



World Institute for Engineering and Technology
Education (WIETE)
Melbourne, Australia

2019 Conference on Engineering and Architecture Design Education

Cracow University of Technology
Kraków, Poland
3 – 7 June 2019

Faculty of Architecture, Cracow University of Technology, Kraków, Poland

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Faculty of Architecture, Slovak University of Technology in Bratislava, Bratislava,
Slovakia

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Faculty of Architecture, Gdańsk University of Technology, Gdańsk, Poland

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The World Institute for Engineering and Technology Education (WIETE), Melbourne,
Australia



Faculty of Architecture
Cracow University of Technology
Kraków, Poland



Faculty of Architecture
Slovak University of Technology in Bratislava,
Bratislava, Slovakia



Faculty of Architecture
Gdańsk University of Technology
Gdańsk, Poland



Kraków

Conference Committee

Conference Patrons

Prof. Dr Hab. Ing. Jan Kazior, Rector, Cracow University of Technology, Kraków, Poland

Prof. Ing. Miroslav Fikar, DrSc., Rector, Slovak University of Technology in Bratislava, Bratislava Slovakia

Prof. Dr Hab. Ing. Jacek Namieśnik, Rector, Gdańsk University of Technology, Gdańsk, Poland
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Conference Honorary Chairmen

Prof. Dr Hab. Ing. arch. Jacek Gyurkovich, Dean, Faculty of Architecture, Cracow University of Technology, Kraków, Poland

Prof. Dr Ing. arch. Pavel Gregor, Dean, Faculty of Architecture, Slovak University of Technology in Bratislava, Bratislava, Slovakia

Prof. Dr Hab. Ing. arch. Lucyna Nyka, Dean, Faculty of Architecture, Gdańsk University of Technology, Gdańsk, Poland

Conference General Co-Chairmen

Prof. Sabina Kuc, Faculty of Architecture, Cracow University of Technology, Kraków, Poland

Prof. Zenon J. Pudlowski, WIETE Director, Melbourne, Australia

Prof. Robert Špaček, Faculty of Architecture, Slovak University of Technology in Bratislava, Bratislava, Slovakia

Prof. Jakub Szczepański, Vice-Dean, Faculty of Architecture, Gdańsk University of Technology, Gdańsk, Poland

Honorary Co-Chairmen

Prof. Adinarayana Kalanidhi, Commonwealth Science and Technology Academy for Research, Chennai, India

Prof. George Metaxas, University of West Attica, Piraeus-Athens, Greece

Prof. Andrew Nafalski, University of South Australia, Adelaide, Australia

Prof. Derek O. Northwood, University of Windsor, Windsor, Canada

CONFERENCE PROGRAMME

	Monday 3 June 2019	Tuesday 4 June 2019	Wednesday 5 June 2019	Thursday 6 June 2019	Friday 7 June 2019	
9.30		Morning Tea			Field Excursion	
10.00		Conference Opening Ceremony				
10.30		Coffee break	Morning Tea	Morning Tea		
11.00		Opening Addresses	Paper Presentation (Session 3)	Paper Presentation (Session 6)		
		A walk around the campus				
14.00		Lunch	Lunch	Lunch	Farewell Lunch	
15.00		Paper Presentation (Session 1)	Paper Presentation (Session 4)	Paper Presentation (Session 7)		
15.30		Registration				
16.00		WIETE	Afternoon Tea	Afternoon Tea		Afternoon Tea
16.30		International Academic Advisory Committee Meeting (WIETE-IAAC)	Paper Presentation (Session 2)	Paper Presentation (Session 5)		Paper Presentation (Session 8)
17.00	WIETE Editorial Advisory Boards					
18.00		Cocktail Party		Conference Closing Ceremony		
20.00			Conference Banquet			

Preliminary Conference Programme

MONDAY, 3 June 2019

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| 15.30 | Registration | Venue: CUT Main Building, Warszawska 24 |
| 16.00 | Meeting of WIETE International Academic Advisory Committee (WIETE-IAAC) | Conference Venue: Sala Senacka (Senate Hall)

Chairman: Prof. Robert Špaček , Faculty of Architecture, Slovak University of Technology, Bratislava, Slovakia; President, WIETE International Academic Advisory Committee (WIETE-IAAC) |
| 17.00 | Meeting of Members of WIETE Editorial Advisory Boards (GJEE&WTE&TE) | Conference Venue: Sala Senacka (Senate Hall)
General Chairman: Prof. Zenon J. Pudlowski , WIETE Director, Melbourne, Australia |
| 18.00 | Welcome Reception | Conference Venue: Sala Senacka (Senate Hall) |

