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[JAU] Submission Acknowledgement

epandelaki@yaho.../Inbox



Prof. Almantas Liudas Samalavičius <almantas.liudas.samalavicius@vilniustech.lt>
To: Edward Pandelaki <epandelaki@yahoo.com>

Jul 7, 2021 at 1:01 PM

Edward Pandelaki:

Thank you for submitting the manuscript, "INCLUSIVE SPACE FOR CHILDREN IN VERTICAL HOUSING " to Journal of Architecture and Urbanism. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Submission URL: <https://journals.vgtu.lt/index.php/JAU/authorDashboard/submission/15250>

Username: epandelaki

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

Prof. Almantas Liudas Samalavičius

[Journal of Architecture and Urbanism](#)

[JAU] Editor Decision

epandelaki@yaho.../Inbox

**Editorial Office** <tpa@vilniustech.lt>

To: Edward Pandelaki <epandelaki@yahoo.com>,

Satriya Wahyu Firmandhani <satriya_firmandhani@yahoo.com>

Dec 17, 2021 at 5:17 PM

Dear dr Edward Pandelaki, Satriya Wahyu Firmandhani:

We have reached a decision regarding your submission to Journal of Architecture and Urbanism, "INCLUSIVE SPACE FOR CHILDREN IN VERTICAL HOUSING".

Our decision is: Major Revisions Required

Editorial Office
tpa@vilniustech.lt-----
Reviewer A:
Recommendation: Revisions Required
See attachment

Reviewer D:
Building and community design with respect to the needs of children is an important topic. The statistics (e.g., 33.5% of the total population of Indonesia are children) provided by the author(s) would indicate that the needs of children should be taken into consideration with the design of new vertical housing units and/or the redesign/renovation of current housing. Additionally, I would agree with the author(s) implication that inclusive design and planning of housing can only serve to benefit the widest audience possible. What is unclear to me is the overall purpose of the article. For example, the researchers made the observation that children use spaces within their environment to meet their needs, regardless of the actual purpose of the space, but is this information supposed to impact future vertical housing design to better meet the needs of the young residents who will live in the space? Finally, I feel that the article would benefit from a good review for sentence structure and clarity. For example, this sentence, "Increasingly in the inner city, the high-rise buildings and vertical housings are getting more and more intense." I am not sure what more intense means in relationship to high-rise buildings. Editing for these types of sentences I think would help the reader better understand the content of the manuscript. It is interesting to read about the types of planning and facilities that go into vertical housing (e.g., health care facilities, meeting rooms, and libraries) but additional explanation/description would be very helpful.Recommendation: See Comments

[Journal of Architecture and Urbanism](#)**2 Files** | 8.7MBF-JAU - Anonymized_Document - submit.docx
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INCLUSIVE SPACE FOR CHILDREN IN VERTICAL HOUSING **TITLE OF YOUR MANUSCRIPT HERE** **(NO MORE THAN 20 WORDS, USE STYLE MANUSCRIPT TITLE, OR ALT + CTRL + T)**

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Abstract. This paper aims to explore forms and type of space in vertical housing in order to support the creation of inclusive living environment for children, through observing children's activities, the available spaces and facilities. The field observation was carried out in vertical housings and their surrounding environment in Indonesia and Japan. Housing is currently in high demand in Indonesia but land availability in cities is limited, thus vertical buildings become one of feasible solution. Furthermore children population in Indonesia reaches about one third of total population. Meanwhile in Japan, as a developed country, vertical housing have been implemented for a long time to meet society's needs in various places and forms. Housing as a living environment which is suitable for children sometimes receives little attention, especially when there are challenges of limited resources. On the other hand, spaces in vertical housing have its potential to support a child-inclusive living environment. Qualitative method is used in order to explore vertical housing living environment and the space for children. The results indicated there are three scales of spaces that need to receive attention to the creation of inclusive living environment for children in vertical housing, that is: micro, meso, and macro spaces. An abstract should be a brief summary of significant items of the main paper. An abstract should give concise information about the content of the core idea of the paper and clearly describe methods and the major findings reported in the manuscript. The structure of an abstract is the following: purpose, methodology, findings, research implications (if applicable), practical implications, the originality and value of the paper. The volume of an abstract should not exceed 200 words. Font Times New Roman 9 pt should be used for formatting an abstract. The customised styles or the key combinations of the template can be used for quick-formatting of the whole manuscript (the full list is provided at the end of the template). Also, the appropriate style of each item is indicated at the end of its description, e.g. use style Abstract, or Alt + Ctrl + S.

Keywords: inclusive space, child-inclusive, child-inclusive space, vertical housing. some general terms, some subject-specific terms. There should be no less than 6 and no more than 10 keywords. Keywords should be formatted in Times New Roman 9 pt (use style Keywords, or Alt + Ctrl + K).

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However, there are no explanation about the importance of inclusive spaces for children in vertical housing, and how the author describe an inclusive space in this manuscript (like the criteria or the meaning of inclusive space).

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Introduction (use style Heading 1, or Alt + Ctrl + I)

Population growth in Indonesia comes with the housing needs for communities. At present, more than 50% of Indonesian population live in urban areas (BPS-Statistics Indonesia, 2014). Due to the scarce availability of land in urban areas, one way to develop existing facilities is through land intensification, with the spatial optimization by constructing vertical buildings. Similarly in the housing sector, one of its developments is vertical housing that is promoted by the Indonesian government in various urban areas.

In its development, the design of housing should incorporate the concept of sustainability in fulfilling the needs of inhabitants without interfering with the capability of the outside community and the future generation to fulfil their needs. There are various elements that should be considered in applying the concept of sustainability in housing area. Creating an inclusive living environment is one of the challenges to sustainability, where housing should be designed as far as it could to meet the needs of various people with different characteristic, such as abilities, economic backgrounds, social groups, and ages.

