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New Paths in Timber Construction in Slovenia



Vesna Žegarac Leskovar is an assistant professor and researcher at the University of Maribor. Her work is characterised by an integrated design and construction approach established in early project phases. This enables optimised solutions in timber construction. In an interview she explains why it is also necessary to incorporate economic efficiency and consider the responsibility of the planning tasks.

The role of an architect

The situation and the role of an architect differs vastly. There are star architects whose main focus is to create monuments for themselves. They claim intellectual property rights and nobody is allowed to change „their" buildings afterwards. And there are architects - voiceless and faceless –doing an invisible job as drawing servants without any influence on the superior idea of the design and the materials

What is the situation like in your opinion? Are architects able to set social and political statements with their works?

Even a very small country like Slovenia is no exception concerning architectural trends. There are a few offices focusing predominantly on architectural form ignoring all technical and economic aspects of architecture. On the other hand we have also "invisible" architects with lower design skills that do not enjoy big attention of public, architectural magazines etc. What we are missing are more architects with high technical knowledge as a support for their design, incorporating originality, functional concept and social responsibility. I believe that this is the profile that a future architect must meet. Working at an academic institution our aim is to raise awareness on this very important issues of architecture among young and future architects.

The design idea and construction beyond pure images

Statement Jeanne Gang

[…] when the media is so focused on images instead of ideas, I think that can do a lot of harm. Architects are now asked to create images at the outset of a project. If you offer an image that early, you reduce the power of the work. It forces you to design according to the image and not to the idea. And the image may not be the best solution.

Architects and engineers think and work differently in the design process. While architects want to proceed in "options" and "alternatives" an engineer needs one solution that is to design the constructive system.

Timber construction is very sensitive and the planning is much more complex compared to massive constructions. Cooperation between architects and (timber construction) engineers is crucial for a good solution. What is your opinion?

I couldn't agree more that the cooperation between architects and engineers is crucial in order to achieve a good solution. On the account of specificities in timber construction the integrated work is inevitable already in the early design stages. However, it is important that both - the architect and the engineer - have the basic knowledge of and understanding for the other party's

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professions. Additionally the integration of other engineering fields, such as mechanical and electrical engineering is also required to some extent. This leads to an integrated design process where no time is lost by mistakes that arise from ignorance or lack of understanding of related disciplines. Beside architectural creativity, social sense and high structural design skills, such as team work is essential in order to incorporate the issues of sustainability, energy and economic efficiency in order to achieve high-quality solutions.

What was your intention behind the book "Architectural design approach for timber public buildings"?



Žegarac Leskovar, Vesna; Premrov, Miroslav. Architectural Design Approach For Energy-Efficient Timber Frame Public Buildings. University of Maribor. Faculty of Civil Engineering. 2011.

Primarily this book was written in with the aim to present the study workshop that has been carried out in the University of Maribor Faculty of Civil Engineering for the small Slovenian municipality of Destrnik searching for solutions for a new kindergarten and municipal building. The true value of the book is indeed ~~in~~ the fact that it describes the way of work in our faculty. The Maribor's Faculty of Civil Engineering has a long tradition in civil engineering, traffic engineering but only an 8 year- old history in architecture. Our advantage is the diversity of disciplines within one faculty. With the co-author of the book the structural engineer Miroslav Premrov we established new elective subjects, namely "Energy-efficient timber buildings" in the first degree of study program for architecture and civil engineering and "Sustainable concepts of building design" as a master study program. The main aim is to teach the students integrated design.

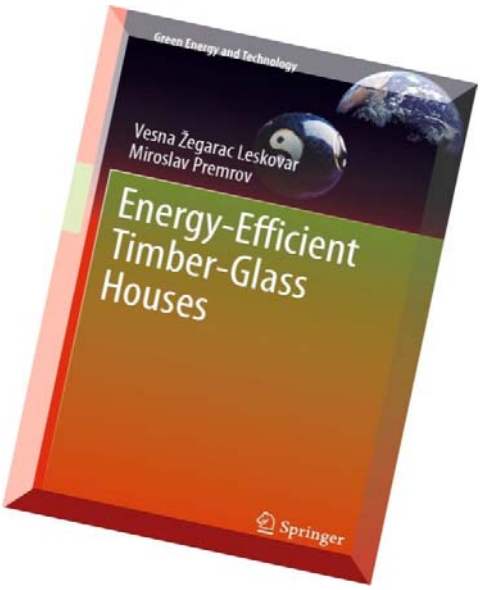
As also presented in the book, our work discusses the problems that arise from environment and economy. We do our own research on structures, design parameters and energy-efficiency of timber-glass buildings, which serves as the basic theoretical knowledge platform for the students' design work. Our students develop projects within integrated groups, architects and civil engineers work together. Based on research theory and problem analyses their work results combine architectural and structural designs, calculation of energy flows, daylight situation and novelties in detail solutions, which is also presented in the book.





Students projects "Kindergarten Sobar" and "Kindergarten Sovica". In: Architectural Design Approach For Energy-Efficient Timber Frame Public Buildings. P. 60-63 and P. 70-73.

How should design and planning be done in future in order to optimize timber architecture and timber construction?



Žegarac Leskovar, Vesna; Premrov, Miroslav. Energy-Efficient Timber-Glass Houses Springer. Green Energy and Technology London, 2013.

I believe our approach to timber architecture is on the right way. It is very important to do new research and to share the knowledge with students, the wider public and experts. Communication and cooperation with industry is also one of the key issues. Therefore we published a scientific monograph by Springer entitled "Energy-efficient Timber-Glass Houses" containing basic theory, research studies and some case studies of cooperation with local municipalities and industry.
The book discusses an innovative approach to combine two expert fields – architectural design and civil engineering, academic research and its application in practice, two eco materials – timber & glass. It emphasizes the importance of interdisciplinary work by an integrative approach on energy-efficient problem solving which can significantly contribute to the improvement of academic teaching and research, industrial production, reduction of negative environmental burdening and finally to the increase of general awareness on sustainable construction.
It can serve as the textbook for students of architecture and civil engineering, a guide for industrial developers, a guide for the development sectors of municipalities and regions suitable for timber construction.

The dialogue in the planning process

Architects and planners deny the „unprofessional clients` competence" to evaluate a plan or a drawing. Most often users have a subjective viewpoint in the assessment of architectural design. This is based on the fact that it significantly influences their living environment. Where is the right balance between the integration or consideration of the users` needs and a superior foresight planning?

The issue of "social responsibility" is the answer to this question. Is it possible to achieve the social aspect without listening, understanding and accepting the opinion of the users of the living environment that we are creating? Finding the right balance between their and our image is the art which can be only achieved if the main designer not only possesses creativity and technical knowledge but also emotional intelligence. We carried out the project "Sustainable renovation of Maribor Kindergartens" with our students where one of the first steps was to speak with representatives of the management board, the kindergarten staff like the cook, building maintainers and house-keepers. Furthermore our students also met the teachers, the children and their parents. The information they gained from these "unprofessional" clients did not change their project ideas completely but certainly influenced their design process in a certain way. They even gained information on about available financial resources of the kindergarten management. We should be aware that we create spaces for people and not pure buildings that need to be published in "best" magazines due to exceptional design. In this sense the mission of an architect is not different from the mission of a good human being, we should listen and try to help those who need us in the right way.

Further information:

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Interview: Sonja Geier, April 2015