

# Praepetch Wongchanglor (BB)

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## Profile

- Recent graduated Master degree in illumination design from University of Sydney, Australia.
- Bachelor's degree in Electrical engineering and telecommunications from University of New South Wales, Australia.
- Vocational certificate in Pre-Engineering English Program (Electrical) from King Mongkut's University of Technology North Bangkok, Thailand.
- Have good understanding in human vision, physics of light, electrical circuit, device and system including electronic and digital circuit.
- Experience in design electrical, electronic and digital circuit and practical circuit constructions.
- Experience in lighting design for exterior and interior complied with Australian standard and NCCA.
- Experience in lighting consultation based on mathematical data (colour rendering, maintenance, and efficiency)

## Education

### **BACHELOR OF ENGINEERING | 2013 - 2015**

- Twinning Engineering Program (TEP), Thammasat University, Thailand
- Major: Electrical Engineering
- Related coursework: Electrical circuit, Electronic circuit, Analog and Digital circuit, Signal, Microprocessor, Electromagnetic engineering, and Electrical Machine.

### **BACHELOR OF ENGINEERING (HONOURS) | 2015 - 2017**

- School of Electrical engineering and telecommunications, University of New South Wales, Australia.
- Major: Electrical Engineering
- Related coursework: Control system, Real-time instrumentation, Digital signal processing, and Electrical safety.

### **MASTER OF ARCHITECTURAL SCIENCE | 2018 - 2019**

- Illumination design, University of Sydney, Australia.
- Related coursework: Light and vision, Photometry and colorimetry, Subjective analysis in lighting design, Lighting technologies, Lighting design software, Object design (Material and light), and Practice of lighting design.

## Experience

### **INDUSTRIAL TRAINING | ELECTRICITY GENERATING AUTHORITY OF THAILAND | NOV 2015 - FEB 2016**

- Working as a part of the Electrical engineer and control system department (machine and equipment division), responsible for compliance of contract and criteria for thermal powerplant from machine specification to installations including site inspections.

### **T.GALLERIA FAÇADE LIGHTING DESIGN | UNIVERSITY ASSIGNMENT | 2019**

- Individual lighting design project for T.Galleria, Sydney. Considering overviews of the building and surrounding through site visiting then design and mark up the interesting area to be lit up in details including how the light reacts with the materials, color temperature, expected the effect of light, and consideration of visual comfort of existing light to be removed. After the rough sketch, conducted some research on available luminaire to find the most suitable luminaire for the design which intends to emphasize the architectural elements of the building

especially the texture of brick façade and fine roof trim. The design complied with NCC section J6 and J8 and include budget estimation, lighting schedule, lighting details, and expected lighting result rendering

#### **GATEWAY INTERIOR LIGHTING DESIGN | UNIVERSITY ASSIGNMENT | 2019**

- Group project, interior lighting design and development plan for GATEWAY, Sydney. Working as a part of team together with architect and engineer. Performed site investigation and identified problem of the existing lighting for the scope area which including passage(Pitt St. entry), main lobby, elevator zone, and main entry(Jessie St. entry). Marking the interesting area to be lit, considered daylight, structure, materials, and the function of the building then brainstorming ideas which led to final lighting solution, most suitable for high ceiling commercial building with black marble flooring. The final design complied with Australian standard (such as AS1680 and NCC section J6 and J8), verified via AGI32 where the minimum illuminance level can be achieved with only working light(using downlight as working light). The project including, demolition plan, emergency lighting, lighting design plan, lighting schedule, lighting scheme, budget estimations, and expected lighting result rendering.

#### **LUMINAIRE DESIGN | UNIVERSITY ASSIGNMENT | 2019**

- Luminaire designed inspired by botanic seed. The complete object made out of Tyvek, veneer, and various recycling materials, operate with two modes controlled by combinations of PIR (motion) sensor and Arduino board. Standby mode provides randomly blinking light when the sensor detects motions it will activate the dominant light bulb(MR16) which provides up light for the area.

## **Technical Skills**

### **AGI32**

- Lighting design and calculation
- Daylight calculation
- Luminaire channel and scene
- Raytraced (rendering)
- Custom luminaires and objects
- Light power density (LPD) calculation for NCC section J6

### **DIALUX**

- Lighting design and calculation
- rendering

### **MICROSOFT OFFICE**

- Microsoft Word
- Microsoft Excel
- Microsoft PowerPoint

### **ADOBE PHOTOSHOP**

- Image editing and illustration

### **PROCREATE**

- Image editing and illustration

### **RHINOCEROS**

- 3D modeling

### **SKETCHUP**

- 3D modeling

### **MATLAB**

- Control system coding and calculations

### **ARDUINO**

- Control system coding

### **FABRICATION**

- Using tool and machine with Timber
- Using tool and machine with Metal
- Laser cutting
- Electronic soldering