2060-2067.

## (e) Examples of synergistic activities

- 1. Past Editor, Chemical Engineering Journal (Elsevier); Associate Editor, Frontiers in Microbiology (Nature Publishing Group); Editorial Board, Microbial Biotechnology; Advisory Board, Environmental Science: Water Research & Technology; Editor, Frontiers of Environmental Science and Engineering
- 2. Selected leadership roles in professional societies include the following
  - a. WEF Board of Trustees (2010-2013)
  - b. Past Chair, WEF Research sub-committee, (2010-2012, 2016-2019)
  - c. Chair Internet Resources Committee, AEESP, (2009-2010)
- 3. Have hosted several high-school students for their Intel Science Talent Search projects and six high-school teachers (NSF STEP High School Teacher Training Program) in my laboratories to work on Environmental Biotechnology and Sustainability Projects (2006-2022).
- 4. Contributor to the Manual of Practice (MOP) on Nutrient Removal. WEF Manual of Practice No. 8, Publisher: Water Environment Federation, Alexandria, VA.