



**4th international symposium
formal methods in architecture**

Seminário de Vilar | Porto 2 - 6 Apr | 2018

DETAILED PROGRAMME

<http://archformalmethods.eu>

Day #1

Monday - 02 | April

Palácio de Belmonte

08.04 – 17.00 ON-SITE REGISTRATION
At Palácio de Belmonte

09.00 – 17.40 WORKSHOPS
Workshop 01

“Depthspace3D: a digital tool for 3D space syntax analysis”

Franklim Morais (Concinnitas, CRL)
Catarina Ruivo (Concinnitas, CRL)

Workshop 02

“Linking data mining, spatial analysis and algorithmic design through python”

João V. Lopes (ISCTE – Lisbon Univ.)

Workshop 03

“City sciences workflows”

Elisa Pozo Menéndez (Madrid Pol. Univ.)

Workshop sessions

09.00 – 10.40 Session 1
10.40 – 11.00 coffee – break
11.00 – 12.40 Session 2
12.40 – 14.00 Lunch time
14.00 – 15.40 Session 3
15.40 – 16.00 Coffee – break
16.00 – 17.40 Session 4

18.40 - ... INFORMAL RECEPTION



formal methods in architecture
4th international symposium
april 2018, Porto, Portugal

Day #2

Tuesday - 03 | April

Casa Diocesana de Vilar | Seminário de Vilar

- 08.40 – 17.00 **ON-SITE REGISTRATION**
At Casa Diocesana de Vilar
- 09.00 – 17.40 **EXHIBITION**
"Conformationem potentem quid Alberti dixit"
(The Re Aedificatoria computational interpretations)
- 09.00 – 09.40 **OPENING SESSION**
"Welcoming"
Jorge Vieira Vaz (Opo'Arch Project | LIA | ESAPorto)
"Theoretical framework"
David Leite Viana (ISTAR | Lisbon Univ. Inst.)
"Functional framework"
Franklim Morais (Concinnitas, CRL)
- 09.40 – 10.40 **KEYNOTE SESSION A**
Chair: Jorge Vieira Vaz (Opo'Arch Project | LIA | ESAPorto)
- 09.40 *A - "What if architecture could change the world?"*
Aryanour Djalali (DNA Barcelona Architects)
- 10.20 *Discussion*
- 10.40 – 11.00 *Coffee – break*
- 11.00 – 12.40 **WORK SESSION I**
Chair: Joaquim Flores (LIA | ESAPorto)
- 11.00 *# 01 - "Alexander's theories applied to urban design"*
Alice Rauber (Rio Grande do Sul Federal Univ.)
Romulo Krafta (Rio Grande do Sul Federal Univ.)
- 11.20 *# 02 - "Potentiality analysis for urban planning"*
Rudi Stouffs (Singapore National Univ.)
Patrick Janssen (Singapore National Univ.)
Ye Zhang (Singapore National Univ.)

Day #2

Tuesday - 03 | April

Casa Diocesana de Vilar | Seminário de Vilar

- 11.40 **# 03 - "3D Space Syntax analyses: attributes to be applied in Landscape Architecture projects"**
António Ascensão (UTAD | Trás - os - Montes Univ)
Cláudia Fernandes (UTAD | Trás - os - Montes Univ)
Laura Roldão Costa (UTAD | Trás - os - Montes Univ)
Catarina Ruivo (Concinnitas, CRL)
- 12.00 **# 04 - "Measuring Urban Renewal: a dual kernel density estimation to assess the intensity of building renovation"**
Filipe Brandão (ISCTE - Lisbon Univ. Inst.)
Ricardo Mendes Correia (ISCTE - Lisbon Univ. Inst.)
Alexandra Paio (ISCTE - Lisbon Univ. Inst.)
- 12.20 **Discussion**
- 12.40 – 14.00 **Lunch time**
- 14.00 – 15.20 **WORK SESSION II**
Chair: Sérgio Mendes (LIA | ESAPorto)
- 14.00 **# 05 - "Generating forms via informed motion, a flight inspired method based on wind and topography data"**
Demircan Tas (Istanbul Tech. Univ.)
Osman Sumer (Istanbul Tech. Univ.)
- 14.20 **# 06 - "Shapes and attributes"**
Rudi Stouffs (Singapore National Univ.)
- 14.40 **# 07 - "Generative biomorphism"**
Ricardo Massena Gago (CIAUD - Univ. Lisbon)
- 15.00 **Discussion**
- 15.20 – 15.40 **Coffee – break**



formal methods in architecture
4th international symposium
april 2018, Porto, Portugal