TUESDAY, 4 June 2019

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| 9.30 | Morning Tea | Conference Venue: Sala Senacka (Senate Hall) |
| 10.00 | Conference Opening Ceremony | Conference Venue: Sala Senacka (Senate Hall) |
| | Introduction | General Chairman: Prof. Zenon J. Pudlowski , WIETE Director, Melbourne, Australia |
| | Opening Welcome | Conference Patron, Rector Cracow University of Technology Prof. Jan Kazior |
| | Opening Welcome | Honorary Chairman: Prof. Derek O. Northwood University of Windsor, Ontario, Canada |
| | Welcome Address | Honorary Chairman: Prof. J. Gyurkovich , Dean Faculty of Architecture, Cracow University of Technology, Kraków, Poland

Prof. Lucyna Nyka , Gdańsk University of Technology, Gdańsk. Poland

Prof. Dr Ing. arch. Pavel Gregor , Dean, Faculty of Architecture, Slovak University of Technology in Bratislava, Bratislava, Slovakia |
| | Welcome Address | Honorary Chairman: Prof. Robert Špaček , Faculty of Architecture, Slovak University of Technology in Bratislava, Bratislava, Slovakia; President, WIETE International Academic Advisory Committee (WIETE-IAAC) |

10.30-11.00 Coffee break

**11.00-13.00
Opening Address Session**

Honorary Co-Chairwoman: **Prof. Sabina Kuc**,
Cracow University of Technology, Kraków, Poland;
Vice-President, WIETE International Academic
Advisory Committee (WIETE-IAAC)

Opening Address 1

Prof. J. Gyurkovich, Cracow University of
Technology, Kraków, Poland

*RIBA accreditation of architectural studies at Cracow
University of Technology: history and importance for
education quality standards*

Opening Address 2

Prof. P. Gregor and **Prof. J. Legény**, Slovak
University of Technology, Bratislava, Slovakia

*Role of research in architectural education at FA-
STU*

Opening Address 3

Prof. L. Nyka, Gdansk University of Technology,
Gdansk, Poland

*Bridging the gap between architectural and
environmental engineering education in the
context of climate change*

Opening Address 4

Prof. L. Oberfrancová, **Prof. J. Legény** and
Prof. R. Špaček; Hochschule Wismar, University
of Applied Sciences, Technology, Business and
Design, Wismar, Germany; Slovak University of
Technology, Bratislava, Slovakia

*Critical thinking in teaching sustainable
architecture*

Opening Address 5

Prof. Derek O. Northwood and Ms. **Daniela
Pusca**,
University of Windsor, Ontario, Canada

*Creativity and its constraints in engineering
education*

13.00 – 14.00 A walk around the campus

14.00 Lunch

15.00 Session 1

Chairman: **Prof. Derek O. Northwood**, University of Windsor, Ontario, Canada
Prof. Pavel Gregor, Slovak University of Technology, Bratislava, Slovakia

Papers

1. *Selected aspects of teaching architecture in the context of ongoing transformations,*
Andrzej Bialkiewicz, Cracow University of Technology, Kraków, Poland
2. *Impact of interaction on team performance in BIM contexts,*
Rodrigo Fernando Herrera, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile, **Felipe Muñoz-La Rivera**, Pontificia Universidad Católica de Chile, Santiago, Chile, **Juan C. Vielma & Edison Atencio**, Universitat Politècnica de València, Valencia, Spain
3. *Humanization of engineering education,*
Maria Jolanta Żychowska, Cracow University of Technology, Kraków, Poland
4. *How relevant is energy efficiency in the residential market? Evidence and lessons for architecture education coming from an empirical program in Spain,*
Carlos. Marmolejo-Duarte, Barcelona's School of Architecture, Universitat Politècnica de Catalunya, Barcelona, Spain, **Consuelo. Del Moral**, Granada's School of Architecture, Universidad de Granada, Granada, Spain, **Luis. Delgado**, Granada's School of Architecture, Universidad de Granada, Granada, Spain, **Silvia. Spairani**, Polytechnic School, Universidad de Alicante, Alicante, Spain, **Joyce de Botton**, Barcelona's School of Architecture, Universitat Politècnica de Catalunya, Barcelona, Spain, **Carlos Pérez**, Barcelona's School of Architecture, Universitat Politècnica de Catalunya, Barcelona, Spain, **Ai Chen**, Barcelona's School of Architecture, Universitat Politècnica de Catalunya, Barcelona, Spain, **Mateusz Gyurkovich**, Cracow University of Technology, Kraków, Poland
5. *The merger of two Technological Education Institutes and the Establishment of a new University,*
George Metaxas, University of West Attica , **Georgia Cheirchanteri**, University of West Attica , **Eleftheria Metaxa**, University of West Attica

