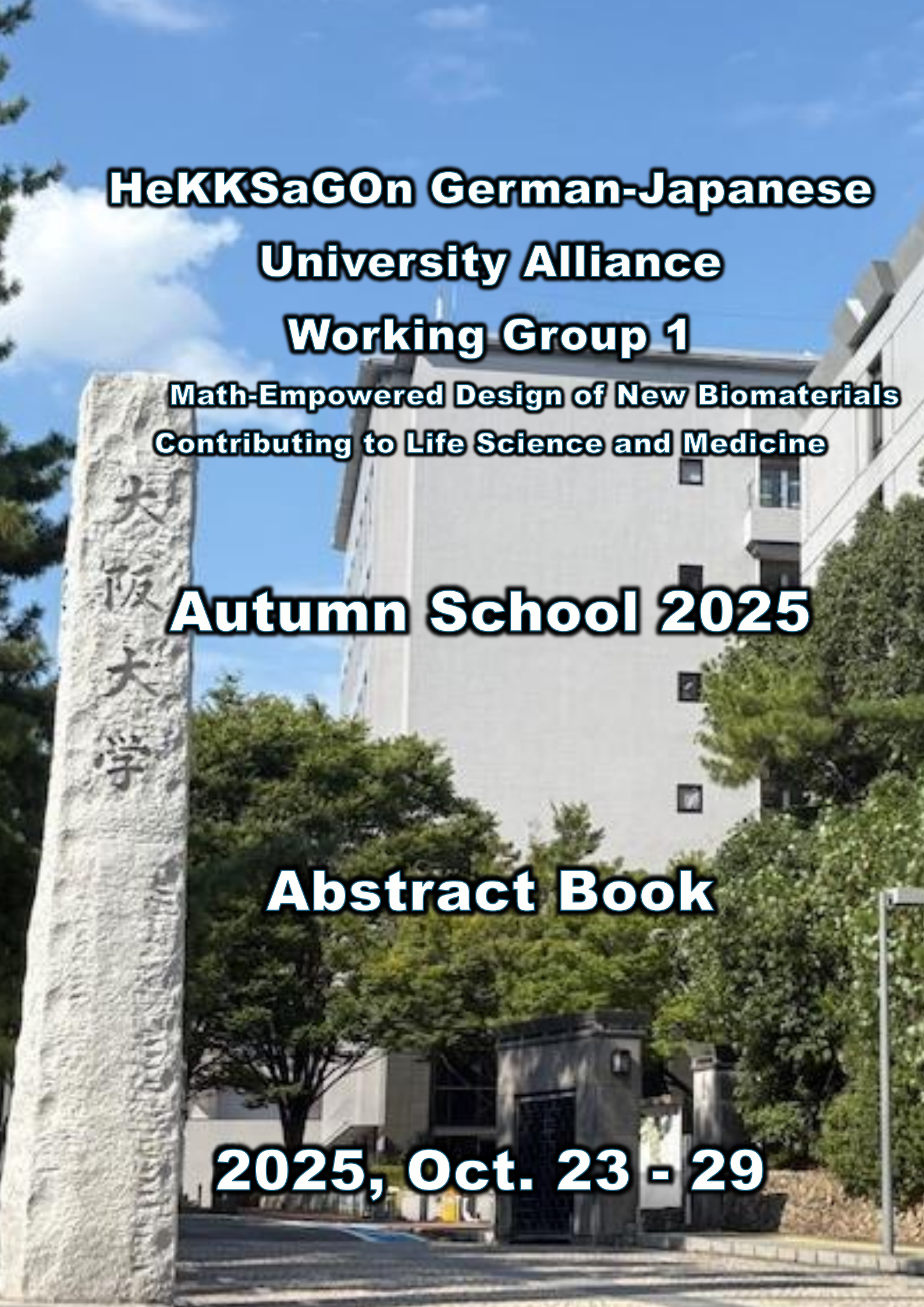


HeKKSaGOn German-Japanese University Alliance

Working Group 1

Math-Empowered Design of New Biomaterials Contributing to Life Science and Medicine

Autumn School 2025

Abstract Book

2025, Oct. 23 - 29

1. Purpose of the Event

The Working Group 1 “Math-Empowered Design of New Biomaterials Contributing to Life Science and Medicine” of the HeKKSaGOn German-Japanese University Alliance promotes international collaborative research aimed at creating innovative biomaterials that contribute to the advancement of life sciences and medicine, based on mathematical and materials sciences.