Day #2

Tuesday - 03 | April

Casa Diocesana de Vilar | Seminário de Vilar

15.40 – 17.00 WORK SESSION III

Chair: Paolo Marcolin (LIA | ESAPorto)

15.40 # 08 – “RE:9²GRID – fragmented parts and unified whole”

Giacomo Pala (IUD | IAT - Innsbruck Univ.)

16.00 # 09 – “Circumstances generate the form: origin and evolution of the hospital pavilion typology”

Sérgio Mendes (LIA | ESAPorto)

16.20 # 10 – “Will drones have a role in building construction?”

Nuno Pereira da Silva (ISCTE - Lisbon Univ. Inst.)

Sara Eloy (ISTAR | ISCTE - Lisbon Univ. Inst.)

16.40 Discussion

17.20 – 18.20 KEYNOTE SESSION B

Chair: Jorge Vieira Vaz (Opo'Arch Project | LIA | ESAPorto)

17.20 B – “Form finding and generative systems: A theoretical and applied research project”

Gonçalo Castro Henriques (LAMO - Rio de Janeiro Federal Univ.)

18.00 Discussion

18.40 - ... WELCOME COCKTAIL

Day #3

Wednesday - 04 | April

Casa Diocesana de Vilar | Seminário de Vilar

- 09.00 – 17.40 **EXHIBITION**
“Conformationem potentem quid Alberti dixit”
(The Re Aedificatoria computational interpretations)
- 09.00 – 10.40 **KEYNOTE SESSION C + D**
Chair: David Leite Viana (ISTAR | ISCTE - Lisbon Univ. Inst.)
- 09.00 **C – “Form and meaning in architecture and urbanism: principles of quality”**
Javier Poyatos Sebatían (Valencia Tech Univ.)
- 09.40 **D – “Urban challenges: from regions to streets”**
José Nuno Beirão (Fac. Arch. Lisbon Univ.)
- 10.20 **Discussion**
- 10.40 – 11.00 **Coffee – break**
- 11.00 – 12.40 **WORK SESSION IV**
Chair: Paolo Marcolin (LIA | ESAPorto)
- 11.00 **# 11 – “ONTOARCHI - Na ontological framework for developing a semantically based new generation of automation tools for architectural design”**
Franklim Morais (Concinnitas, CRL)
David Leite Viana (ISTAR | ISCTE - Lisbon Univ. Inst.)
Jorge Vieira Vaz (Opo'Arch Project | LIA | ESAPorto)
Catarina Ruivo (Concinnitas, CRL)
Isabel Carvalho (Concinnitas, CRL | CIAC – Algarve Univ.)
- 11.20 **# 12 – “All bottles from one design Semantics in design generation using ontologies to control shape generation”**
Rui de Klerk (Fac. Arch. Lisbon Univ.)
José Nuno Beirão (Fac. Arch. Lisbon Univ.)
- 11.40 **# 13 – “SUPERGRID – a grammar for a kit-of -parts pedagogy”**
Pedro Engel (PROURB ! Rio de Janeiro Federal Univ.)
- 12.00 **# 14 – “A generative system using shape grammars and visual programming”**
Daniel Lenz (LAMO - Rio de Janeiro Federal Univ.)
- 12.20 **Discussion**
- 12.40 – 14.00 **Lunch time**
- 14.00 – 15.20 **WORK SESSION V**
Chair: Isabel Carvalho (Concinnitas, CRL | CIAC – Algarve Univ.)
- 14.00 **# 15 – “The galleria progressive in the Solomon R. Guggenheim Museum and the Museum of Unlimited Growth”**
Ana Luísa Rolim (Pernambuco Federal Univ.)
Luiz Amorim (Pernambuco Federal Univ.)
Maria Júlia Jaborandy (UNICAP - Pernambuco Catholic Univ.)



