Anna E. Nesbitt, Ph.D.
Curriculum Vitae

1202 Newbury Rd.
Champaign, IL 61832
+1 (217) 418.1736
aenesbitt@gmail.com
www.aenesbitt.com

Work Experience

Jan. 2013 – Present

Computer Science Teacher
Campus Middle School for Girls
Champaign, IL

Curriculum Development, Game Design

Created and led an interdisciplinary tech curriculum blending coding (Python, JavaScript/HTML, Java), design thinking, and creative production ranging from game design (Escoria/Godot) to yearbook publishing.

Aug. 2017 – Aug. 2020

Teaching Assistant Professor
Atmospheric Sciences, University of Illinois
University of Illinois, *Champaign, IL*

Curriculum Development, Online Course Development, Supervision

Designed and taught immersive, discovery-based courses in the climate and atmospheric sciences. Overhauled and revitalized a 200-student Climate Science lecture. Created advanced labs, integrated coding and visualization with advanced composition to help students see data as a story.

Jan. 2012 – Aug. 2017

Program Coordinator
School of Earth, Society & Environment
University of Illinois, *Champaign, IL*

Advising, Course Development Web Development, Budgeting

Designed and taught interdisciplinary courses in climate, computation, and sustainability, including Global, Climate Science and Earth Systems Modeling, Environmental Issues Today, and a Sustainability Expedition to Costa Rica while advising ESES majors, organized a research symposium, etc.

Sept. 2009 – Dec. 2011

NIH Postdoctoral Research Fellow
Department of Chemistry
University of Illinois, *Champaign, IL*

NMR Techniques, Pattern-Matching, Method Development

Engineered an algorithm to match experimental and predicted NMR spectra, accelerating chemical-shift mapping in solid-state systems. Simulated DsbB dynamics in lipid membranes and prepared ^{13}C and ^{15}N N-labeled samples of DsbA, DsbB, and ubiquitin for SSNMR analysis.

May 2001 – May 2002

NSF Pre-doctoral Fellow
Weill Cornell Graduate School of Medical Sciences
Cornell University, *New York, NY*

Computational Biology and Proteomics, Simulation, Protein Modeling

With Dr. Diana Murray, modeled phosphoinositide enzymes (PTEN, PLC, PKC) using Brownian-dynamics and electrostatic simulations. Revealed that PTEN uses fleeting electrostatic attractions to shuttle between the nucleus and membrane, a key dynamic, supporting its tumor-suppressor power.

May 2001 – May 2002

Graduate Research Assistant
Applied Chemical Technologies (C-ACT)
Los Alamos National Labs, *Los Alamos, NM*

NMR Techniques, Green Chemistry

Explored the frontier of green chemistry through supercritical CO_2 using it for precision cleaning, liquid NMR of micellar systems, and sustainable silicon wafer processing, and investigated its mineralization as a route to permanent carbon capture and storage.

Education

2003 – 2009	Ph.D. Cornell University Biophysics *Ithaca & New York, NY*
1997 – 2002	B.S. University of Utah Chemistry, Physics Minor *Salt Lake City, UT*

Technical Skills

Proficient	Python, MATLAB, LaTeX, HTML/CSS, JavaScript, Website Dev., Illustrator, Photoshop, Microsoft Office (including Visual Basic)
Intermediate	gcc/c++, fortran, Java, R

Communication Skills

English	Native speaker
Spanish	Oral: intermediate – Written: intermediate
Portuguese	Oral: developing – Written: developing

Awards

2025 *Passing Through* — Second Rounder
Austin Film Festival

2025 *Skin Hunger* — Second Rounder
Austin Film Festival

2025 *Skin Hunger* — Third Place
The Women Talking to Women About Anything Other Than a Man Festival

2025 *Laila's Last Day* — Finalist
The Women Talking to Women About Anything Other Than a Man Festival

2023 *The Fortress of Clonakility* — Semifinalist
Austin Film Festival

2021 *Sextopussy Saves the World* — Semifinalist
Scriptapalooza

2019 LAS List of Teachers Ranked As Excellent, ESE/ATMS 421
University of Illinois

2018 LAS List of Teachers Ranked As Excellent, ESE/ATMS 311, ATMS 305
University of Illinois

2017 LAS List of Teachers Ranked As Excellent, ATMS 305
University of Illinois

Playwriting

Tragedy

Coherence — Proposed Work

When three quantum computers deployed in deep space unexpectedly fuse into a single superconsciousness that collapses causality, two strangers at a scientific conference — and their future selves — must confront their actions and paths abandoned before the universe unravels around them.

