

LIN Shengwei, Ervine

Dr. sc., MLA, BA(Arch)

National University of Singapore

School of Design and Environment

Department of Architecture

8 Architecture Drive

SDE4 #04-03

Singapore 117356

+65 97401381

akilse@nus.edu.sg | ervinelin@gmail.com

Professional Profile

Ervine is currently senior lecturer at the National University of Singapore's Department of Architecture where he teaches in the landscape architecture program. Prior to his current appointment, he was a senior researcher at the Centre for Urban Greenery and Ecology (National Parks Board, Singapore) after completing his doctorate with the ETH Zurich and his Master of Landscape Architecture with the National University of Singapore. His research revolves around the use of emerging technologies to push the boundaries of landscape architecture. This includes the use of reality capture technologies which can digitally reconstruct large scale landscapes and developing tools and techniques to work with this data for design and planning purposes.

He strongly believes that landscape architecture has a role to play in the building of cities and that the way forward is the integration with neighbouring disciplines through the digital domain in order to produce performative landscapes. In his current position, he has the opportunity to work alongside multiple stakeholders and governmental agencies in order to realise research projects which require such an interdisciplinary team. Prior to his return to academia, Ervine was a full time photographer with a passion for travel and landscape photography.

Education

May 2012 – Dec 2015	Swiss Federal Institute of Technology in Zurich Doctor of Sciences of ETH Zurich
May 2010 – May 2012	National University of Singapore Master of Landscape Architecture
Aug 2002 – June 2006	National University of Singapore Bachelor in Arts (Architecture)

Career History

June 2019 – Present	National University of Singapore Senior Lecturer
Jan 2016 – April 2019	National Parks Board Singapore Senior Researcher
May 2012 – Dec 2015	Singapore-ETH Centre for Global Environmental Sustainability PhD researcher
Jan 2006 – Jan 2011	StudioV Photography & Design Owner
June 2005 – Jan 2006	Bliss Photography Partner
May 2004 – July 2004	Surbana Corporation Pte. Ltd Intern

Awards and Achievements

Aug 2018	Minister's Award (Team) 2018 Landscaping for Urban Spaces and High-Rises (LUSH) 3.0
May 2018	Singapore Good Design Mark (SG Mark 2018) TIM: Tree Inspection Microdrone
April 2018	NParks Best Research Award (2018) Developing a Light, Low Cost and Low Risk Micro Unmanned Aerial System (mUAS) for Tree Inspections
Sep 2012	Singapore Institute of Landscape Architect (SILA) Student Awards Best Design Showcase (Gold) Contextual Analysis & Investigations Award (Silver)
March 2012	Urban Redevelopment Authority (URA) – “Journey of Possibilities” Competition 1st Prize in Inclusiveness, Accessibility and Resolving Conflicts category
Sep 2011	Singapore Institute of Landscape Architect (SILA) Student Awards Best Design Showcase Outstanding Site Studies/Analysis and Investigations Top Student Award
Jul 2010	Awarded Nparks Scholarship Scholarship to pursue a Master of Landscape Architecture in NUS
Aug 2002 – Aug 2005	Board of Architects Prize 2002/2003 2003/2004 2004/2005
Aug 2002 – Aug 2005	NUS School of Design & Environment Dean's List Semester 2, 2002/2003 Semesters 1&2 , 2003/2004 Semesters 1&2, 2004/2005
Aug 2005	Ramalingam Medal for Architectural Detailing & Structure 2004/2005

Academic Exhibitions

March 2015	“Future Cities: Research in Action” Urban Redevelopment Authority of Singapore (URA) Centre
November 2014	“Future City Jakarta: Swiss and Indonesian Research and Technology in Practice” Symposium and Exhibition at the Universitas Indonesia, Depok Campus in Jakarta
September 2014	“Future Cities Laboratory: Research, Outcomes, and Prospects” Symposium and Exhibition” at the ETH Zurich
May 2014	“Designing the Ciliwung River” 2014 International Architecture Biennale Rotterdam
September 2013	“Future Cities Laboratory Midterm Exhibition” Singapore-ETH Centre

Research Projects

Primary Investigator

- Developing a Species-level Building Information Modelling (BIM) Vegetation Library
- Developing a Light, Low Cost and Low Risk Micro Unmanned Aerial System (mUAS) for Tree Inspections

Co-Primary Investigator

- Developing Efficient Tools and Techniques to Model Spatially, Biologically and Semantically Representative 3D Trees for Virtual Singapore
- Pilot Project to use Unmanned Automated Drones for Inspection and Geospatial Data Collection of Marina South Tree Bank

Collaborator

- Wind Load Prediction on Trees in Virtual Urban Landscape for Greenery Management
- Keppel Viaduct Supplementary Lighting for Planting

Relevant Skills

3D Modelling & Manufacturing

- Proficient in parametric modelling using Rhinoceros3D/Grasshopper
- Experience in modelling for additive and subtractive manufacturing
- Experience in other modelling software

GIS and Remote Sensing Data

- Experience with obtaining remote sensing data through laser scanning and photogrammetry techniques
- Experience with various off-the-shelf products to work with LiDAR and point cloud data
- Developed tools and techniques to extract data from LiDAR and point cloud data
- Experience with geographic information systems (GIS) tools, e.g. ArcGIS/FME

Programming Languages

- Experience with C# scripting for Rhinoceros3D/Grasshopper
- Experience with basic Arduino scripting and related electronics

Information Modelling

- Developed CityGML writer for parametrically modelled trees at the city scale
- Obtained insights into building information modelling for vegetation

Unmanned Aerial Vehicles (UAV)

- Experienced in building, developing and flying various forms of UAVs
- Experience in using and developing UAVs for inspection and mapping purposes

Graphical Tools

- Proficient in photography, photo editing, graphic design software

Teaching Experience

National Parks Board

- In-house trainer in the use of unmanned aerial vehicles for inspection and mapping
- In-house presenter for GIS related work

Singapore-ETH Centre

- Assisted in the running of Design Research Studios for students
- Conducted workshop teaching students how to use developed tools for modifying point clouds

StudioV Photography and Design

- Conducted Photography and Adobe Photoshop lessons and workshops