formal methods in architecture
4th international symposium
april 2018, Porto, Portugal

Day #3

Wednesday - 04 | April

Casa Diocesana de Vilar | Seminário de Vilar

- 14.20** # 16 – *“Partitioning indoor space using visibility graphs: Investigating user behaviour in office spaces”*
Petros Koutsolampros (SS Lab - Bartlett Sc. Arch. UCL)
Kerstin Sailer (SS Lab - Bartlett Sc. Arch. UCL)
Tasos Varoudis (SS Lab - Bartlett Sc. Arch. UCL)
- 14.40** # 17 – *“Complex buildings and cellular automata: a cellular automaton model for the centquatre Paris”*
Roberto D’Autilia (Roma Tre Univ.)
Janet Hetman (Roma Tre Univ.)
- 15.00** Discussion
- 15.20 – 15.40** Coffee – break
- 15.40 – 17.00** WORK SESSION VI
Chair: Joaquim Flores (LIA | ESAPorto)
- 15.40** # 18 – *“Interaction between soil morphology and the technological landscape of Ave Valley”*
André Chaves (Fac. Arch. Porto Univ.)
- 16.00** # 19 – *“Spatial analysis in GIS environment: locational attractiveness assessment of the retail trade”*
Eliziéle Paroli (Rio Grande do Sul Federal Univ.)
Clarice Maraschin (Rio Grande do Sul Federal Univ.)
- 16.20** # 20 – *“Formal methods in social housing municipal management”*
David Leite Viana (ISTAR | ISCTE - Lisbon Univ. Inst.)
Sara Eloy (ISTAR | ISCTE - Lisbon Univ. Inst.)
Jorge Vieira Vaz (Opo’Arch Project | LIA | ESAPorto)
Isabel Carvalho (Concinnitas, CRL | CIAC – Algarve Univ.)
Catarina Ruivo (Concinnitas, CRL)
- 16.40 – 17.00** # 21 – *“Four-dimensional objects, Cellular Automata and Virtual Reality – the Hypercocoon project”*
Victor Sardenberg (LAMO - Rio de Janeiro Federal Univ.)
- 17.00 – 17.20** Discussion
- 17.40 – 18.20** BOOK RELEASE
Chair: Francesco Cancelliere (Politecnico di Milano)
- 17.40** Book – *“Formal Methods in Architecture and Urbanism”*
Presenter: Vítor Oliveira (Fac. Eng. Porto Univ | Lusophone Univ.)
Editor: David Leite Viana (ISTAR | ISCTE - Lisbon Univ. Inst.)
Editor: Franklim Morais (Concinnitas, CRL)
Editor: Jorge Vieira Vaz (Opo’Arch Project | LIA | ESAPorto)
- 18.40 - ...** COCKTAIL MEETING

