

CALL FOR PRESENTATION PROPOSALS

NEXUS 2020

RELATIONSHIPS BETWEEN
ARCHITECTURE AND MATHEMATICS

International Conference
20–23 July 2020,
Kaiserslautern, Germany

PRESENTED BY
RCA – RESEARCH CULTURE IN ARCHITECTURE

HOSTED BY
FATUK – FACULTY OF ARCHITECTURE,
TECHNISCHE UNIVERSITÄT KAISERSLAUTERN
AND KIM WILLIAMS BOOKS



KIM WILLIAMS BOOKS



fatuk

Fachbereich Architektur
Technische Universität
Kaiserslautern



unione
italiana
disegno

**Architecture Geometry
Initiative Kaiserslautern**

PRESENTATION

The 13th international, interdisciplinary conference “Nexus 2020: Relationships Between Architecture and Mathematics” will take place **20–23 July 2020** in Kaiserslautern, Germany, presented by RCA – Research Culture in Architecture, hosted by **fatuk** – Faculty of Architecture, Technische Universität Kaiserslautern and **Kim Williams Books**.

This important meeting is the thirteenth conference in the Nexus series, following those in 1996 (Fucecchio, Florence, Italy), 1998 (Mantua, Italy), 2000 (Ferrara, Italy), 2002 (Óbidos, Portugal), 2004 (Mexico City), 2006 (Genoa, Italy), 2008 (San Diego, USA), 2010 (Porto, Portugal), 2012 (Milan, Italy), 2014 (Ankara, Turkey), 2016 (San Sebastián – Donostia, Spain) and 2018 (Pisa, Italy).

The Nexus conferences are dedicated to explorations of the relationships between architecture and mathematics through a broad panorama of topics. Over the years since the Nexus conferences began in 1996, conference participants have presented studies of buildings both large and small, as well as entire cities and neighbourhoods, designed by great architects of the past such as Leon Battista Alberti and Andrea Palladio, and by modern masters such as Xenakis, Le Corbusier, Frei Otto and Frank Lloyd Wright, and contemporary architects such as Anna Bofill and Greg Lynn. These works are studied from the viewpoint of mathematical notions: symmetry, descriptive and projective geometry, proportion, statics, grammars, computer science, topology, algebra, fractals, and many more.

SELECTION PROCESS

Speakers at the Nexus 2020 conference will be selected by the Scientific Committee on the basis of abstracts submitted in response to the present call for proposals. Acceptance will be based on the appropriateness for Nexus; originality of topic; whether the topic is accessible only to specialists or can be appreciated by a wider audience; how developed the research appears to be.

Proposals are also welcome for contributions to an exhibition with posters and physical objects/models. The exhibition will remain open for the duration of the conference.

All accepted abstracts will be collected in a book published by Kim Williams Books that will be distributed during the conference itself.

Following their presentation at the conference, a limited number of presenters will be invited to develop their work into full research papers for publication in the *Nexus Network Journal*. The selection will be made by the Scientific Committee on the basis of the presentations at the conference.

THE FOLLOWING CONDITIONS APPLY:

- Submission of an abstract is not a guarantee of acceptance at the conference or of publication in the *Nexus Network Journal*.
- Papers that have been presented at other meetings and/or previously published as chapters of books or as journal articles will not be considered.
- The author submitting an abstract automatically grants permission for that abstract to circulate among members of the Scientific Committee. The conference chairs guarantee that the abstract will not be used for any purpose other than review and selection.
- Authors of accepted abstracts must guarantee their participation at the conference. No abstract accepted for the conference and published in the book will be eligible for selection for publication in the *Nexus Network Journal* unless the author is present at the conference to present the work in person.
- Publication of the accepted abstract in the conference book is contingent on payment of the conference participation fee before or on the established date (see Conference Fee and Working Schedule below).
- After acceptance authors will be expected to re-format their abstracts for publication as instructed.
- There are no publication fees for publication in the *Nexus Network Journal*.

SPECIAL NOTICE FOR PH.D. CANDIDATES AND RECENT PH.D. RECIPIENTS

There will be no dedicated Ph.D. Day at Nexus 2020. Abstracts from current Ph.D. candidates and those who have received their Ph.D. degrees in the period 2019–2020 will be considered for presentation during the main conference, but are requested to declare their status.

CONFERENCE FEE

Authors of accepted abstracts are expected to cover their own travel expenses to the conference venue and pay the conference participation fee. The conference fee will be announced at the time presenters are notified of the acceptance of abstracts.

WHAT TO SUBMIT

- Cover sheet. Please include a cover sheet with the following information:
 - Full name and surname;
 - title or profession (Professor, Doctor, Architect, Independent Scholar, etc.);
 - affiliation (if applicable);
 - physical mailing address;
 - e-mail address;
 - title of proposed presentation;
 - category of research (see below);
 - 5 keywords (refer to the submission guidelines of the *Nexus Network Journal* for a list of suggested keywords <https://www.nexusjournal.com/for-authors/keyword.html>).
- Abstract. Abstracts in English, no more than 1600 words and 2 pages (DIN/A4) of images. The abstract should comprise the following sections: Introduction (ca. 150 words); The Research (ca. 1300 words); Conclusion (ca. 150 words); References (no more than 10).
- Curriculum vitae. **BE BRIEF: no more than 1 page**, including significant publications.

WHERE TO SUBMIT

Submissions are to be sent via e-mail to the Secretary of the Scientific Committee at this address: nexus2020@kimwilliamsbooks.com.

WHEN TO SUBMIT

Submissions will be accepted from **1 November 2019 to 29 November 2019**. No abstracts will be acknowledged before 1 November or accepted after 29 November, unless an extension of the deadline is specifically announced.

CATEGORIES OF RESEARCH

The following categories of research are intended to facilitate the review work of the Scientific Committee. Please indicate the category that you believe best describes your research:

- Design theory: mathematics as a design tool;
- Design analysis: mathematics used to analyse an existing monument or site;
- Geometry: Applications of geometry (descriptive, projective, fractal, etc.) to architecture;
- Topology: Applications of topology to architecture;
- Rule-based Design: Shape grammars; parametric design;
- Representation of architecture: perspective; modelling;
- Structures: architectural engineering application; statics related to form;
- Computer applications: morphogenesis, digital fabrication, virtual reality;
- Didactics: methods, approaches and projects in the classroom, at all levels of education;
- Other ____ (please provide 2 keywords).

CONFERENCE WORKING SCHEDULE

The schedule for submissions, selections, and the preparation of the final presentations is:

- 29 November 2019 | Deadline for submission of abstracts.
- 14 February 2020 | Notification of acceptance of abstracts.
- 1 April 2020 | Deadline for submission for final, correctly formatted abstracts for publication and payment of conference participation fee in order to have the abstract published in the proceedings.
- **20–23 July 2020 | Conference in Kaiserslautern.**
- 1 October 2020 | Notification of selection for publication in *Nexus Network Journal*.
- 2021 | Publication of selected papers in the *Nexus Network Journal*.

If you would like more information about the Nexus conferences, books or the *Nexus Network Journal*, see the *Nexus Network Journal* website (www.nexusjournal.com).

For the Nexus 2020 Conference details visit the *Nexus 2020 Kaiserslautern* website (nexus2020.architektur.uni-kl.de)

If you have questions about the call for proposals, please don't hesitate to contact the Conference Secretary or Chairs at nexus2020@kimwilliamsbooks.com.

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