In regard to age, children are one of the inhabitant who need attention. The 2015 data shows that the population of children reaches approximately 33.5% of the total population of Indonesia (BPS-Statistics Indonesia, 2018). Housing as a living environment which is suitable for children sometimes receives little attention, especially when there are challenges of limited resources. Meanwhile there is a reciprocal relationship between built environments and its inhabitant. Several researches concluded that environmental characteristic of housing gives influence to the children's physical activities and psychological condition (Hanapi and Ahmad, 2016; Blau et al, 2019; Rollings et al, 2017). Housing characteristic also have relation to the children's outcome as young adult (Blau et al, 2019). In these contexts, it is necessary to further examine children's activities within the vertical housing environment where they live in. Therefore, they could have better development for a better future. In their residential environment, inhabitants including children move and interact with other fellow residents, such as friends, parents, other family members and other people. Various children's activities and interactions currently conducted and require spaces in the developed residential environment. These spaces are important and have their own potentials to support children's growth and development. In this regard, it is certainly interesting to

observe and explore spaces with their potentials by looking at children's activities in their residential environment and the available spaces and facilities.

As one of the developed countries in Asia, Japan has built vertical housings for a long time in various places and forms. This is due to the limited availability of land in the country. In the condition of an aging society, appropriate and adequate facilities for children to support parents or those who plan to have children continues to be provided. Therefore, Japan offers insightful lessons for the suitability of children's activities with the environment where they live in.

The aim of this study is to explore forms and type of space in vertical housing in order to support the creation of inclusive living environment for children, through field observations on children's activities in their residential environment and the available space and facilities in a number of vertical housings in two countries: Indonesia, in Semarang, and Japan, in Kobe and several surrounding cities. The space is focused on the outside of the residential units. There were scholars who studied about children and the spaces in their living environment in vertical housing but they have different concerns, such as studies regarding consideration or criteria that need to be concerned related with living environment for children in vertical housing (Whitzman, 2010; Rinaldi et al, 2017); impact of housing and its surrounding environment to the condition and development of children (Vandivere et al, 2006; Mizrahi and Whitzman, 2009; Hanapi and Ahmad, 2016; Rollings et al, 2017; Heenan, 2017; Blau et al, 2019); and studies on spaces for children to play and recreation (Baskara, 2011; Shi, 2017; Olsen et al, 2019). This study explored and investigated the current children's activities, their spaces and the potentials, thus it yielded findings of kind of spaces which could support the implementation of child-inclusive living environment in vertical housing.

This study uses field observation to collect the data and qualitative method in analyzing the data in order to explore the vertical housing and its surrounding environment conditions in accordance with the aim of the study. There are several steps conducted to reach the aim of this study as follows: in the first step, understanding inclusive space, the children, and vertical housing with its facilities is studied based on literature review; in the second step, field observations on children's activities along with the form of vertical housing living environment and available spaces and facilities are conducted in several locations in Indonesia and Japan; in the third step, analysis is conducted through comparing, describing regularities of activities and its facilities, and categorizing the spaces based on certain characteristics with their potentials, then the results are concluded at the end.

Discussion

People always need space to carry out their activities. The various types of activities ultimately require a variety of spaces to accommodate them properly and comfortably. These various activities certainly conducted by various people with different characteristics, therefore it is hoped that the available space could be an inclusive space. Concern toward provision of spaces and built environment which is inclusive has been conducted in the approach of inclusive design. Basically, inclusive design gives concern toward an approach of design where designer make sure that the product or service provided could serve the widest possible audience, irrespective of age or ability (UK Design Council in John Clarkson and Coleman, 2013). Inclusive design has unique challenges because it aims to improve usability for a wide range of users (Goodman-Deane et al, 2013). It is about making places everyone can use (Fletcher, 2006). Comprehension on inclusive design oftentimes is used in the same meaning and interchangeably with other terms such as Design for All, Universal Design, Barrier Free Design, as they share similar aims (Persson et al, 2014). According to Fletcher (2006) there are principles that need to be concerned in the implementation of inclusive design, that is: places people at the heart of the design process which involve as many people as possible on the design; acknowledges diversity and difference which meets as many people's needs as possible; offers choice where a single design solution cannot accommodate all users; has flexibility in use which can adapt to changing uses and demands; and convenient and enjoyable to use for everyone. Within these comprehension, inclusive space is hoped as a space that could accommodates various people with different characteristics. These characteristics then reflect different abilities and ultimately diverse needs, including children who have different characteristic from adults, especially for the younger children.

Children have different characteristics related with their age, started from infancy until adolescence. They develop in physical, cognitive, and social and emotional dimension (Paris, et al, 2019). Furthermore, Paris et al (2019) put forward that development is multicontextual, which is influenced by both nature or genetics and nurture or the environment. Therefore, attention to the creation of an environment, in this case physical environment, which supports child development is important to be given. Appropriate design is informed by the fact that children have different needs and spatial ranges as they age, as in the case of discussion of Marcus and Sarkissian (Whitzman, 2015). Related with the age, furthermore Whitzman put forward that: from infancy to age 2, there is the need for some space to toddle around, in both indoor and adjacent outdoor areas; for pre-schoolers, children need more outdoor play space within easy access of parents; for ages 6 to 9, children use communal play spaces semi-independently and begin to venture autonomously in their immediate neighbourhoods; for ages 10 to 12, children generally want more adventurous play spaces and begin to venture

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further abroad. These needs and concerns need to be implemented in built environment including vertical housing as a living environment for the children.

Living environment in the form of vertical housings is widely developed due to the scarce availability of land. Therefore, the form of vertical housings as residential environment is certainly different from landed houses. Based on field observations, vertical housings that have been developed to date and the children activities have various forms.

1. The form of vertical housings

In various cities in Indonesia, one of which is Semarang, many vertical housings have been developed and widely provided by the government with a focus on providing the lower income in the form of rental flats. The percentage of vertical housings in the city of Semarang at this time is still small when compared to landed houses. Therefore, the vertical housings built in groups are between landed houses in their vicinity, both in the inner city and fringe area.

Meanwhile, the percentage of vertical housings or apartments in Japan has reached more than 40 percent from the total number of housing stocks in 2013 (The Building Centre of Japan, 2017). Increasingly in the inner city, the high-rise buildings and vertical housings are getting more and more intense. On the other hand, in small cities and fringe areas, the existence of these buildings is less and among the landed houses, as in the case of Semarang.



Kudu



Kaligawe



Pekunden

Figure 1. Vertical housings in Semarang and its surrounding area.



Port Island



Akashi



Osaka

Figure 2. Vertical housings in Kobe and its surrounding area.