The upcoming HeKKSaGOn Autumn School 2025, under the theme *“Engineering Materials for Biomedicine: from molecules to tissues”*, will bring together young researchers and graduate students from Japan and Germany. Participants will exchange cutting-edge knowledge on material design and gain insights into biological phenomena across multiple scales, from molecules to tissues. Through lectures, discussions, and poster presentations, the program seeks to foster cross-disciplinary knowledge exchange, cultivate new ideas, and nurture seeds of future collaborations.

Furthermore, this school goes beyond academic exchange, consciously addressing societal challenges. Designing next-generation biomedical materials to tackle issues such as aging and intractable diseases is directly linked to innovations in regenerative medicine and drug discovery, making significant contributions to the SDG “Good Health and Well-being.” At the same time, international exchange among young researchers—gaining mutual understanding of diverse cultures and research backgrounds—will help build a sustainable global research network.

2. Schedule and Venue

- **Dates:** October 23 (Thu) – 29 (Wed), 2025
- **Venue:** Osaka University, Toyonaka Campus

  Main venue: Nambu Yoichiro Hall (Faculty of Science, Building E, 2nd floor)

  On the afternoon of October 24: Sessions will take place in the Faculty of Science, Building E, 2nd floor.

Osaka Autumn School 2025 "Engineering Materials for Biomedicine: from molecules to tissues"

			~ October 22	Thursday (October 23)	Friday (October 24)	Saturday (October 25)
	Venue			Nambu hall	AM:Nambu hall / PM:E210,E211	
Week 1 (Oct. 23 - 25)	9:45-10:45		Arrival at Osaka		**Lecture 3:** **Hiroshi Yoshikawa** (Univ. Osaka) "Development of Laser Processing and Manipulation Techniques for Life/Material Sciences"	
	10:45-11:00				Coffee Break	
	11:00-12:00				**Lecture 4:** **Joachim Wittbrodt** (Heidelberg Univ.) "Evolutionary Building Blocks by ex vivo Stem Cell Behavior"	
	12:00-13:30			13:00- Welcome & orientation	Lunch Break	
	13:30-14:30			**Lecture 1:** **Motomu Tanaka** (Heidelberg Univ.) "Dynamics of Life: a view from interfaces"	**Lecture 5:** **Yoshihiro Sasaki** (Kyoto Univ.) "Design and Biomedical application of Membrane Nanoparticles"	**Excursion** ・Osaka Castle ・Around Umeda
	14:30-14:45			Coffee Break	**Short Lecture S1:** **Masaki Nakahata** (Univ. Osaka) "Development of Polymeric	
	14:45-15:45			**Lecture 2:** **Sonia Mahmoudi** (Tohoku Univ.) "Weaving Across Scales: Topology & Symmetry"	**Museum Tour with tour guide** Coffee break (Café Saka) 15:00~: Move to the museum 15:20: Arrival 16:20: Take coffee with sweets 17:00: Back to Faculty of Science, Bldg.E-2F	
	15:45-16:45			**Announcement of Tour and Excursion**		
	17:00~19:00			**Welcome party** (17:00 - 19:00) Cafeteria *La-foret*		

