



# Antonello Di Nunzio

Architect and Programmer

Viale cappuccini 56  
86035, Larino (CB)  
**plugin@antonellodinunzio.online**

[www.antonellodinunzio.online](http://www.antonellodinunzio.online)

His main expertise is intuition for potential business routes, problem solving mixed to programming and design processes.

## WORK EXPERIENCE

**Ladybug Tools LLC, 2993 Eskridge Rd Fairfax, VA, 22031-2269 — Freelance (Application Developer)**

JANUARY 2021 - ONGOING

Ladybug Tools is a collection of free computer applications that support environmental design and education.

**Freelance, Viale cappuccini 56, Larino (CB), Italy — Freelance architect and programmer**

AUGUST 2020 - ONGOING

Consulting, researching and developing innovative tools for a more environmentally-conscious architectural design. Design. Programming. LEED consulting with focus on daylight analysis (Italy, Mexico, USA)

He collaborates with: Sinergi Integrated Building Sciences, University of Arkansas Rome Center, Spatiomatics

**ENVI-Met GmbH, Kaninenberghöhe 2, 45136 Essen, Germany — Freelance (Software plugin designer)**

MAY 2018 - ONGOING

Developments: the first NetCDF exporter, the first official plugin for Grasshopper 3D (McNeel), the first plugin for Sketchup.

**SUMs architects, piazza dei Colori 22/A, 40138 Bologna, Bologna (BO), Italy — Computational environmental designer**

NOVEMBER 2019 - AUGUST 2020

Developments of innovative tools for architectural design. Urban microclimate analysis. Architectural competitions.

**Accenture, Piazzale dell'Industria 40, 00144 Rome, Italy — Senior programmer analyst**

APRIL 2017 - NOVEMBER 2020

He was involved in national and international projects for middle and big companies (HCM industry). Cloud technology.

## SKILLS

Problem solving.

Good communication.

Programming (Python, C#, Ruby, HTML5, Javascript, SQL)

Analysis and simulation: ENVI-Met, Grasshopper (Ladybug Tools)

## PUBLICATION

**Why Coupling MicroClimate and Buildings in Design for Climate Change,** Colloqui.AT.e 2021 – Ar.Tec. Conference. September 2021, EdicomEdizioni

**Energy and environmental analysis of urban environment: methodology and application,** IAQVEC 2019. October 2019, IOP Publishing

**Outdoor Comfort: the ENVI-BUG tool to evaluate PMV values point by point, 2015 - 2nd IBPSA-Italy conference** Bozen-Bolzano. February 2015, bu.press

## TEACHING

### **SOS, School of Sustainability**

JANUARY 2022 - JANUARY 2022

Providing the basic and advanced notions about outdoor thermal comfort and potential approach to simulate scenarios using Ladybug Tools and ENVI-Met.

### **Summer School 2021, Studio - University of Arkansas (UARK)**

MAY 2021 - JULY 2021

The course is a Design Seminar with a specific focus on advanced environmental analysis and simulation performed by using parametric design tools based on Rhino's integrated graphical algorithm editor Grasshopper and a series of specific plugins such as Ladybug Tools and OneClick LCA. LEED v.4.1 is used as a framework.

### **EP 2021, University of Arkansas (UARK)**

JANUARY 2021 - MAY 2021

Providing the basic and advanced notions of parametric modeling with Grasshopper to combine with Ladybug Tools and Climatestudio to improve design of indoor and outdoor spaces. LEED v4 protocol is used like a framework to guide the analysis. The challenge is applying those criteria to Roman ancient buildings.

### **IDS 2020, University of Arkansas Rome Center**

SEPTEMBER 2020 - NOVEMBER 2020

Sustainable design optimization using Ladybug Tools and ClimateStudio following the three-tier approach for efficient buildings. Basic info about Comfort and Energy Performance in buildings. Building Energy Modeling - passive and active strategies. Daylight analysis following LEED Daylight Credit (LEED v4).

### **The Order, University of Arkansas Rome Center**

SEPTEMBER 2017 - NOVEMBER 2017

Providing the basic notions of parametric modeling with Grasshopper. Some common tasks of parametric design and generative modeling were addressed through a series of exercises/examples during the course. Grasshopper as a parametric tool to create historical roman architecture.

### **PhD Summer School in Bologna: Design for Adaptation. Resilient Urban Communities, University of Bologna (UNIBO) + ASTER**

SEPTEMBER 2015 - SEPTEMBER 2015

Focus on climate change and resilience of different sites of Bologna which are part of a renovation plan of the Municipality of Bologna. ENVI-Met Numerical model as tool for planners and designers.

## LANGUAGE

Italian (mother tongue)

English (Working Professional)

## CONTACTS

[plugin@antonellodinunzio.com](mailto:plugin@antonellodinunzio.com)

[antonello@ladybug.com](mailto:antonello@ladybug.com)



## EDUCATION

### **Master's Degree in Architecture, UNIBO (Alma Mater Studiorum Università di Bologna)**

OCTOBER 2008 - MARCH 2015

Architectural design and project, environmental physics technique, parametric design, building restoration

### **High School graduation qualification, Technical Institute for Surveyors "Leonardo da Vinci"**

SEPTEMBER 2003 - JULY 2008

Artistic and technical draw, construction technologies, design, math.

## WORKSHOP

### **Urban microclimate analysis with Ladybug and Morpho, Politecnico di Milano (POLIMI)**

26 MARCH 2021 - 26 MARCH 2021

Live demo about Environmental analysis investigation and sustainable design strategies for urban design . He was invited as a speaker.

### **How to create a python plugin with Grasshopper, Performance Network**

01 OCTOBER 2020 - 01 OCTOBER 2020

A webinar organized by P/N - Performance Network. He showed how to solve an urban design task in Grasshopper.

### **The Youth Scholars Webinar on Urban Microclimate, ENVI-Met and Kunshan Piaoyou Building Technology CO., LTD**

31 MAY 2020 - 31 MAY 2020

The Youth Scholars Webinar on Urban Microclimate was held for the first time in November 2018 and adhered to the concept of equality, pragmatism and openness at the beginning. He was invited as a speaker.

### **ENVI\_MET Winter Release 2018 & Grasshopper plugin for ENVI-MET, promoted by McNeel and organized by Performance Network**

11 DECEMBER 2018 - 11 DECEMBER 2018

Live demo about Dragonfly ENVI-Met components to make the numerical modeling easier. He was invited as a speaker.

## **Rhino Days Rome, University of Arkansas Rome Center and McNeel Europe**

18 MARCH 2016 - 19 MARCH 2016

Two days of workshops where the most up-to-date tools for architects and designers will be presented in the field of 3D digital modeling, parametric design, energy and environmental analysis, digital manufacturing and BIM. He was invited as a speaker to talk about Ladybug Legacy.

## **REBUS (Renovation of public building and Urban Spaces), Emilia-Romagna**

22 APRIL 2015 - 24 APRIL 2015

projects financed by Republic-Med (REtrofitting PUBLIC spaces in Intelligent MEDiterranean Cities)

Role: Environment expert consultant.