Tragedy

Neural Nets

In progress. When a neuroscientist mapping the human connectome learns her father is dying, she risks everything to bring him back, blurring the boundary between devotion and discovery — between love and the fragile chemistry that makes us human.

Tragicomedy

Passing Through

A family in limbo reconstructs their dying matriarch through layered recollections, revealing how curated memory shapes the self and how love endures as a restless negotiation between erasure and discovery.

Tragicomedy

Skin Hunger

When a dying woman recruits her oblivious best friend for a journey through their shared past, truths emerge that strip away old defenses, revealing a space of deep intimacy where each truly sees the other. — Written with Beth Hogan

Screenwriting

Features

Western

Deserted

In progress. *En route* to visit her dying father, a young woman is betrayed by her bodyguard and stranded in the desert west of the Santa Fe Trail. Guided by her mother's ghost, she must summon the stories of her childhood to find her way home.

Bro Comedy

Man Up ♂

Four university men — a professor, a marketer, an IT guy, and a facilities worker — hit the Rockies to "find the essence of manhood," but blisters, bears, and bro-logic threaten to kill them before they realize manning up means shrinking . . . their egos.

Tragedy

The Space Between Fences

Trapped between loyalty and longing, a neurodivergent girl flees into fantasy to survive her mother's neglect —until a figure from her traumatic past returns, setting off a chain of betrayals she can no longer escape.

Drama

Love & Moonlight in Clonakilty Bay

Under the shadow of her husband's arrest, a resilient farmer forms an unlikely friendship with a spirited Traveller girl. But when a US Bomber — with a stowaway monkey onboard — falls from the sky, the two women must choose between tradition and forbidden love in a town punch drunk on celebration. — Written with Jaclyn Stevens

Comedy

Sextopusy Saves the Day

A filmmaker signs on to document an eccentric all-women's band — but as the project veers off the rails, he'll have to go full meta just to make it out alive.

Television

Prestige Dramedy

Bad Climate

A young climate scientist, stranded as funding collapses around her, faces an impossible task as the boundaries between science and myth dissolve in a storm of ego, grief, and her need to save the planet. — Written with Carina Hinojosa

Dramedy/Dark Comedy

Hospice @Home

A recently divorced hospice nurse returns to her hometown, where she learns to let go of a troubled past as she helps others face their final goodbyes.

Shorts

Tragicomedy

Skin Hunger

Based on the play. At the end of a cross-country road trip, three women find the courage to face uncomfortable truths together.

Surreal Satire

Laila's Last Day

Forced to resign from a corporate café, a young girl works through a series of surreal obstacles that make her last day on the job unforgettable.

Dark Fabulism

A Sticky Shroud with No Pockets

When a young boy becomes a mediator for parents, he makes a devastating wish.

Surreal Psychological Thriller

The Crystal Egress

When a young woman agrees to help an older man find his wife, she catches a disturbing glimpse into her own future.

Dark Fabulism

One Night Hands

When the proprietor of a curiosities shop welcomes a surreal customer, she discovers he's all hands — literally.

Prose

Short Stories

Slipstream

Arco Satiris

Sci-Fi Surrealism

In Pursuit of Relish

Dream Logic Fiction

Bailing O\I

Dark Fabulism

A Sticky Shroud without Pockets

Surreal Psychological Thriller

The Crystal Egress

Fantasy

Outside Lands

Fantasy

A Foamy Flagship

Dark Fabulism

One Night Hands

Novels

Historical Fabulism

Alexa, Who's Socrates?