		Sunday (October 26)	Monday (October 27)	Tuesday (October 28)	Wednesday (October 29)	Thursday (October 30)	Friday (October 31)	November 1 ~
	Venue		Nambu hall	Nambu hall	Nambu hall			
Week 2 (Oct. 26 - Nov. 1)	9:45-10:45	Holiday	**Lecture 6:** **Fuyuhiko Tamanoi** (Kyoto Univ.) "Small size, highly dispersive MSN nanoparticles with excellent tumor accumulation property"	**Lecture 9:** **Kenji Urayama** (Kyoto Univ.) "Flaw Management in Soft Polymer Materials: Resistance and Tolerance Strategies"	**Lecture 11:** **Martin Bastmeyer** (Karlsruhe Inst. Tech.) "3D Cellular Microenvironments to Study Cell Mechanics"	**HeKKSaGOn Presidents' Conference**	**HeKKSaGOn Presidents' Conference**	**Departure**
	10:45-11:00		Coffee Break					
	11:00-12:00		**Lecture 7:** **Kazuya Kabayama** (Univ. Osaka) "Optimizing antibody drug dynamics to enhance alpha-targeted therapy"	**Lecture 10:** **Hiroshi Jinnai** (Tohoku Univ.) "Mechanical Properties and Nano-scale Structural Relation in Polymer Composites Studied by Advanced Electron Microscopy"	**Lecture 12:** **Makoto Sato** (Univ. Osaka) "Core Principles Underlying the Formation and Function of Neocortical Neuronal Circuits"			
	12:00-13:30		Lunch Break		**Lecture 13:** **Yoshinori Takashima** (Univ. Osaka) "Enzymatic Degradation of Movable Cross-Linked Polymeric Materials"			
	13:30-14:30		**Lecture 8:** **Michiya Matsusaki** (Univ. Osaka) "Nanostructured Collagen Matrices for Biomedical and Food Applications"	**Short Lecture S2:** **Yuuichiro Kobayashi** (Univ. Osaka) "Creation of sulfur polymer **Short Lecture S3:** **Kenji Yamaoka** (Univ. Osaka) "Interdiffusion of Polymer with	**Discussion, Evaluation & Photo** **(12:45～13:00)**			
	14:30-14:45		Coffee Break					
	14:45-15:45		**Flash Talk & Poster presentation** (72 min, 4 min×18) & Poster Presentation (odd/even, 24 min/ 24 min)	**Flash Talk & Poster presentation** (76 min, 4 min×19) & Poster Presentation (odd/even, 22 min/ 22 min)				
	15:45-16:45							
	17:30~			**Banquet** (17:00 - 19:00) Japanese restaurant (Ganko) https://www.gankofood.co.jp/en/shop/detail/ya-ishibashien/				
	19:30							

4. Accommodation and Transportation

- **Kasugaoka-House**

  Address: 7-12-17, Minami-Kasugaoka, Ibaraki, Osaka 567-0047, Japan

  Hotels accessible via the Osaka Monorail.

  Please get off at **Handai-Byoin-Mae Station** (towards Kadoma-shi), then walk about 6 minutes north

