Dr. DANIEL FARCAS, CIH, CSP, CHMM

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EDUCATION

2011-2015: **Ph.D.** in Human and Community Development, West Virginia University.

2008-2010: **M.S.** in Forestry from Davis College, West Virginia University.

2004-2006: **M.A.** in System's Ecology and Sustainable Development, Bucharest University.

1999-2003: **B.S.** in Chemistry, Bucharest University.

BOARD CERTIFICATIONS

Certified Industrial Hygienist (**CIH**) CP #11723

Certified Safety Professional (**CSP**) #36048

Certified Hazardous Materials Manager (**CHMM**) #24712

Firestop Inspector (Premier Certificate Holder) firestop.org

EMPLOYMENT

2018- Present: Project Manager / Hillis-Carnes Capitol Services, PLLC

As an experienced Industrial Hygienist and Safety Professional, my focus is to anticipate, recognize, evaluate, prevention and control conditions that may result in occupational illness, impaired health, or significant discomfort in the workplace. During the Risk Assessments and Exposure Monitoring process, I visually inspect the premises and personnel work areas to identify and evaluate hazardous work operations and conditions and to recommend corrective procedures where the potential for injury exists. I also serve as a subject matter expert on occupational and environmental and draft policy statements for our clients based on the National Environmental Policy Act (NEPA) regulations while developing and conducting compliance training for employees and contractors.

My industrial, commercial and residential clients receive the best technical, environmental and regulatory assistance and guidance through compliance inspections, audits and evaluations. My aim is to reach the highest standard of what defines a healthy work environment by testing the indoor air quality levels and performing assessments if necessary, for nuisances like noise, silica, mold, asbestos, volatile organic compounds, coal dust, and ammonia. As an Environment, Health and Safety Specialist, I ensure our beneficiaries comply with applicable federal and state standards, including OSHA, EPA, NFPA, and ANSI.

My HAZMAT experience includes, but is not limited to lead, PCBs, hazardous materials use, handling and storage, hazardous energy control (Lock Out / Tag Out), fall prevention and protection, underground storage tank (UST) and leaking underground tanks (LUST) removal and disposal, ergonomics and electrical safety and arc flash protection (NFPA 70E).

2014- 2018: Research Chemist / National Institute for Occupational Safety and Health (NIOSH)

05/01/2016 to 10/31/2018: Allergy and Clinical Immunology Branch

My occupational health and safety research focus was to evaluate personal protective equipment (PPE) exposure to biological pathogens as methicillin-resistant *S. aureus* (MRSA), *P. Aeruginosa, K. Pneumonia* and *B. Subtilis*, by using standard microbial techniques and quantitative real-time polymerase chain reaction (qPCR) to assess viable and non-viable microbial cells washed from the fabrics. I also employed scanning electron microscopy (SEM) and transmission electron microscopy (TEM) to observe the bacterial attachment to fabrics and characterize the stages of biofilm formation following ASTM E2274, E1054 protocols, and BS EN 16616 method.

05/01/2014 - 04/30/2016: Exposure Assessment Branch

I continuously improve and drive exposure and assessments research in the fields of silica, carbon nanotubes, and asbestos while identifying potential occupationally exposed populations, updating analytical methods for field monitoring and lab analysis, and performing on-site field sampling efforts to characterize workers exposure. The result of my research has been published in the peer-review journals, as detailed below.

2010-2013: Environmental Scientist / Cira and Associates Consulting, LLC

I completed hundreds of indoor air quality investigations and remediation projects that mitigated the impacts of microorganisms, mineral fibers, radon, lead and volatile organics in residential and occupational environments. I collected air quality real-time data, prepared samples for laboratory analysis, and wrote reports documenting results while recommending technical solutions for mold removal and asbestos abatement. My soil characterization and remediation projects (including Phase I, II and III) focused on leakage of petroleum hydrocarbons, chlorinated solvents, heavy metals and polychlorinated biphenyls from above and underground storage tanks.

2008-2010: Graduate Research and Teaching Assistant / Davis College, West Virginia University (WVU).

As a graduate assistant, I taught, tutored, and graded students' tests for WVU General Biology and Life Science Laboratories (BIOL 103 & 101). I was also a frequent guest lecturer for botany, biology, zoology, cellular and molecular biology classes. My research focus was on forest soil chemistry nitrogen cycling and sequestration before the invasion of hemlock woolly adelgid (*Adelges tsugae*) of eastern hemlock (*Tsuga Canadensis*) stands. My study involved soil sample collection and GPS mapping, sample analysis through flow injection analysis and ion chromatography and development of spatial prediction maps using ArcGIS to acquire a spatial perspective of the soil nitrogen biogeochemical cycling in the forested ecosystems.