16.00 Afternoon Tea

16.30 Session 2

Chairman: **Prof. Robert Spacek**, Prof. Robert Špaček, Faculty of Architecture, Slovak University of Technology in Bratislava, Bratislava, Slovakia; President, WIETE International Academic Advisory Committee (WIETE-IAAC)

Chairwoman: **Prof. Lucyna Nyka**, Gdańsk University of Technology, Gdańsk. Poland

Papers:

1. *Drawing – default creative method of architectural creation*
Martina Peřinková, Technická Univerzita Ostrava

2. *Student Workshops - a Place of the Cooperation of Many Professional Communities*,
Anna Kulig, Krystyna Romaniak, Pawel Sikorski, Cracow University of
Technology, Kraków, Poland
3. *Creative Thinking Techniques in Architectural Education*,
Maria Jolanta Sołtysik, Joanna Kowalewska, Gdańsk University of Technology,
Gdańsk. Poland
4. *Parametric design in architectural education*,
Jan Cudzik, Kacper Radziszewski Gdańsk University of Technology, Gdańsk.
Poland
5. *Teaching architects on the base of design thinking methodology. Case study of
Gdańsk historic backyards*,
Joanna Szechlicka, Joanna Kowalewska, Gdańsk University of Technology,
Gdańsk. Poland
6. *Philosophical concept of modernity and postmodernity in architectural education*,
Piotr Czyż, Gdańsk University of Technology, Gdańsk. Poland

Discussion

18.00 **Cocktail Party**

WEDNESDAY, 5 June 2019

10.30 **Morning Tea**

11.00 **Session 3**

Chairman: **Prof. Andrzej Bialkiewicz**, Cracow University of Technology

Chairwoman: **Prof. Mariola Żychowska**, Cracow University of Technology

Papers:

1. *Education of architects: ideas of Walter Gropius 100 years later*,
Grażyna Schneider-Skalska, Cracow University of Technology, Kraków, Poland
2. *Future of the Education of Architects in Poland based on the "Młodzi Architekci"
("Young Architects") Programme*,
Magdalena Jagiello-Kowalczyk, Cracow University of Technology, Cracow,
Poland , **Stanislav Avsec**, University of Ljubljana, Ljubljana, Slovenia ,
Agnieszka Żabicka, Ph.D. Studies, Cracow University of Technology, Cracow,
Poland
3. *Innovative methods in education of landscape architecture students at Cracow
University of Technology*,
Beata Makowska, Cracow University of Technology
Krakow, Poland

4. *Supporting the architecture students education based on international programs with the example of international cooperation between the Faculty of Architecture of the University of Technology in Cracow and Escuela Superior de Esenanzas Tecnicas de la Universidad CEU Cardenal Herrera in Valencia,*
Mariusz Twardowski, Cracow University of Technology Krakow, Poland
5. *Universal design in the education of architects. Challenges and projects carried out at the Gdańsk University of Technology,*
Marek Wysocki, Gdańsk University of Technology, Gdańsk. Poland
6. *Students Competition as a Socio-spatial Tool for Planning Urban Structures on the example of Kołobrzeg,*
Izabela Burda, Małgorzata Dymnicka, Gdańsk University of Technology, Gdańsk. Poland
7. *The method of three-dimensional synchronic resolving functional and spacial matters in architectural design,*
Ela Ratajczyk-Piątkowska, Ksenia Piątkowska, Marta Golińska, Gdańsk University of Technology, Gdańsk. Poland

Discussion

14.00 Lunch

15.00 **Session 4**

Chairwoman: **Prof. Grazyna Schneider -Skalska**, Cracow University of Technology

Chairman: **Prof. Rodrigo Fernando Herrera**, Pontificia Universidad Católica de Valparaíso, Valparaíso, Chile

Papers:

1. *Teaching of the creation of spatial form of the contemporary cities at the Faculty of Architecture, Warsaw University of Technology the Chair of Urban Design and Rural Landscape*
Katarzyna Pluta, Warsaw University of Technology, the Chair of Urban Design and Rural Landscape
2. *Bridging theory and practice as the method of post-graduate education in urban development and planning: the case of Gdynia Urban Summer School 2015-2018*
K. Krośnicka, P. Lorens, I. Mironowicz, Gdańsk University of Technology, Gdańsk. Poland
3. *New educational programs as the factor of formation of innovative competences at students,*
Semenyuk Olga, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan, **Kuc Sabina**, Cracow University of Technology Krakow **Sadykova Sara**, Vitte S.U Moscow University, Moscow, Russia, **Arynov Kaldybay**, Caspian State University of Engineering and Technology named after Sh. Esenov, Astana, Kazakhstan, **Aukazhieva Zhanar** Caspian State University of Engineering and Technology named after Sh. Esenov, Astana, Kazakhstan, **Belousova Ella**, Caspian State University of Engineering and Technology

named after Sh. Esenov, Astana, Kazakhstan, **Niyazbekova Shakizada** Caspian State University of Engineering and Technology named after Sh. Esenov, Astana, Kazakhstan

4. *The international student competitions as a part of the didactic process implemented in cooperation with local partnership,*
Matylda Wdowiarz –Bilska, Cracow University of Technology Krakow, Poland
5. *Curriculum changes resulting from the development of bim technology and parametric and algorithmic design software,*
Maciej Wójtowicz, Rafal Zieliński, Cracow University of Technology Krakow, Poland
6. *Virtual reality + bim as a potential tool in architectural engineers learning process,*
Lukasz Wesolowski, Cracow University of Technology Krakow, Poland
7. *Participation of the fourth semester students of the Faculty of Architecture at Cracow University of Technology in the development of basic drawings as an initial material for further scientific research on a properly functioning natural balanced ventilation system.*
Tomasz Gaczol, Cracow University of Technology Krakow, Poland

Discussion

16.00 **Afternoon Tea**

16.30 **Session 5**

Chairwoman: **Prof. Elżbieta Weclawowicz-Bilska**, Cracow University of Technology

Prof. Martina Peřinková, Technická Univerzita Ostrava

Papers:

1. *Innovative teaching mode of spatial planning issues,*
Elżbieta Węclawowicz-Bilska, Cracow University of Technology Krakow, Poland
2. *The importance of the problem of activation of the elderly and the disabled in teaching architectural and urban design,*
Patrycja Haupt, Cracow University of Technology Krakow, Poland, **Barbara Skalna**, Cracow Academy of Physical Education
3. *Diploma design in real locations – the importance of local vision in the field,*
Bogdan Siedlecki, Cracow University of Technology Krakow, Poland
4. *Cooperation with local stakeholders as a crucial element of urban design courses at the Gdańsk University of Technology,*
Anna Gołędzinowska, Małgorzata Kostrzevska, Gdańsk University of Technology, Gdańsk. Poland

5. *Improving Student Competencies Through Outgoing Workshops*,
Krystyna Romaniak, Szymon Filipowski, Michał Nessel, Cracow University of
Technology Krakow, Poland

Discussion

20.00 **Conference Banquet**

THURSDAY, 6 June 2019

10.30 **Morning Tea**

11.00 **Session 6**

Chairman: **Prof. Wacław Celadyn**, Cracow University of Technology Cracow
Prof. George Metaxas, University of West Attica, Greece

Papers:

1. *The correction of the building physics study program at a faculty of architecture in the context of the global warming problem*,
Przemysław Markiewicz-Zahorski, Cracow University of Technology Krakow, Poland
2. *Geometry of retractable roofs in engineering education*,
Krystyna Romaniak, Cracow University of Technology Krakow **Anita Pawlak-Jakubowska**, Cracow University of Technology Krakow
3. *Reshaping the space for the needs of life. Integrating architecture and urban planning in design-based education*,
Krystyna Ilmurzyńska, Warsaw University of Technology Warsaw, Poland
4. *Lighting of single-family houses – education of students of the faculty of Architecture PK*,
Krystyna Paprzyca, Cracow University of Technology Krakow, Poland
5. *The Significance of Education and Research in Preservation Local Heritage. The Case of Small Towns in Gdańsk Region*,
Anita Jaśkiewicz-Sojak, M.J. Soltysik, Gdańsk University of Technology, Gdańsk. Poland
6. *The interdisciplinary assumptions of in the education of interior architects at the Faculty of Interior and Landscape Design at the West Pomeranian University of Technology Szczecin*,
Agnieszka Rek-Lipczynska, Izabela Kozłowska, West Pomeranian University of Technology Szczecin, Poland