  TEL: +81-6-72-626-6228

  URL: https://www.osaka-u.ac.jp/en/schools/facilities/BandB/kasugaoka_house

  Google map: https://maps.app.goo.gl/j8P81brH7QcbJKcJ9

- **Senri Hankyu Hotel Osaka**

Adress: 2-1 Shinsenri-Higashimachi,Toyonaka City,Osaka, ZIP Code 560-0082

TEL: +81-6-6872-2211

URL: https://www.hankyu-hotel.com/en/hotel/hh/senrihh

Google map: https://maps.app.goo.gl/gd3HpiVaDtvuZsLp6

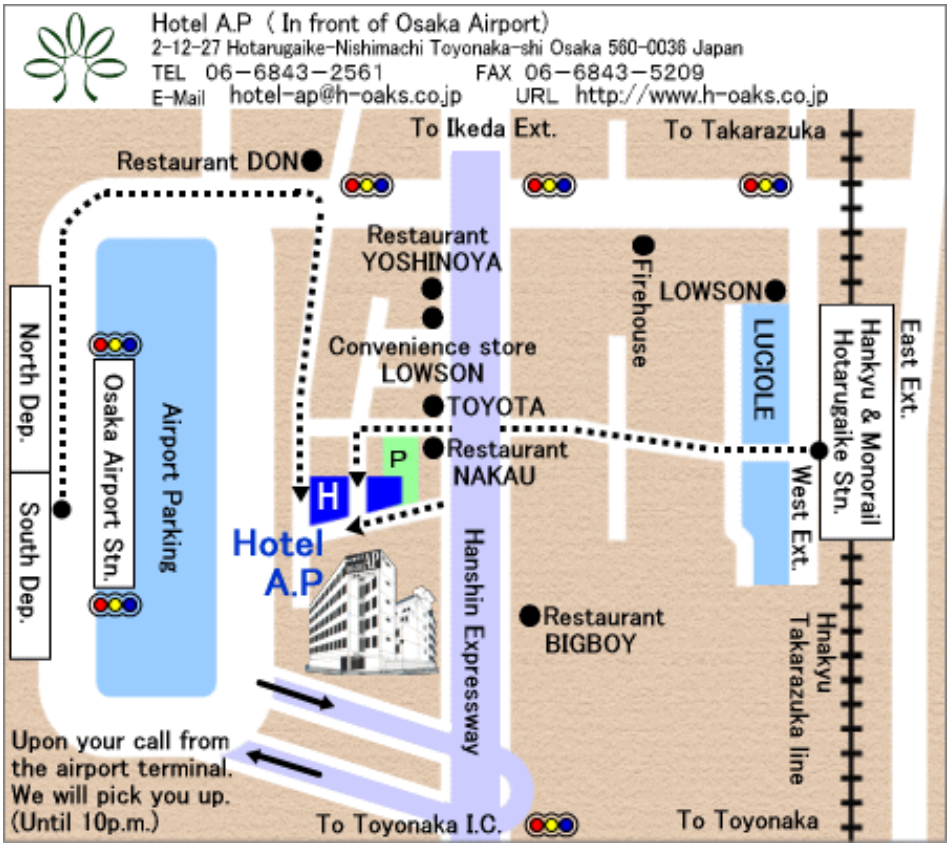
• **Hotel A.P（in front of Osaka Airport）**