In progress. When Socrates' mother, Phaenarete, unexpectedly gives birth to twins, history is overwritten . . . until the drive fails.

Publications

Courtney, J.M., Ye, Q., **Nesbitt, A.E.**, Tang, M., Tuttle, M.D., Watt, E.D., Nuzzio, K.M., Sperling, L.J., Comellas, G., Peterson, J.R., Morrissey, J.H., Rienstra, C.M. (2015). Experimental Protein Structure Verification by Scoring with a Single, Unassigned NMR Spectrum. *Structure*, 23(10), 1958-66.

Sperling, L.J., Tang, M., Berthold, D.A., **Nesbitt, A.E.**, Gennis, R.B., Rienstra, C.M. (2013). Solid-state NMR study of a 41 kDa membrane protein complex DsbA/DsbB. *J. of Phys. Chem. B*, 117(20), 6052-60.

Tang, M., **Nesbitt, A.E.**, Sperling, L.J., Berthold, D.A., Schwieters, C.D., Gennis, R.B., Rienstra, C.M. (2013). Structure of the disulfide bond generating membrane protein DsbB in the lipid bilayer. *J. of Mol. Biol.*, 425(10), 1670-82.

Brothers, M.C., **Nesbitt, A.E.**, Hallock, M.J., Rupasinghe, S.G., Tang, M., Harris, J., Baudry, J., Schuler, M.A., Rienstra, C.M. (2012). VITAL NMR: using chemical shift derived secondary structure information for a limited set of amino acids to assess homology model accuracy. *J. of Biomol. NMR*, 52(1), 41-56.

Tang, M., Sperling, L.J., Berthold, D.A., Schwieters, C.D., **Nesbitt, A.E.**, Nieuwkoop, A.J., Gennis, R.B., Rienstra, C.M. (2011). High-resolution membrane protein structure by joint calculations with solid-state NMR and X-ray experimental data. *J. of Bio. NMR*, 51(3), 227-33.

Tang, M., Sperling, L.J., Berthold, D.A., **Nesbitt, A.E.**, Gennis, R.B., Rienstra, C.M. (2011). Solid-state NMR study of the charge-transfer complex between ubiquinone-8 and disulfide bond generating membrane protein DsbB. *J. of the Am. Chem. Soc.*, 133(12), 4359-66.

Nomikos, M., **Mulgrew-Nesbitt, A.**, Pallavi, P., Mihalyne, G., Zaitseva, I., Swann, K., Lai, F.A., Murray, D., McLaughlin, S. (2007). Binding of phosphoinositide-specific phospholipase C-zeta (PLC-zeta) to phospholipid membranes: potential role of an unstructured cluster of basic residues. *J. of Biol. Chem.*, 282(22), 16644-53.

Mulgrew-Nesbitt, A., Diraviyam, K., Wang, J., Singh, S., Murray, P., Li, Z., Rogers, L., Mirkovic, N., Murray, D. (2006). The role of electrostatics in protein-membrane interactions. *Biochim. Biophys. Acta*, 1761(8), 812-26.

Harper, J.K., Facelli, J.C., Barich, D.H., McGeorge, G., **Mulgrew, A.E.**, Grant, D.M. (2002). 13C NMR investigation of solid-state polymorphism in 10-deacetyl baccatin III. *J. of the Am. Chem. Soc.*, 124(35), 10589-95.

Harper, J.K., **Mulgrew, A.E.**, Li, J.Y., Barich, D.H., Strobel, G.A., Grant, D.M. (2001). Characterization of stereochemistry and molecular conformation using solid-state NMR tensors. *J. of the Am. Chem. Soc.*, 123(40), 9837-42.

Harper, J.K., Dalley, N.K., **Mulgrew, A.E.**, West, F.G., Grant, D.M. (2001). 10-Deacetyl baccatin III dimethyl sulfoxide disolvate. *Acta Cryst. C*, 57(1),64-5.