The vertical housings in Semarang have been developed in the form of groups of several building blocks, approximately 4 to 9 blocks, at a site that is intended for the development of vertical housings (Figure 1). Most of the vertical housing blocks are not interconnected. However, there are also vertical housing blocks that are connected to each other, as in the case of Pekunden. Meanwhile in Japan, besides the group of vertical housing blocks developed at a particular site location, many vertical housings also stand on their respective sites (Figure 2). This last form of development is mostly found in the inner city area. The planned shapes of the buildings are vary, in the form of single loaded corridor, double loaded corridor and centralized access (Figure 3).

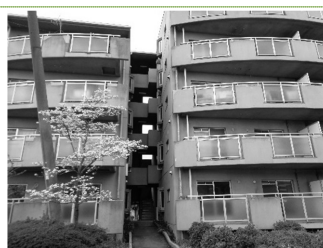
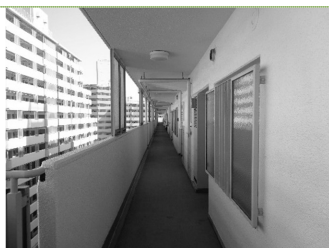


Figure 3. The planned shapes of the vertical housings.

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In the vertical housing in Indonesia, the shared facilities for residents are often placed on the ground floor. They consist of parking lots for motorcycles, bicycles, and other public and social facilities such as *posyandu* (integrated healthcare centre) for the elders and children, libraries, and community meeting rooms. The vertical housing in Pekunden has more complete public and social facilities, such as markets and shops that can also be visited by residents of the surrounding landed houses. This condition is similar with the development of vertical housings in Japan. Shared facilities, such as bicycle and motorcycles parking lots, mailboxes are placed on the ground floor of the building.

Outside the vertical housings building in Indonesia, there are car parking facilities and also playgrounds designated for children. More complete facilities, such as education and health centre facilities, are mostly merged with the surrounding landed houses following the city facilities for the communities. In the context of Japan, there are also some facilities outside the buildings. In areas that are designed for large-scale vertical housing development, such as in Port Island Kobe, education and health facilities have been planned evenly in certain parts of the area so that they could easily accessible. Meanwhile, in the vertical housings built in each plot in the inner city, more complete facilities utilize the facilities provided by the city government as well as private institutions, ranging from playground, health, education, and after-school facilities for child activity centres.

2. Children's activities

Based on field observations, there are various kinds of children's activities in the vertical housing living environment. In the vertical housings in Semarang, younger children play in the corridor or hallway in front of the dwelling units on each floor (Figure 4). In this corridor, parents also take care of their young children while talking with other inhabitants. This parenting activity is also carried out on the ground floor of the building. This condition is different from Japan where corridors are only functioned as mere circulation spaces.



Figure 4. Children's activities in the corridor of vertical housings in Semarang.

In Indonesia, some of the children have their activities in their homes and its surrounding area after school. Whereas in Japan some of the children have activities in designated places after school, such as child activity centre. The various activities carried out by the children include chatting, playing, medical examinations, studying, sports, worshiping, and developing their own abilities, such as reading books and playing music. In general, the greater the age of the child, the activities carried out would be more diverse and covering wider areas so that they required more varied and appropriate facilities (Figure 5).



Figure 5. Diverse children's activities covering wider areas.

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3. Facilities Available for Children

In terms of providing facilities for children, there is an attempt to create a housing which is suitable for children's needs, through the provision of facilities and infrastructure from the government, private sector, as well as from the community itself (Figure 6). The latter includes facilities established by the children themselves in utilizing the available space to accommodate their activities. These facilities for children are available inside the vertical housing building itself as well as outside the vertical housing building, both inside the building site to those outside the building site which are often on a neighborhood scale and city scale that can be used with other vertical housing residents.

The facilities provided in buildings are often found on certain floors of the building, especially on the ground floor, which include children's health check facility, small library and reading room, prayer rooms, as well as multipurpose rooms that can also be used for children's gathering and playing. The facilities provided outside the building are very diverse. On the site of vertical housing, oftenly parks, playgrounds, and sports facilities are provided. As previously described, on the outside of the vertical housing site, more complete facilities are available for children, such as educational facilities, health center facilities, recreational facilities, after-school facilities for child activity centers, and other kind of facilities. Easily accessible circulation pathways and safe environment are often found in vertical housings living environment in Japan. There are designated facilities, such as playgrounds, educational and health facilities in the vertical housing development area such as in Port Island Kobe, public parks in residential neighbourhoods in urban areas, schools, and facilities for children's after school activities, both on a city and neighbourhood scale.

Based on field observations, it appeared that there are facilities provided for children with participation and initiation from the community, including children in it, with the support of building owners and community groups. These facilities are such as the provision of a self-service book loan or library for children in neighbourhood area, and provision of space by converting one of the residential units into a community gathering room, where it can also be used to accommodate children's activities (Figure 6, the first and second from right below).



Figure 6. Facilities available for children in several housings and its surrounding area in Indonesia (above) and Japan (below).

4. The Space for Children

Based on field observations, there are notes that can be taken regarding the children, their conducted activities, and the utilized facilities and spaces. The space used by children in carrying out activities starts from the space in front of each dwelling unit to the spaces and facilities for children in the building of vertical housings, as well as spaces outside the buildings, both indoors and outdoors. The closer the space to the dwelling unit, the more it is used by children of a younger age. Meanwhile, the farther the space is, the more various activities that can be conducted by the children. The formation and utilization of space by children can be done directly, where they participate consciously in the planning and implementation of the planned space, or indirectly, where they make use of a space and unconsciously they contribute to the shape and condition of the space.

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This condition shows that there are various forms of space that are used by children in a vertical housing living environment, and the distance of space to the dwelling unit has a role in the implementation of an inclusive vertical living environment for diverse children. The spaces, starting from the front of the dwelling unit, have the potential to support the creation of an inclusive space for children in a vertical housing living environment. Related with the proximity of existing spaces to dwelling units in vertical housings living environment and children's activities, there were three spatial scales that could be inferred to support the implementation of inclusive space for children in vertical housings as follows (Figure 7).