Address: 2-12-27, Hotarugaike-Nishimachi, Toyonaka, Osaka 560-0036, Japan

TEL: +81-6-6843-2561

URL: https://www.h-oaks.co.jp/hotel-ap/en/

Google map: https://maps.app.goo.gl/nK4R94icPct7Kn4o7



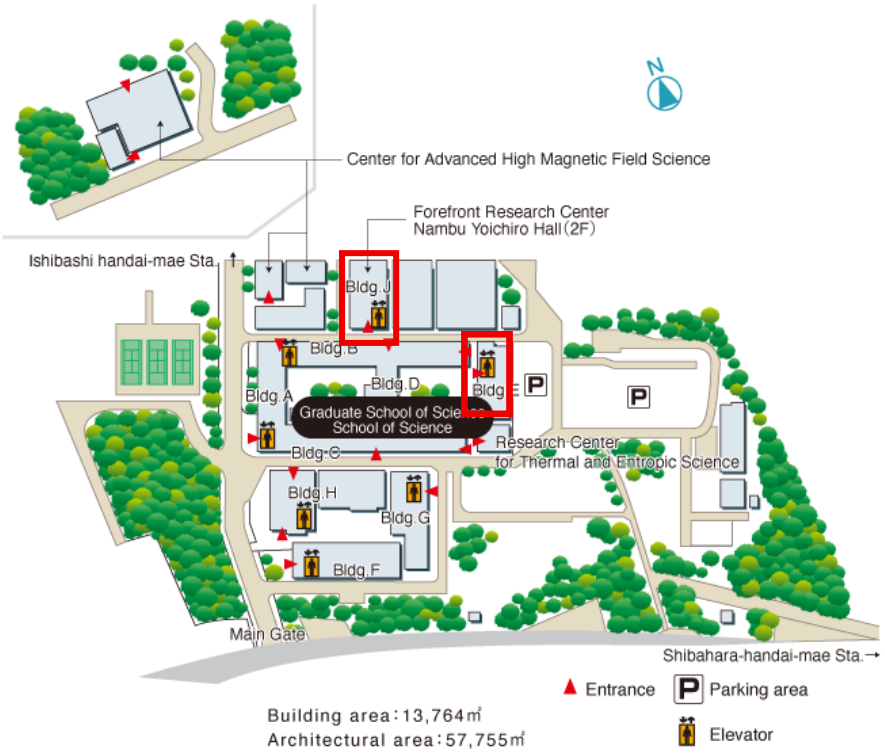
5. Venue Details

Nambu Yoichiro Hall: Osaka University Toyonaka Campus (Forefront Research Center, 2nd floor)

Rooms 201, 203, 204, 210, 211: Faculty of Science, Building E, 2nd floor, Osaka University Toyonaka Campus

Note: On the afternoon of October 24, sessions will be held in Building E, 2nd floor, Faculty of Science.

Eduroam Wi-Fi: Available throughout all venues.



6. Access (Monorail, Bus, Airplane)

- **From Hankyu Osaka-Umeda Station / JR Osaka Station (approx. 50 min.)**

  Take the Hankyu Takarazuka Line to *Ishibashi-Handai-Mae Station*. Walk east for about 30 minutes.

- **From JR Shin-Osaka Station (approx. 40 min.)**

  Take the Osaka Metro Midosuji Line to *Senri-Chuo Station*. Transfer to the Osaka Monorail bound for Osaka Airport, get off at *Shibahara-Handai-Mae Station*, and walk west for about 6 minutes.

- **From Osaka International Airport (Itami Airport) (approx. 15 min.)**

  Take the Osaka Monorail bound for Kadoma-shi. Get off at *Shibahara-Handai-Mae Station* and walk west for about 6 minutes.

・**From Kansai International Airport (approx. 2 hours)**

Route 1: Take the Airport Limousine Bus bound for *Osaka New Hankyu Hotel (Umeda/Osaka Station area)*. From there, take the Hankyu Railway (Takarazuka Line) to *Hotarugaike Station*. Transfer to the Osaka Monorail bound for Kadoma-shi, get off at *Shibahara-Handai-Mae Station*, and walk west for about 6 minutes.

Route 2: Take the Nankai Railway to *Namba Station*, then the Osaka Metro Midosuji Line to *Senri-Chuo Station*. Transfer to the Osaka Monorail bound for Osaka Airport, get off at *Shibahara-Handai-Mae Station*, and walk west for about 6 minutes.

Route3: Take JR to *Osaka Station*, then the Osaka Metro Midosuji Line to *Senri-Chuo Station*. Transfer to the Osaka Monorail bound for Osaka Airport, get off at *Shibahara-Handai-Mae Station*, and walk west for about 6 minutes.

Route 4: Take the Airport Limousine Bus to Osaka International Airport (Itami), then transfer to the Osaka Monorail bound for Kadoma-shi, get off at *Shibahara-Handai-Mae Station*, and walk west for about 6 minutes.

Note: Eduroam Wi-Fi is available when traveling by limousine bus from Kansai International Airport.

