

## Technological Directory - Graduate School and Faculty of Engineering (2020)

### Department of Architecture

| Discipline  | Field        | Expertise   | Keyword 1                         | Keyword 2                        | Keyword 3   | Open to consultations on   | Lab   | Researcher                         | Related researchers |
|-------------|--------------|---|-----------------------------------|----------------------------------|---|--|---|------------------------------------|---------------------|
| Engineering | Architecture | Urban planning  | Urban planning, regional planning | Government, systems              | Landscape   | Investigations and planning in district/investigations and research of German urban planning/advice for planning of master plans   | Urban Planning Lab                            | Toshiya OKAYAMA, Professor         |                     |
| Engineering | Architecture | Building construction and materials                     | Concrete structures               | Composite and hybrid structures  | Seismic strengthening                             | Members, joints and frame of reinforced concrete, composite and hybrid structures/<br>Seismic strengthening  | Building Structure Lab 1                      | Yasuyoshi MIYAUCHI, Professor      |                     |
| Engineering | Architecture | Architectural planning, design                          | Architectural design              | Environment for children         | Architectural theory                              | Architectural design and supervision (particularly housing, housing complex, kindergartens, schools, and offices)/Idea method, sign planning, VIS planning and design  | Architectural Design Lab 1                    | Hiroyuki TERAJI, Professor         |                     |
| Engineering | Architecture | Architectural history and design                        | Architectural design              | Architectural history and design | Architectural theory                              | Investigations, research and interpretation of modern architecture / investigations and planning for regional revitalization/planning and design of facilities   | Architectural History and Theory Lab          | Masaaki HONDA, Professor           |                     |
| Engineering | Architecture | Building construction and materials                     | Concrete structures               | Hybrid structures                | Joints  | Members, joints and frame of reinforced concrete, composite and hybrid structures / Seismic performance of reinforced concrete members after fire heating and cooling  | Building Structure Lab 2                      | Nozomu BABA, Professor             |                     |
| Engineering | Architecture | Architectural planning and design, architectural design | Planning theory                   | Architectural human engineering  | Safety planning and design                        | Investigations, research, and design guidance related to disaster resistance planning in architecture (in particular, evacuation safety)/life safety design/investigations, research and design guidance related to universal design | Architectural Planning and Design Lab 1       | Hidemasa YOSHIMURA, Professor      |                     |
| Engineering | Architecture | Building construction and materials                     | Structural analysis               | Steel structures                 | Structural design                                 | Large deformation behavior of spatial structures utilizing cables and membranes; mechanical performance of bolted beam to column connections   | Building Structure Mechanics Lab              | Xiaoguang LIN, Associate Professor |                     |
| Engineering | Architecture | Architectural environment and building equipment        | Heating environment               | Heat and moisture transfer       | Condensation proofing and condensation prediction | Measurement of the hydrothermal property of construction materials/architectural design to avoid moisture damage of buildings/prediction and evaluation of the humidification performance of indoor air                              | Architectural Environmental Engineering Lab 1 | Manami SATO, Associate Professor   |                     |

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|-------------|--------------|--|----------------------------|----------------------|--|--|---|---|---------------------|
| Engineering | Architecture | Architectural planning and design                | Architectural planning     | Architectural design | Environmental behavior study           | Research about the relationship between local culture and architecture / Research about conservation and renovation of modern architecture and heritage / Research about the environments for children / Research about place-constructing behaviors   | Architectural Planning and Design Lab 2       | Daisaku HAYASHIDA, Associate Professor  |                     |
| Engineering | Architecture | Building materials, practice and Building system | Materials and practice     | Concrete             | Building system and planning           | Development of technologies for high performing, highly functional, highly durable construction materials/examination of universal architectural culture from the perspectives of materials construction, maintenance/management/conservation, structure, identity and authenticity                                      | Building Material Lab                         | Shigeharu NAKAMURA, Associate Professor |                     |
| Engineering | Architecture | Architectural environment and building equipment | Heating environment        | Wind Environment     | Optimization design using CFD analysis | Experimental research on solar shading and the utilization of daylight / CFD and reverse simulation of indoor and outdoor / Thermal load calculation based on building performance evaluation / Optimization design of buildings and urban areas using CFD analysis, daylight analysis, GIS, BIM, grasshopper and so on. | Architectural Environmental Engineering Lab 2 | Ryohei KONO, Associate Professor        |                     |
| Engineering | Architecture | Building construction and materials              | Steel structures           | Structural analysis  | Structural design                      | Members, joints and frame of steel structures / Collapse behavior of steel structures under severe earthquake  | Building Structure Lab 3                      | Seiji MUKAIDE, Associate Professor      |                     |
| Engineering | Architecture | Architectural planning, design                   | Architectural design       | Urban design         | Architectural theory                   | Experimental research on new architectural design of houses, clinics, offices, stores, etc. based on observation of cities and natural environments  | Architectural Design Lab 2                    | Shinsuke Fujii, Associate Professor     |                     |
| Engineering | Architecture | Structural and seismic engineering               | Post-earthquake inspection | Seismic Retrofit     | Earthquake resistant design            | Residual seismic performance evaluation and rehabilitation of earthquake damaged buildings / Seismic evaluation and retrofit of existing buildings / Performance based seismic design methodologies for building structures  | Earthquake Resistant Structure Lab 2          | Chunri QUAN, Assistant Professor        |                     |