Space on a micro scale. This space is the area on each floor of the vertical housing, which is right next or in front of the dwelling units, often in the form of circulation space in each floor. As explained earlier, this space could accommodate activities for toddlers and their parents, and activities for younger children to play with their friends. This space is the closest scale to the dwelling units. Regarding its potential, this space allows younger children to do activities with adults more easily, both by parents and other adults who inhabit the vertical housings in the same floor. This space can be similar to the case of the neighbourhood road and front yard of the landed houses. It has the potential in providing convenience in observation toward children activities, especially for the younger children could be easier to be observed by their parents during their activities. This micro-scale space also had the potential to increase social cohesion and togetherness between residents. The creation of good social cohesion and togetherness of the residents could create joint supervision and security in their living environment, because residents could know each other well and care for one another. Another potential is the participation of children that is feasible and easier to be conducted in order to make the space more suitable for them at this scale. However, activities carried out at the micro space scale need to pay attention on children's safety and it had the possibility of disrupting more general matter, such as circulation, due to the activities and misplacement of belonging in the circulation space. For that reason, a clear spatial planning and design concerning this matter is required.



Figure 7. Three spatial scale of spaces that could support the implementation of inclusive space for children in vertical housing living environment.

Space on meso scale. This space is the area located in a certain part of vertical housing that is often found on the ground floor, or it might also located on certain upper floor. In this space, there are activities of caring for toddlers, playing with children, and other kind of activities. Indoor playroom, health facility, small library, and childcare could be found here. This space could potentially provide an area to accommodate more diverse children's activities through indoor facilities. It is protected from outside weather and could be easily accessed by children and parents who resided in the vertical housings. The participation of children is still feasible, especially for certain spaces intended to accommodate their activities. This meso-scale space also has potential in providing space for children to interact with other children or persons who live in the different floors of the building. This condition hopefully could support in developing vertical neighbourhood interaction in a vertical housing living environment.

Space on a macro scale. This space is the area outside the vertical housings. It could be inside or outside the vertical housing sites, and also public spaces on a city scale. In this space, a variety of activities can be carried out to accommodate the needs of children, ranging from younger to older children. It could provide various facilities such as educational centre, health facility, worship facilities, childcare and activity centre for an after school program, and other recreational facilities. This space had the potential as a space for children who lived in vertical housing to interact with children who lived outside the building, including children from the surrounding areas or children from other vertical housing. In this space, the participation of children is increasingly limited. However, the space in this scale has the potential for providing a greater variety of spaces and facilities. The more macro the available space, the easier it would be to accommodate larger and various children's activities, especially for older children, and to provide more complete facilities for children's development. Accessibility is an aspect that required attention for space in this scale.

The potentials of each space should receive attention, certainly without reducing the main functions in creating an inclusive space for children. It also need to be looked as a whole and integrated, which complement each other part. Therefore it could offer choices where single solution cannot accommodate all user.

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Conclusion

Supporting the implementation of inclusive living environment for children in vertical housing could be started from the space closest to the residential unit until the space outside of the vertical housing in a wider scale. The findings shows various forms of vertical housing, the facilities and also children's activities in their living environment along with the spaces utilized. Based on the proximity of the existing utilized spaces to the residential units in vertical housing and the children's activities, there were three spatial scale that could be inferred, namely micro, meso, and macro scale spaces. With its potentials, these spaces are expected to complement each other by taking into account the context in which a vertical housing is built. Therefore, the creation of space that is more inclusive for children in vertical housing living environment could be achieved in order to support the implementation of the concept of sustainability.

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Introduction, Notations, Conclusions, References, and Appendix are not numbered. Use Times New Roman 10 pt for formatting paragraphs in a section, or to continue after an extract (use style Paragraph body, or Alt + Ctrl + Z).

In the introduction, context of the research should be established, the purpose and/or hypothesis that was investigated should be stated. The information on previous research on the subject can be included either in Introduction, or in the following section. Also, the main idea, importance, novelty, etc. can be indicated in this section (use style Paragraph body, or Alt + Ctrl + Z).

1. General regulations (use style Heading 1, or Alt + Ctrl + 1)

The main text should include previous research on the subject (if it is not included in the Introduction), methodology and/or theoretical framework, results of the research, and discussion with interpretation of results obtained. Use *Italic* (not boldface typing or capital letters) for emphasizing a word or a phrase. More requirements for a manuscript are provided in Table 1 (use style Paragraph body, or Alt + Ctrl + Z).

1.1. Formatting lists (use style Heading 2, or Alt + Ctrl + 2)

For bulleted lists use an en dash (-) rather than strong dot (•). It should be formatted in Times New Roman 10 pt, e.g.:

— First;

— Second;

— Third (use style Bulleted list, or Alt + Ctrl + B).

To create numbered lists, use the following style:

1. First;

2. Second;

3. Third (use style Numbered list, or Alt + Ctrl + L).

Table 1. Requirements for a manuscript. For formatting the title of the Table use Times New Roman 9 pt (style Table title, or Alt + Ctrl + I) (source: Author, year)

Requirements	Clarification	Other notes
The manuscript should include all parts:	Abstract, keywords, notations, introduction, body text, conclusions, and references:	Acknowledgements, funding, disclosure statement, authors contribution and appendices can be added if needed. Acknowledgements, funding, disclosure statement and contribution should be provided into the Title Page.
All figures and tables must be placed and cited in the text in consecutive numerical order. The resolution of pictures should be no less than 300 dpi (dots per inch).	If the size of the final file is too large (more than 10 MB), then the manuscript should contain the figures with minimised resolution, and the original figures must be provided in original size, resolution and appropriate format. Do not use text editor for providing separate figures.	For more details see section 'Figures and tables'.
Proper citation of sources is necessary.	The Journal uses the APA Style (surname and date) short reference system for citations in the text with a detailed alphabetical list at the end of the paper. Every reference cited in the text should be also present in the reference list and vice versa.	For more details see section 'Reference style'. Examples are provided in section 'References'.
The list of references should be made according to the requirements of the Journal.	References should be listed in alphabetical order. Please check if all names and surnames of the authors, also the details (title, year, volume, pages, etc.) in the list of references are correct. For more information and examples see sections 'Reference style' and 'References'.	Please check if all information required in the description of each reference is added.