7. Flash talk and Poster presentation

Poster board size: A0 (vertical, 841 mm × 1189 mm)

Presentation file for "Flash Talk"

- **Presenters:** All poster presenters
- **Presentation file name:** P[Presentation Number]_Name.pptx (Example: P40_TaroHandai.pptx)
- **File format:** PowerPoint (.pptx)
- **Submission method:** Upload via the Google Form as follow. https://forms.gle/ecm1DsXuRopSFU8B8
- **Submission deadline:** October 22 (Tuesday), 12:00 (JST), (October 22, 5:00 AM (CEST))

Presentation Guidelines

- **Presentation length:** Maximum 4 minutes (including switching time)
- **Presentation software:** Microsoft PowerPoint on Windows11
- **Operation check:** Please test your slides on the presentation PC during lunch or coffee breaks on the presentation day.

8. Meals

・**Lunch for students**

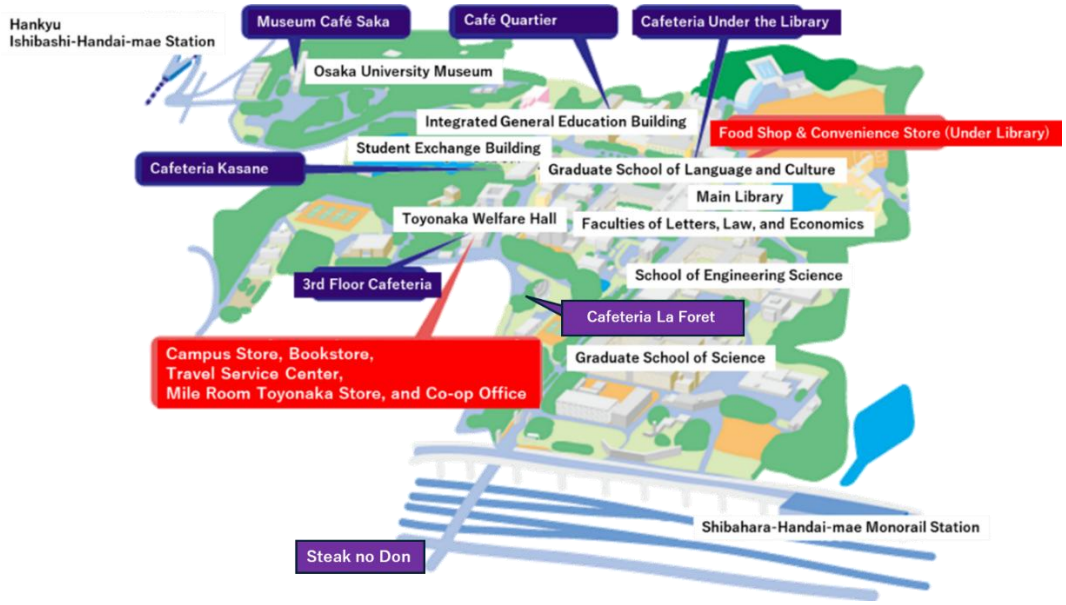
Lunch is available at the Toyonaka Campus Cooperative Cafeteria as well as several nearby dining options.

Please note that cash (Japanese yen) is required, as credit cards are not accepted in some cafeterias.

Toyonaka Campus Cooperative Cafeteria	**Nearby Dining Options**
Cafeteria Kasane	Steak no Don (Family Steak Houses)
Cafeteria Under the Library	Cafeteria La Foret

（within the campus）

Toyonaka Welfare Hall
3rd floor Cafeteria



・**Lunch for faculty members:** Lunch will be arranged by the organizers.

9. Welcome Party

October 23(Thu)　Toyonaka Campus Cafeteria *La-folet*　17:00-19:00

Fee: JPY 2,000 for Japanese faculty staff,　free for German faculty members and all of students

10. Museum Tour

October 24(Fri)　Osaka University Museum　15:20-16:20

Coffee Break : Museum cafe Saka

11. Banquet

October 28(Tue)

Ganko Ikeda Ishibashien　17:00～19:00

https://www.gankofood.co.jp/en/shop/detail/ya-ishibashien/

Fee: JPY 2,000 (free for German faculty members and German students)

12. Notes

- Please be punctual for all sessions.
- English will be the common language.
- Name badges must be worn at all times.
- Bring comfortable clothing for the excursion.