The results of my research are presented in the thesis published in June 2010 and entitled "Site characterization of hemlock stands at Allegheny National Forest". My thesis was cited in January 2017 by the Canadian Journal of Forest Research in the "Thinning effects on foliar elements in eastern hemlock: implications for managing the spread of the hemlock woolly adelgid" article.

JOURNALS

1. Farcas D, Blachere F, Kashon ML, Sbarra D, Schwegler-Berry D, Stull JO, Noti JD. [2019] Survival of Staphylococcus aureus on the outer shell of fire fighter turnout gear after sanitation in a commercial washer/extractor. Journal of Occupational Medicine and Toxicology 14(10).

2. Farcas D, Harper M, Januch JW, Jacobs TA, Sarkisian K, Stetler LD, Schwegler-Berry D [2017]. Evaluation of Fluidized Bed Asbestos Segregator to determine erionite in soil. Environ Earth Sci 76(126):1-15.

3. Kang J, Erdely A, Afshari A, Casuccio G, Bunker K, Lersch T, Dahm M, Farcas D, Cena L [2017]. Generation and Characterization of Aerosols Released from Sanding Composite Nanomaterials Containing Carbon Nanotubes. NanoImpact 5:41-50.

4. Soo J, Lee T, Chisholm W, Farcas D, Schwegler-Berry D, Harper M [2016]. Treated and Untreated Rock Dust: Quartz Content and Physical Characterization. J Occup Environ Hyg 13(11):D201-D207.

5. Farcas D, Lee T, Chisholm W, Soo J, Harper M [2016]. Replacement of filters for respirable quartz measurement in coal mine dust by Infrared Spectroscopy. J Occup Environ Hyg 13(2):D16-D2.

BOOKS

1.Farcas D, [2019] CIH EXAM Equations simply explained and with examples, Publisher: APub, ISBN: 978-1700473417.

2.Farcas D, [2019] CSP EXAM Equations simply explained and with examples, Publisher: APub, ISBN: 978-1672380959.

PRESENTATIONS

1. Farcas D, Lee T, Chisholm WP, Soo J, Harper M [2015]. Possible replacements for DM450 filters in FTIR analysis of silica in coal mine dust abstract. AIHce 2015 Conf. Proceedings:69-SR-128-02.

2. Soo J, Lee T, Chisholm W, Farcas D, Schwegler-Berry D, Harper M [2015]. Treated and Untreated Rock Dusts: Silica Content and Physical Characterization. abstract, American Industrial Hygiene Conference & Exposition, Baltimore, MD.

3. Cena L, Kang J, Farcas D, Erdely A [2015]. A Standardized Approach for the Generation and Characterization of Aerosols Released from Composite Nanomaterials in Industrial Scenarios. abstract, AIHce 2016, Baltimore, Maryland, May 21.

4. Bishop L, Cena L, Kang J, Farcas D, Afshari A, Kodali V, Dahm M, Schubauer-Berigan M, Schwegler-Berry D, Eye T, Battelli L, Casuccio G, Bunker K, Erdely A. [2016] Characterizing the particulate aerosol generated from sanding MWCNT-enabled composites and the impact on in vivo toxicity. abstract, Allegheny-Erie Society of Toxicology Regional Meeting, Morgantown, West Virginia, May 18-19.

5. D. Farcas, F. Blachere, M. L. Kashon, D. Sbarra, D. Schwegler-Berry, J. D. Noti. [2018] Survival of *Staphylococcus aureus* and *Pseudomonas aeruginosa* Biofilms on the Outer Shell of Firefighter Turnout Gear after Sanitation in a Commercial Washing Machine, 8th American Society for Microbiology (ASM) Conference on Biofilms, Washington, DC, October 10.

6. D. Farcas, F. Blachere, M. L. Kashon, D. Sbarra, D. Schwegler-Berry, J. D. Noti. [2018] Survival of *Staphylococcus aureus* and *Pseudomonas aeruginosa* Biofilms on the Outer Shell of Firefighter Turnout Gear after Sanitation in a Commercial Washing Machine, 2019 American Industrial Hygiene Conference and Expo (AIHce EXP), Minneapolis, MN, May 2019.

HONORS & AWARDS

1. Outstanding Scholarship, Research, and Participation from West Virginia Association of Graduate Schools, Apr 2015 at Shepherd University, WV.

2. Honorary citizenship of Morgantown by Mayor Marti Shamberger and President Gordon Gee on May 12, 2016, at the WVU Erickson Alumni Center.

3. Fellows SIG Best Student Poster form the American Industrial Hygienist Association (AIHA) at the American Industrial Hygiene Conference and Expo (AIHce EXP), May 2019.

4. Protective Clothing and Equipment Committee Best Student Poster form the American Industrial Hygienist Association (AIHA) at the American Industrial Hygiene Conference and Expo (AIHce EXP), May 2019.