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Acknowledgements, funding, disclosure statement, and author contributions should be provided in a separate file (Title Page).	In order to ensure author anonymity, the information will be included in the manuscript after peer-review process. Please do not write acknowledgements for editors and referees!	
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2. Formulas and equations (use style Heading 1, or Alt + Ctrl + 1)
Formulas, equations and their components presented in the text must be written in Equation Editor. The size of basic symbols in equations should correspond to the letter size of the main text—10 pt; indexes should be in 7 pt, sub-indexes—6 pt.
All the numerals, including index numbers, are presented in Regular type, variables in *Italic*. Matrices are written in square brackets [] or bold, and vectors in figurative brackets { }. Equations should be formatted in Times New Roman 10 pt. Punctuate equations with commas or periods when they are a part of a sentence, as in:

— $a = \frac{b}{c}$ (use style Displayed equation, or Alt + Ctrl + E), — (1)

if necessary, value of symbols should be specified.
Please confine equations to one column width—8 cm. If the equation is longer, it should be split at appropriate algebraic symbols. The parts of the longer equations must be horizontally left aligned in the equation editor.

Equations are numbered by Arabic numerals in round brackets and aligned right. The punctuation and numbers of longer equations, like (2), must be vertically centred with the last line of the equation:

$$\frac{d\Delta Z(\zeta)}{dx} = \frac{d\Delta Z(\zeta)}{L_{Re} d\zeta} =$$
$$\frac{1}{L_{Re}} \left(\frac{dH_{01}^{(2)}}{d\zeta} \Delta Z_i + L_{Re} \frac{dH_{11}^{(2)}}{d\zeta} \frac{d\Delta Z_i}{dx} + L_{Re}^2 \frac{dH_{21}^{(2)}}{d\zeta} \frac{d^2 \Delta Z_i}{dx^2} + \right.$$
$$\left. \frac{H_{02}^{(2)}}{d\zeta} \Delta Z_{i+1} + L_{Re} \frac{dH_{12}^{(2)}}{d\zeta} \frac{d\Delta Z_{i+1}}{dx} + L_{Re}^2 \frac{dH_{22}^{(2)}}{d\zeta} \frac{d^2 \Delta Z_{i+1}}{dx^2} \right). \quad (2)$$

Use an en-dash (–) rather than a hyphen (-) for a minus sign. Please note that an en-dash should be used for connecting values (years, tables, figures, equations, etc.) in a range; for connecting variables in a range, please use ÷, or ‘from ... to ...’ construction. Reformatting of running text, into which special characters such as Greek letters have been entered via the keyboard, can cause these characters to disappear. In order to avoid this problem, always insert special characters to your document from *Insert* → *Symbol*. In the *Symbol* dialog box select the required character and click *Insert*.

3. Figures and tables (use style Heading 1, or Alt + Ctrl + 1)
Style and font size of all tables and figures should be the same in the whole manuscript. Figures and tables should follow the requirements provided in Table 2. Do not use boldface for text within figures (diagrams, charts and schemes), for emphasis use *Italic*. All tables should be presented as a part of the text and should be editable (do not use any macros and screenshots for figures and tables).

Table 2. Requirements for tables and figures. For the title of the Table use Times New Roman 9 pt (style Table title, or Alt + Ctrl + I)

	Font	Line thickness	File formats
Tables	Times New Roman 9 pt	0.5 pt	*.doc, *.docx
Photos and images (resolution no less than 300 dpi)	—	—	*.jpg, *.tiff, *.gif, *.png

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Diagrams, charts, schemes	Times New Roman from 5 to 8 pt	From 0.3 to 2 pt	*.pdf, *.eps, *.cdr, *.xls, *.xlsx, *.dwg
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Note: The width of figures and tables should be either 8 cm, or 14–16.5 cm. Use Times New Roman 8 pt for formatting notes (style Notes, or Alt + Ctrl + O).

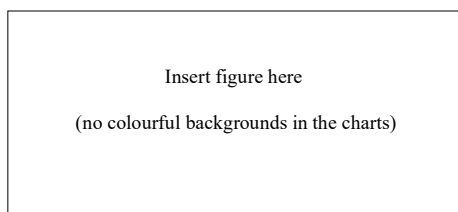


Figure 1. Title of the figure. Obtain permission and include the acknowledgement required by the copyright holder if a figure is being reproduced from another source. For the title of the Figure use Times New Roman 9 pt (style Figure caption, or Alt + Ctrl + F)

Care and attention must be given to below guidelines because importing graphics packages can often be problematic:

— All figures and tables must be placed and cited in the text in consecutive numerical order. In multi-part figures, each part should be labelled, e.g. Figure 1. ****. a ****, b ****.

— The resolution of pictures should be no less than 300 dpi (dots per inch). If the size of the final file is too large (more than 10 MB), then the manuscript should contain the figures with minimised resolution, and the original figures must be provided in separate files.

— Figures in separate files should be saved in appropriate formats (see Table 2). The file name for the graphics should include their short description (e.g. Fig_1, Fig_2a).

4. Reference style (use style Heading 1, or Alt + Ctrl + 1)

Please use the APA (surname and year) short reference system for citations in the text with a detailed alphabetical list at the end of the paper. For the work by two authors both should be mentioned every time. The word “and” between the authors’ names within the text and the ampersand in parentheses should be used, e.g. Brown and Caste (2004)... or (Brown & Caste, 2004). The first author’s surname followed by et al. should be used if the item have three or more authors (Singh et al., 2012). Write out the full name of the organizations or groups that serve as authors the first time they appear in the text, e.g. (Vilnius Gediminas Technical University [VGTU], 2018). For subsequent citations, the name of the group or organization may be abbreviated (VGTU, 2018). In case the list of references includes persons bearing the same surnames, the first letter of the author’s name should be indicated, e.g. (V. Paulauskas & D. Paulauskas, 2013). Sources of the same authors and the same year should be mentioned in the following way (Liu, 2013a, 2013b). In case no author is indicated, the title of the source in the signal phrase, and the first word or two of the title in the parentheses should be used (*Oxford Dictionary of English*, 2010). If there is no date in the source, the abbreviation “n.d.” (for “no date”) should be used. Two or more works by different authors who are cited within the same parentheses should be listed in alphabetical order by the first author’s surname and putting semicolons between them. Please use the transliterated (not translated) version of the names and sources in Cyrillic according to the USA Library of the Congress Romanization rules <https://www.loc.gov/catdir/cpsd/roman.html>.

