### Suggested Topics from Supervisors (2018-2019)

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1. **Project Title**
The role of education in implementing BIM for BSE

   **Objective**
   To compare the pedagogies of BIM for BSE in Hong Kong and in overseas countries

   **Methodology**
   Qualitative, desktop research, survey and interview

   **Equipment**
   NIL

   **Deliverables**
   Educational strategies for implementing BIM for BSE in Hong Kong

2. **Project Title**
Applying BIM for BEAM Plus submission

   **Objective**
   To explore the opportunity of applying BIM technology to the BEAM Plus certification process

   **Methodology**
   Computational simulation

   **Equipment**
   Revit, IESVE

   **Deliverables**
   A recommended procedure of applying BIM for BEAM Plus submission

3. **Project Title**
Lighting quality improvement by using advanced nanocoating luminaires

   **Objective**
   To study the possible improvement in lighting quality by replacing the traditional luminaires with highly reflective luminaires

   **Methodology**
   Field measurement

   **Equipment**
   Luminance meter, SLR digital camera, wide angle lens, tripod, MacBook

   **Deliverables**
   A report showing the comparison in various aspects of lighting quality

4. **Project Title**
Impact of camera white balance settings on the accuracy of luminance acquisition by using high dynamic range imaging

   **Objective**
   To investigate the impacts of white balance settings at different lighting conditions on obtaining accurate luminance values by HDR imaging

   **Methodology**
   Experimental measurement, computational simulation

   **Equipment**
   Photoshop, luminance meter, SLR digital camera, tripod, MacBook

   **Deliverables**
   A recommended camera white balance setting for HDR imaging

5. **Project Title**
Light pollution survey in urban districts of Hong Kong

   **Objective**
   To conduct a survey on current light pollution in urban districts in Hong Kong after the implementation of Charter on External Lighting since 2016

   **Methodology**
   Field measurement

   **Equipment**
   Lux meter

   **Deliverables**
   A preliminary evaluation report on the effectiveness of Charter on External Lighting
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<td>Perception of light pollution in Hong Kong</td>
<td>To study the citizens’ current perception of light pollution in the urban districts of Hong Kong after the implementation of Charter on External Lighting since 2016</td>
<td>Qualitative, survey and interview</td>
<td>NIL</td>
<td>A preliminary evaluation report on the effectiveness of Charter on External Lighting</td>
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<td>Estimation of background light level due to neighbouring residences for assessing light trespass in public housing estates in Hong Kong</td>
<td>To estimate the maximum background light level from residences</td>
<td>Computational simulation</td>
<td>Dialux</td>
<td>A suggested value for subtraction from the required vertical illuminance on windows for assessing the unavoidable light trespass</td>
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<td>Smart films on façade glazing for effective daylighting control</td>
<td>To explore the feasibility of applying smart films on façade glazing to effectively control the amount of daylight</td>
<td>Experimental measurement</td>
<td>Lux meter</td>
<td>A performance evaluation report on the applicability of smart films for daylighting control</td>
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<td>Developing a smart light therapy cap for people with dementia</td>
<td>To develop a smart light therapy cap for mitigating the negative conditions of the people with dementia with appropriate verification</td>
<td>Lab experiment, focus group study</td>
<td>OLED, Arduino</td>
<td>A scientifically proven smart light therapy cap for people with dementia</td>
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<td>Developing a scale model of a smart building for BSE education</td>
<td>To develop a scale model with the wide use of sensors equipped with IoT</td>
<td>Lab experiment, survey and interview</td>
<td>Sensors, LoRa terminals, gateways, LEDs, panels</td>
<td>A building model equipped with IoT to be used for future BSE education</td>
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