Day #4

Thursday - 05 | April

Casa Diocesana de Vilar | Seminário de Vilar

- 09.00 – 17.40 **EXHIBITION**
"Conformationem potentem quid Alberti dixit"
(The Re Aedificatoria computational interpretations)
- 9.00 – 10.40 **KEYNOTE SESSION E + F**
Chair: Franklim Morais (Concinnitas, CRL)
- 09.00 ***E – "Urban morphology: teaching different approaches"***
Vitor Oliveira (Fac. Eng. Porto Univ | Lusophone Univ.)
- 09.40 ***F – "Complexity Revival in Architecture: Building Innovation"***
Alexandros Kallegias (AA School of Architecture, London)
- 10.20 **Discussion**
- 10.40 – 11.00 **Coffee – break**
- 11.00 – 12.40 **WORK SESSION VII**
Chair: Susana Milão (LIA | ESAPorto)
- 11.00 ***# 22 – "Z-Tolerance: three-dimensional abstract representations of the migration issues in Europe"***
Canan Albayrak (Middle East Tech. Univ.)
Rui Colaço (IST - Lisbon Univ)
- 11.20 ***# 23 – "Urban segregation and socio-spatial interactions: a configurational approach"***
Ana Luisa Maffini (Rio Grande do Sul Federal Univ.)
Clarice Maraschin (Rio Grande do Sul Federal Univ.)
- 11.40 ***# 24 – "Design strategies and sexism in domestic spaces: a critical analysis of three modernist social housing icons"***
Larissa Gomes (UNICAP - Pernambuco Catholic Univ)
Ana Luísa Rolim (Pernambuco Federal Univ.)
- 12.00 ***# 25 – "SCAVA – Space Configuration, Accessibility and Visibility Analysis: a 3D space syntax approach"***
Catarina Ruivo (Concinnitas, CRL)
Franklim Morais (Concinnitas, CRL)
David Leite Viana (ISTAR | ISCTE - Lisbon Univ. Inst.)
Jorge Vieira Vaz (Opo'Arch Project | LIA | ESAPorto)
- 12.20 **Discussion**
- 12.40 – 14.00 **Lunch time**



formal methods in architecture
4th international symposium
april 2018, Porto, Portugal

Day #4

Thursday - 05 | April

Casa Diocesana de Vilar | Seminário de Vilar

- 14.00 – 15.20 **WORK SESSION VIII**
Chair: David Leite Viana (ISTAR | ISCTE - Lisbon Univ. Inst.)
- 14.00 **# 26 – “The space between the formal and the informal city alongside the River Maranguapinho”**
Camila Santana / Univ. Centre Estácio – Ceará)
Ugo Santana / Univ. Centre Estácio – Ceará)
- 14.20 **# 27 – “Made by Architects, Modified by People: A Grammar for User Interventions”**
Amina Rezoug (Istambul Tech. Univ.)
- 14.40 **# 28 – “Collaborative mapping with smartphones – an artistic approach”**
Isabel Carvalho (Concinnitas, CRL | CIAC – Algarve Univ.)
- 15.00 **# 29 – “Graph theory applied to the methodology of landscape planning”**
Adriana Afonso Sandre (Fac. Arch Urb São Paulo Univ.)
Paulo Renato Pellergino (Fac. Arch Urb São Paulo Univ.)
- 15.00 **Discussion**
- 15.20 – 15.40 **Coffee – break**
- 16.00 – 17.40 **WORK SESSION IX**
Chair: Franklim Morais (Concinnitas, CRL)
- 16.00 **# 30 – “Data mining, spatial analysis and algorithmic design”**
João V. Lopes (ISCTE - Lisbon Univ. Inst.)
- 16.20 **# 31 – “Development of a permeability measure between private and public space”**
Patrícia Alonso (Chalmers Univ. of Technology)
Meta Berghauser Pont (Chalmers Univ. of Technology)
Luiz Amorim (Pernanbuco Federal Univ)
- 16.40 **# 32 – “The centrality of (Vocational-Oriented) Knowledge: An Assessment of the Location of Polytechnic Institutes in Portugal”**
Mafalda Toscano (CERIS - IST - Lisbon Univ.)
Luísa Cannas da Silva (CERIS - IST - Lisbon Univ.)
Teresa Valsassina Heitor (CERIS - IST - Lisbon Univ.)
Reem Shurush (Technion | Israel Inst. Tech)
- 17.00 **# 33 – “The Digital Divide as a determining factor in the geographical localization of the urban Quality of Life in the metropolitan area of Monterrey, México”**
Sofia Garza Vargas (Fac. Arch. Urb. | Lusophone Univ.)
Aida Escobar Ramirez (Fac Arch. | UANL)
- 17.20 **Discussion**
- 17.40 **CLOSING SESSION**
David Leite Viana (Chair Scientific Committee)
Jorge Vieira Vaz (Head Organizing Committee)
- 18.40 - ... **SYMPOSIUM DINNER**

Day #5

Friday - 06 | April

All around Porto!

09.40 – 12.40 TRIP A

12.40 – 14.00 Lunch time

14.00 – 17.40 TRIP B

Thank you!

<http://archformalmethods.eu/programme/conference/>