See examples in Reference list:

- For a book (Montgomery, 2012; *Oxford Dictionary of English*, 2010);
- For chapters or parts of edited works included in collections or textbooks (Slack, 2007);
- For journal articles (Chrobot Mason, & Aramovich, 2013; Davoudabadi et al., 2019; Liu, 2013a, 2013b; V. Paulauskas & D. Paulauskas, 2013);
- For internet documents (Brown, 2019; Klibanoff, n.d.);

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- For online newspapers (Isaak, & Conger, 2018);
- For conference proceedings:
- a) —— published (Saraiji, Harb, & Hamdan, 2011);
- b) —— unpublished (Brown & Caste, 2004);
- For thesis or dissertation (Sledevič, 2016; Suwetwattanakul, 2010);
- For technical reports (Eller, & Olson, 2009);
- For working papers (Altunbas, Manganelli, & Marques Ibanez, 2011);
- For quality standards (European Committee for Standardization, 2005; International Organization for Standardization, 1998);
- For EU publications (European Parliament & Council of the European Union, 2009);
- For videos (Harvard University, 2019);
- For social media posts (Gates, 2019; News from Science, 2019);
- For archives (Wilson, 2000).

For formatting references use Times New Roman 9 pt (style References, or Alt + Ctrl + X).
Conclusions (use style Heading 1, or Alt + Ctrl + 1)

Conclusions or generalizations about your research should be presented using Times New Roman 10 pt (use style Paragraph body, or Alt + Ctrl + Z). **Do not provide figures or tables in Conclusions.**

References (use style Heading 1, or Alt + Ctrl + 1)

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Appendix may be added if needed.

Notations (use style Heading 1, or Alt + Ctrl + 1)

In this section, variables, functions, abbreviations, etc. should be listed with explanations. Please note that these explanations should not be repeated in the running text (use style Paragraph body, or Alt + Ctrl + Z).

Variables and functions

a—explanation of the first variable;

b—explanation of the second variable;

c—explanation of the third variable, etc.

Abbreviations

EFA—Example of First Abbreviation, etc.

To view the customised styles of the template

Select **Home**. You should now see the **Styles** gallery in the top right of the screen. Click on the small arrow in the bottom right corner of the box for the Styles window. **Faster way to open Styles gallery: click the following key combination (Alt + Ctrl + Shift + S).**

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- Manuscript title (Alt + Ctrl + T)
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- Figure caption (Alt + Ctrl + F)

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RESPONSES FROM THE AUTHORS TO THE REVIEWERS COMMENTS

The authors has made revisions according to the comments from Reviewer A and Reviewer D as can be found in the manuscript and in the explanations below.

Responses to Reviewer A

1. Reviewer comment in the Abstract section: Purpose, method, and findings are clearly explained in the abstract. However, there are no explanation about the importance of inclusive spaces for children in vertical housing, and how the author describe an inclusive space in this manuscript (like the criteria or the meaning of inclusive space).

Response:

The authors has explained the importance of inclusive space for children in vertical housing and add revision in these sentences in the abstract.

...Housing is currently in high demand in Indonesia, but land availability in cities is limited whereas children population in Indonesia has reached about one third of total population. Vertical buildings, thus, become one of feasible solution. Meanwhile Japan, as a developed country, has implemented vertical housing for a long time to meet society's needs in various places and forms. Housing as a living environment which is suitable for children sometimes receives little attention, especially when there are challenges of limited resources. Therefore there are not many spaces that designated to accommodate various children activities. On the other hand, spaces in vertical housing have their potential to support a child-inclusive living environments...

The authors has explained the meaning of inclusive space as written in the discussion section as follows.

...Within these comprehension, inclusive space is hoped as a space that could accommodates various people with different characteristics...

The criteria of an inclusive space is adopted from the principles of inclusive design based on literature study on Fletcher (2006) as written in the discussion section as follows.

...According to Fletcher (2006) there are principles in implementing inclusive design, namely: placing people at the heart of the design process which involve as many people as possible on the design; acknowledging diversity and difference which meets as many people's needs as possible; offers choices where a single design solution cannot accommodate all users; having flexibility in use which can adapt to changing uses and demands; and convenient and enjoyable to use for everyone...

2. Reviewer comment on Keywords: There should be no less than 6 and no more than 10 keywords.

Response:

The authors add several new keywords as follows.

...inclusive space, child-inclusive, child-inclusive space, vertical housing, inclusive design. spaces for children

3. Reviewer comment in the Introduction section: It should be concluded, what kind of space that could support the implementation of child-inclusive living environment in vertical housing.

Response:

The findings have concluded the kind or type of space that could support the implementation of child-inclusive living environment in vertical housing.

...it yielded findings of types of space which are used by children and how it could support the implementation of child-inclusive living environment in vertical housing...

...The findings show various forms of vertical housing, the facilities for children to do activities in their living environment along with the other spaces utilized. Based on the proximity of the existing utilized spaces to the residential units in vertical housing and the children's activities, there were three spatial scales could be inferred: micro, meso, and macro scale spaces...

4. Reviewer comment in the Discussion section: This discussion has not explain in depth about inclusive space for children, since the title states "Inclusive Space for Children in Vertical Housing"

Response:

The discussion in the paper has been revised, and contains the meaning and principles of inclusive space based on literature study, and types of space that could support inclusive space for children based on observation.

5. Reviewer comment in the Conclusion section: The findings already answered the paper aim, however there is no comparison between the findings and previous research that cited in this paper in conclusion. Also, it has not conclude yet about the specified criteria for inclusive space.

Response:

The authors have revised and explained about comparison between the findings and previous research cited in this paper in the Introduction section as follows.

..The aim of this study is to explore forms and types of space in vertical housing in order to support the creation of inclusive living environment for children. This research was done through field observations on children's activities in their residential environment and the available spaces and facilities in a number of vertical housings in two countries: Indonesia, in Semarang, and Japan, in Kobe and several surrounding cities. The space in this research is focused on the outside of the residential units. There were scholars who studied about children and the spaces in their living environment in vertical housing, but they have different concerns, such as studies regarding consideration or criteria related with living environment for children in vertical housing (Whitzman, 2010; Rinaldi et al., 2017); the impact of housing and its surrounding environments to the condition and development of children (Vandivere et al, 2006; Mizrachi and Whitzman, 2009; Hanapi and Ahmad, 2016; Rollings et al., 2017; Heenan, 2017; Blau et al., 2019); and studies on spaces for children to play and recreation (Baskara, 2011; Shi, 2017; Olsen et al., 2019). This study, on the other hand, explored and investigated the current children's activities, their spaces and the potentials so that it yielded findings of types of space which are used by children and how it could support the implementation of child-inclusive living environment in vertical housing...