Discussion

14.00 Lunch

15.00 Session 7

Chairwoman: **Prof. Katarzyna Pluta**, Warsaw University of Technology,
Prof. Olga Semeniuk, Eurasian National University, Astana,
Kazakhstan

Papers:

1. *Green building awards as a tool of building knowledge on sustainable design of interiors,*
Magdalena Celadyn Jan Matejko Academy of Fine Arts in Krakow, Kraków,
Poland
2. *The yurt model - architectural school of steppe culture in educational process,*
Malibekuly Zhandarbek Honorable architect of Kazakhstan, Honored builder of
Kazakhstan, Author of State Emblem of the Republic of Kazakhstan, professor; **L.N.
Gumilyov** Eurasian National University, Astana, Kazakhstan; **Semenyuk Olga**,
L.N. Gumilyov Eurasian National University, Astana, Kazakhstan; **Dyisebayev
Ulkairebek**, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan;
Maslov Khalil L.N. Gumilyov Eurasian National University, Astana, Kazakhstan;
Andabayeva Gulnaz Doktorbekovna, L.N. Gumilyov Eurasian National
University, Astana, Kazakhstan;
3. *Historical and architectural research in the design process. Application of method
in the architectural education,*
Izabela Kozłowska, West Pomeranian University of Technology Szczecin, Poland,
Jakub Gołębiewski, West Pomeranian University of Technology Szczecin, Poland
4. *Architecture, industrial technologies and the natural environment – educational
aspects in sustainable design (adaptation of the grain elevator in Szczecin),*
Piotr Fiuk, West Pomeranian University of Technology, Szczecin, Poland

Discussion

16.00 **Afternoon Tea**

16.30 Session 8

Chairwoman: **Prof. Maria Budiakova**, Slovak University of Technology
Dr Magdalena Celadyn, Cracow Academy of Fine Arts

Papers:

1. *Methods of search of the creative idea in architectural design at a basic stage of
education,*
Gulnara Abdrasilova, KAZGASA
2. *Technical approaches to teaching “architecture of unique buildings” subject at
kazgasa (klaace) architecture school,*
A.K Tuyakayeva, KAZGASA
3. *Framework for teaching construction law in a rapidly changing legal
environment,*

Janusz Barnaś, Cracow University of Technology Krakow, Poland **Olga Kania**, Cracow University of Technology Krakow, Poland, **Krzysztof Barnaś**, Cracow University of Technology Krakow, Poland

4. *General Building Construction course in education of students at the Faculty of Architecture, Cracow University of Technology*,
Teresa Kusionowicz, Cracow University of Technology Krakow, Poland
5. *Students Exhibitions in Educational Process. CUT and ENU bilateral agreement 2012-2019*,
Sabina Kuc Cracow University of Technology Krakow, Poland, **Sara Sadykova** , L.N. Gumilyov Eurasian National University, Astana, Kazakhstan **Olga Semeniuk**, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan, **Aliya Appassova**, L.N. Gumilyov Eurasian National University, Astana, Kazakhstan, Cracow University of Technology Krakow, Poland
6. *2019 Kaira Looro Architecture Competition Peace Pavilion workshops in Krakow importance of historical and cultural background of the place*,
Apolonia Kuc, Jagiellonian University, Krakow, Poland

Discussion

Conference Closing Ceremony

Concluding Remarks	Honorary Co-Chairwoman: Prof. Sabina Kuc , Cracow University of Technology, Kraków, Poland; Vice-President, WIETE International Academic Advisory Committee (WIETE-IAAC)
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Concluding Remarks	Honorary Chairman: Prof. Robert Špaček , Slovak University of Technology in Bratislava, Bratislava, Slovakia; President, WIETE International Academic Advisory Committee (WIETE-IAAC)
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Concluding Remarks	Honorary Chairman: Prof. Derek O. Northwood University of Windsor, Ontario, Canada
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Concluding Remarks	General Chairman: Prof. Zenon J. Pudlowski , WIETE Director, Melbourne, Australia; Visiting Professor, Slovak University of Technology in Bratislava, Bratislava, Slovakia
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FRIDAY, 7 June 2019

10.00 Field Excursion

13.00 Farewell Lunch
