

# AMANDA LANG

Senior Nuclear Engineer

Fuel Reload Team Lead

Core Designer

## PROFILE

Lang is a practicing nuclear engineer for Duke Energy in Charlotte, NC. She predominately performs core design and fuel reload calculations for Oconee Nuclear Station (a PWR) but has recently supported Brunswick Nuclear Plant (a BWR). Lang led a multidisciplinary team of engineers through three reactor core fuel cycle reloads. She is Vice Chair of the Reactor Physics Division of the American Nuclear Society. She is the Public Information Officer of [North American Young Generation in Nuclear](#).

## EXPERIENCE

### Duke Energy Nuclear Fuels Engineer

AUGUST 2013 - PRESENT

Supported core reload products while steadily progressing from Engineer I, II, III to senior engineer. Incorporated Crystal River fuel within a cycle design. Performed fuel scoping study to incorporate aspects of accident tolerant fuel. Evaluated core design margins including crud induced power shift (CIPS) and crud induced localized corrosion (CILC). Performed cause evaluations. Facilitated Reactor Engineering Working Group. Led a project to improve the in-house scoping program NextScope. Received James B. Duke Award in 2018.

### UW-Madison Fuel & Material Lab

2009-2013

As research assistant, modeled the use of novel material process in sodium fast reactor fuel design using MCNP5/MCNPX. Received Innovations in Fuel Cycle Research Award 2012.

### Exelon Nuclear Intern

2011

Developed annual fuel cycle designs for a boiling water reactor. Awarded National Academy for Nuclear Training Scholarship.

### Idaho National Laboratory Intern

2010

Used Visual Basic to develop program to estimate radiation dose from samples irradiated in the Advanced Test Reactor. Awarded Center for Advanced Energy Studies Scholarship.

## CONTACT

☎ 608-370-2648

✉ [Amanda.Lang@Duke-Energy.com](mailto:Amanda.Lang@Duke-Energy.com)

## SKILLS

- Neutronics calculations with CASMO/SIMULATE
- Fuel reload products including safety analysis physics parameters, physics test manuals, pattern scoping, final fuel cycle designs & core operating limits reports
- Calculation, Design Verification, Fuel Reload Qualified with an INPO accredited nuclear training program
- Systems training
- Basic MICROBURN proficiency
- Basic Python proficiency

## CREDENTIALS

### University of Wisconsin-Madison

MAY 2013

B.S./M.S. Nuclear Engineering & Second Major in Mathematics

Completed reactor operations course & operated research reactor under supervision of licensed operator

### Professional Nuclear Engineer

DECEMBER 2016

North Carolina License Number: 44512

### Nuclear Energy Advocate

Co-authored two [children's books](#) on nuclear energy. Appeared on [The Energy Talk](#) podcast. Presented on [Capitol Hill](#).