The aim of the paper is more toward to explore forms and types of space in vertical housing in order to support the implementation of inclusive living environment for children, rather than to find specified criteria for inclusive space, as written in the finding as follows.

..This condition shows that there are various forms of space that can be used by children in a vertical housing living environment, and the distance of space to the dwelling unit also plays a role in the implementation of an inclusive vertical living environment for diverse children. The spaces, stretching from the front part of the dwelling unit, have the potential to support the creation of an inclusive space for children in a vertical housing living environment...

...The findings show various forms of vertical housing, the facilities for children to do activities in their living environment along with the other spaces utilized. Based on the proximity of the existing utilized spaces to the residential units in vertical housing and the children's activities, there were three spatial scales could be inferred: micro, meso, and macro scale spaces...

6. Reviewer comment in the Conclusion section: This conclusion mention about sustainability which is not discussed in earlier discussion.

Response:

The authors explain about the relationship between inclusive living environment and sustainability, which is inclusive living environment as a part of sustainability concept, in the Introduction section as follows.

...In its development, the design of housing should incorporate the concept of sustainability in fulfilling the needs of inhabitants without interfering in the capability of the outside community and the future generation to fulfil their needs. There are various elements that should be considered in applying the concept of sustainability in housing areas. Creating an inclusive living environment is one of the challenges to sustainability, where housing should be designed as far as it could to meet the needs of various people with different characteristic, such as abilities, economic backgrounds, social groups, and ages...

7. Reviewer comment in the Reference section: This references should be referred to APA style (Use authors' surname; The journal name should be *italic* instead of the title).

Response:

The authors has revised the references section according to the APA style.

Responses to Reviewer D

1. Reviewer comment: Building and community design with respect to the needs of children is an important topic. The statistics (e.g., 33.5% of the total population of Indonesia are children) provided by the author(s) would indicate that the needs of children should be taken into consideration with the design of new vertical housing units and/or the redesign/renovation of current housing. Additionally, I would agree with the author(s) implication that inclusive design and planning of housing can only serve to benefit the widest audience possible. What is unclear to me is the overall purpose of the article. For example, the researchers made the observation that children use spaces within their environment to meet their needs, regardless of the actual purpose of the space, but is this information supposed to impact future vertical housing design to better meet the needs of the young residents who will live in the space?

Response:

The purpose of the article is explained in the abstract and introduction section as follows.

...This paper aims to explore forms and types of space in vertical housing in order to support the creation of inclusive living environments for children, through observing children's activities and the available spaces and facilities...

The authors agree with the reviewer and hope that the findings of forms and type of space which are used by children could be an input in designing the next vertical housing as written in the introduction section as follows.

...it yielded findings of types of space which are used by children and how it could support the implementation of child-inclusive living environment in vertical housing...

2. Reviewer comment: The article would benefit from a good review for sentence structure and clarity. For example, this sentence, "Increasingly in the inner city, the high-rise buildings and vertical housings are getting more and more intense." I am not sure what more intense means in relationship to high-rise buildings. Editing for these types of sentences I think would help the reader better understand the content of the manuscript.

The authors agree with the reviewer, and have conducted review on sentences structure and clarity has conducted. In the sentence of ...Increasingly in the inner city, the high-rise buildings and vertical housings are getting more and more intense..., "more intense" has the meaning of high-rise buildings can be met more often than in the suburban area. The authors revised the sentence as follows.

...In the inner city areas, the high-rise buildings and vertical housings are more numerous and can easily be found...

3. Reviewer comment: It is interesting to read about the types of planning and facilities that go into vertical housing (e.g., health care facilities, meeting rooms, and libraries) but additional explanation/description would be very helpful.

The authors have made revision on the explanation about the types and facilities in vertical housing in the discussion section.

[JAU] Editor Decision

epandelaki@yaho.../Inbox

**Editorial Office** <tpa@vilniustech.lt>To: Edward Pandelaki <epandelaki@yahoo.com>,
Satriya Wahyu Firmandhani <satriya_firmandhani@yahoo.com>

Jul 5, 2022 at 5:09 PM

Dear dr. Edward Pandelaki, Satriya Wahyu Firmandhani:

We have reached a decision regarding your submission to Journal of Architecture and Urbanism, "INCLUSIVE SPACE FOR CHILDREN IN VERTICAL HOUSING".

Our decision is to: Accept SubmissionEditorial Office
tpa@vilniustech.lt

[Journal of Architecture and Urbanism](#)**4 Files** | 11.3MBF-JAU - Anonymized_Document - submit.docx
4MBA-Inclusive Space - RV.docx
4MBF-JAU - revision - manuscript - 22 06 29.doc
3MBF-JAU - revision - responses to reviewers comments - 22 06 29.doc
52kB

[JAU] Submission ORCID

epandelaki@yaho.../Inbox



Prof. Almantas Liudas Samalavičius <almantas.liudas.samalavicius@vilniustech.lt>
To: Edward Pandelaki <epandelaki@yahoo.com>

Jul 5, 2022 at 5:09 PM

Dear Edward Pandelaki,

You have been listed as an author on a manuscript submission to Journal of Architecture and Urbanism.
To confirm your authorship, please add your ORCID id to this submission by visiting the link provided below.



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If you have any questions, please contact me.

Prof. Almantas Liudas Samalavičius

[Journal of Architecture and Urbanism](#)

Re: [JAU] Submission ORCID

epandelaki@yaho.../Sent

Jul 17, 2022 at 12:50 PM

**Edward Endrianto Pandelaki** <epandelaki@yahoo.com>

To: Prof. Almantas Liudas Samalavičius <almantas.liudas.samalavicius@vilniustech.lt>

Dear Prof. Almantas,

I would like to inform you my ORCID id as follows:

0000-0002-8678-8980

I have also gave permission to Vilnius Gedimina Technical University Journals to have access the above ORCID id.

Related with the manuscript, I hope that I could still make an addition in it.

