JACQUELINE R.M.A. MAASCH

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EDUCATION

2019 – Present
Master of Computer & Information Technology
University of Pennsylvania, Philadelphia, PA, USA
Department of Computer & Information Science | School of Engineering & Applied Science
GPA 3.95/4.0 — Interdisciplinary Innovation Fellow

2016
Bachelor of Arts
Smith College, Northampton, MA, USA
Major Anthropology, Minor Environmental Science & Policy
GPA 3.97/4.0 — Summa Cum Laude — Phi Beta Kappa — Sigma Xi

PROFICIENCIES & PROJECTS

Advanced Java – R – LaTeX | *Intermediate* C | *Actively Learning* Python – JavaScript – Bash
R projects **sanzo** CRAN package – Rectal swabs for *Giardia* D_x – *Giardia* epi in rural Niger

Coursework (G) Algorithms; Data Structures; Software Development; Discrete Math; Computer Systems Programming; Hardware. *(UG)* Human Genetics; Primate Evolution; Molecular Biosciences; Statistics.

RESEARCH EXPERIENCE

05.2020 – Present
Computational Researcher
School of Engineering & Applied Science | Perelman School of Medicine
University of Pennsylvania, Philadelphia, PA, USA
PI: Dr. César de la Fuente, Dr. Jorge Henao-Mejia. Jointly investigating the role of peptides in innate immunity, the microbiome, infectious disease, and metabolism.

10.2017 – 07.2019
Research Associate & Project Lead
Soil-Transmitted Helminth Research Group
Smith College Department of Biological Sciences, Northampton, MA
PI: Dr. Steven A. Williams. Gates Foundation reference laboratory investigating the molecular biology and diagnosis of agents causing neglected tropical diseases (NTDs).

11.2016 – 05.2017
Next-Generation Sequencing Technician
Biology Research & Development Team
PathoQuest, Paris, France
PI: Dr. Éric Cabannes. Institut Pasteur spin-out developing blood-based metagenomic NGS assays for the clinical diagnosis of viral and bacterial pathogens.

02.2016 – 09.2017 | **Molecular Diagnostic Technician**
Massachusetts General Hospital Human Genetics Unit
Laboratory for Molecular Medicine, Cambridge, MA, USA
PI: Dr. Heidi Rehm. Harvard-affiliated CLIA laboratory providing clinical diagnostics for genetic diseases and personalized medicine research support for the Broad Institute.

06.2014 – 12.2015 | **Undergraduate Research Assistant**
Cornell University Department of Plant Breeding & Genetics
Collaborative Crop Research Program, Ithaca, NY, USA
PI: Dr. Rebecca Nelson. Gates and McKnight Foundation funded laboratory investigating plant pathology, genomics-assisted crop breeding, soil science, and agroecology.

HONORS & GRANTS

2020 GAPSA-Provost Fellowship for Interdisciplinary Innovation, University of Pennsylvania
2016 Summa Cum Laude, Smith College Class of 2016
2015 Phi Beta Kappa, Junior Inductee, Zeta of Massachusetts Chapter
2014 Schulz Foundation Travel Grant for Student Research, Biological Sciences
2014 Margaret A. Walsh Grantham Summer Research Fellowship, Biological Sciences

PUBLICATIONS & PRESENTATIONS

2020 **Maasch J**, Arzika AM, Cook C, Lebas E, Pilotte N, Grant JR, Williams SA, Keenan JD, Lietman TM, Aiemjoy K. Rectal swabs as an alternative sample collection method to bulk stool for the real-time PCR detection of *Giardia duodenalis*. Accepted May 2020 – in press: *American Journal of Tropical Medicine & Hygiene*.

2020 Benjamin-Chung J, Pilotte N, Ercumen A, Grant JR, **Maasch J**, Gonzalez AM, Ester AC, Arnold BF, Rahman M, Haque R, Hubbard AE, Luby SP, Williams S, Colford JM. Comparison of multi-parallel qPCR and double-slide Kato-Katz for detection of soil-transmitted helminth infection among children in rural Bangladesh. *PLOS Neglected Tropical Diseases 14*(14): e0008087.

2020 Hasegawa M, Pilotte N, Kikuchi M, Means AR, Papaiakovou M, Gonzalez AM, **Maasch J**, Ikuno H, Sunahara T, Ásbjörnsdóttir K, Walson JL, et al. What does soil-transmitted helminth elimination look like? Results from a targeted molecular detection survey in Japan. *Parasites and Vectors 13*(6).

2019 Pilotte N, **Maasch J**, Easton AV, Dahlstrom E, Nutman TB, Williams SA. Targeting a highly repeated embryonic DNA sequence for improved real-time PCR-based detection of *Ascaris* infection in human stool. *PLOS Neglected Tropical Diseases 13*(7): e0007593.

2019 **Maasch J**, Arzika AM, Cook C, Lebas E, Pilotte N, Grant JR, Williams SA, Keenan JD, Lietman TM, Aiemjoy K (presenter). Rectal swabs for molecular detection of *Giardia duodenalis. Proceedings from the Annual Meeting of the American Society of Tropical Medicine and Hygiene.* National Harbor, MD.

2018 Pilotte N (presenter), **Maasch J**, Easton AV, Dahlstrom E, Nutman TB, Williams SA. Improved molecular detection of *Ascaris lumbricoides* utilizing an embryonic sequence for assay design. *Proceedings from the Annual Meeting of the American Society of Tropical Medicine and Hygiene.* New Orleans, LA.