I would like to add an "Acknowledgment" at the end of the article.

I attach the revised manuscript with the addition of Acknowledgment in this email.

Thank you very much for your kind help and attention.

Best regards,

Edward

On Tuesday, July 5, 2022, 05:09:32 PM GMT+7, Prof. Almantas Liudas Samalavičius <almantas.liudas.samalavicius@vilniustech.lt> wrote:

Dear Edward Pandelaki,

You have been listed as an author on a manuscript submission to Journal of Architecture and Urbanism.
To confirm your authorship, please add your ORCID id to this submission by visiting the link provided below.

 [Register or connect your ORCID iD](#)[More information about ORCID at Journal of Architecture and Urbanism](#)

If you have any questions, please contact me.

Prof. Almantas Liudas Samalavičius

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[JAU] Your article proofs for review

epandelaki@yaho.../Inbox



Dovilė Vaitkevičienė <dovile.vaitkeviciene@vilniustech.lt>
To: Edward Pandelaki <epandelaki@yahoo.com>

Oct 13, 2022 at 12:54 PM

Your proofs are now available for review.

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Please approve these proofs or return any corrections by 14 October 2022, to avoid delay to publication.

Corrections must be limited to answers to queries, typographical and essential corrections only.

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3. Submit your corrections by adding a message to 'Production Discussion' (you can write corrections to email or upload a file)

After we have received your corrections and Licence Agreement, your article will be corrected and published online.

1. Please download Licence Agreement from 'Submission Library' – 'View Document Library'.
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Sincerely,

Dovilė Vaitkevičienė

[Journal of Architecture and Urbanism](#)

Re: [JAU] Your article proofs for review

epandelaki@yaho.../Sent



Edward Endrianto Pandelaki <epandelaki@yahoo.com>
To: Dovilė Vaitkevičienė <dovile.vaitkeviciene@vilniustech.lt>

Oct 14, 2022 at 5:48 PM

Dear Dovilė Vaitkevičienė,

Thank you for your email.
I would like to answer the queries as follows.

A. Highlight #1: The numerations in the paragraph are all right. The numerations are not reflecting the sections of the paper, but it explains about the steps that have been taken in the study to achieve the aim.

B. Highlight #2: The name of the section is correct but without numbering, therefore it will be just "Discussion". Under the section of Discussion, there are four sub sections as follows:

1. The Form of Vertical Housing.
2. Children's activities.
3. Facilities available for children.
4. The spaces for children

Besides the answers to the queries above, there are several notes that I would like to convey as follows.

A. Would you please correct the full name of Edward PANDELAKE into the following name: Edward Endrianto PANDELAKE.

B. It is written that the Received date is: 2021 July 2022. Perhaps it needs correction.

C. We hope that we could add a section of Acknowledgement after the section of Conclusion. The text for the section of Acknowledgement are as follows.

Acknowledgement

The authors would like to express their appreciation to the Faculty of Engineering, Universitas Diponegoro, Indonesia, for the support to this study.

I also attached a manuscript file where I have added the acknowledgement section, and corrected the title of the Discussion section, as well as the numbering of the subsections in the Discussion section.

Thank you very much for your kind help and attention. I look forward for your reply.

Best regards,

Edward

On Thursday, October 13, 2022, 12:54:48 PM GMT+7, Dovilė Vaitkevičienė <dovile.vaitkeviciene@vilniustech.lt> wrote:

Your proofs are now available for review.

Your username and password were sent to you in a separate email.

Please approve these proofs or return any corrections by 14 October 2022, to avoid delay to publication.

Corrections must be limited to answers to queries, typographical and essential corrections only.

1. Retrieve your PDF proof from Galleys by clicking 'PDF'.
2. Please check your proofs thoroughly before submitting your corrections, as further corrections cannot be accepted. If you have any queries, please email me.
3. Submit your corrections by adding a message to 'Production Discussion' (you can write corrections to email or upload a file)

After we have received your corrections and Licence Agreement, your article will be corrected and published online.

1. Please download Licence Agreement from 'Submission Library' – 'View Document Library'.
2. Sign the Licence Agreement and upload it to this message (please use 'add message' button at the end of this message Library).

After we have received your corrections and filled in and signed Licence Agreement, your article will be corrected and published online.

You can access your submission in Journal of Architecture and Urbanism through journals website.

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If you have any difficulty using the Journal of Architecture and Urbanism system, please contact me.

Sincerely,
Dovilė Vaitkevičienė

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[JAU] New notification from Journal of Architecture and Urbanism

epandelaki@yaho.../Inbox



Dovilė Vaitkevičienė <dovile.vaitkeviciene@vilniustech.lt>
To: Edward Pandelaki <epandelaki@yahoo.com>

Oct 17, 2022 at 6:43 PM

You have a new notification from Journal of Architecture and Urbanism:

There is new activity in the discussion titled "[JAU] Your article proofs for review" regarding the submission "Inclusive space for children in vertical housing".

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Prof. Almantas Liudas Samalavičius

[Journal of Architecture and Urbanism](#)

Re: [JAU] New notification from Journal of Architecture and Urbanism

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Edward Endrianto Pandelaki <epandelaki@yahoo.com>

To: Prof. Almantas Liudas Samalavičius <almantas.liudas.samalavicius@vilniustech.lt>

Oct 19, 2022 at 9:36 AM

Dear Prof. Almantas,

Thank you for your notification.

I have replied in the discussion box of the submission.

The proofs for review is appropriate, and I also attached the license agreement as you might also find it in this email.

Thank you very much for your kind help and attention.

Best regards,

Edward

On Monday, October 17, 2022, 06:43:04 PM GMT+7, Dovilė Vaitkevičienė <dovile.vaitkeviciene@vilniustech.lt> wrote:

You have a new notification from Journal of Architecture and Urbanism:

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Prof. Almantas Liudas Samalavičius

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INCLUSIVE SPACE FOR CHILDREN
IN VERTICAL HOUSING

AUTHOR(S):

EDWARD ENDRIANTO PANDELAKI
SATRIYA WAHYU FIRMANDHANI

JOURNAL TITLE:

Warranty

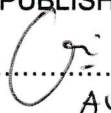
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Signed:  Name (Print): EDWARD ENDRIANTO PANDELAKI
Position: AUTHOR Date: 18/10/2022