13. Contact Information

Department of Macromolecular Science, Graduate School of Science, Osaka University

Yoshinori Takashima

takasima@chem.sci.osaka-u.ac.jp

TEL　+81(Japan) 6-6850-5447

Program

Oct. 23th (Thu)

12:30 - 13:00 [Nambu Hall (2F)]	Registration
13:00 - 13:30 [Nambu Hall (2F)]	Welcome & orientation
	<Chairperson : Masaki Nakahata >
13:30 – 14:30 **L01** [Nambu Hall (2F)]	**Motomu Tanaka** *(Physical Chemistry of Biosystems Institute of Physical Chemistry Heidelberg University)* "Dynamics of Life: a view from interfaces"
14:30 - 14:45 [Nambu Hall (2F)]	**Coffee Break**
14:45 – 15:45 **L02** [Nambu Hall (2F)]	**Sonia Mahmoudi** *(Advanced Institute for Materials Research (WPI-AIMR), SUURI-COOL laboratory, Tohoku University)* "Weaving Across Scales: Topology & Symmetry"
15:45 – 16:45 [Nambu Hall (2F)]	**Announcement of Tour and Excursion**
17:00 – 19:00 [University cafeteria laforet]	**Welcome party**

Oct. 24th (Fri)

<Chairperson : Martin Bastmeyer >

9:45 – 10:45 **Hiroshi Yoshikawa** *(Department of Applied Physics, The University of Osaka)*
L03 "Development of Laser Processing and Manipulation Techniques for
[Nambu Hall (2F)] Life/Material Sciences"

10:45 – 11:00 **Coffee Break**
[Nambu Hall (2F)]

11:00 – 12:00 **Joachim Wittbrodt** *(Rupprecht Karls Universität Heidelberg Centre for Organismal Studies (COS) Developmental Biology/Physiology)*
L04 "Evolutionary Building Blocks by ex vivo Stem Cell Behavior"
[Nambu Hall (2F)]

12:00 – 13:30 **Lunch Break**

13:30 – 14:30 **Yoshihiro Sasaki** *(Department of Polymer Chemistry, Graduate School of Engineering, Kyoto University)*
L05 "Design and Biomedical Application of Membrane Nanoparticles"
[**Bldg.E210,E211**]

14:30 – 15:00 **Masaki Nakahata** *(Graduate School of Science, The University of Osaka)*
S01 "Development of Polymeric Materials Based on Bio-Inspired Design, Bio-Synthetic Interaction, and Bio-Synthetic Integration"
[**Bldg.E210,E211**]

15:00 – 16:45 **Museum Tour with tour guide**
Coffee break (Café Saka)

Oct. 25th (Sat)

13:30 – 16:45 **Excursion**
- Osaka Castle
- Around Umeda

Oct. 27th (Mon)

<Chairperson : Motomu Tanaka >

9:45 – 10:45 **L06** [Nambu Hall (2F)]
Fuyuhiko Tamanoi *(Institute for Integrated Cell-Material Sciences, Quantum Nano Medicine Research Center, Kyoto University)*
"Small size, highly dispersive MSN nanoparticles with excellent tumor accumulation property"

10:45 – 11:00 [Nambu Hall (2F)] **Coffee Break**

11:00 – 12:00 **L07** [Nambu Hall (2F)]
Kazuya Kabayama *(Institute for Radiation Sciences ,The University of Osaka)*
"Optimizing antibody drug dynamics to enhance alpha-targeted therapy"

12:00 – 13:30 **Lunch Break**

13:30 – 14:30 **L08** [Nambu Hall (2F)]
Michiya Matsusaki *(Graduate School of Engineering, The University of Osaka)*
"Nanostructured Collagen Matrices for Biomedical and Food Applications"

14:30 - 14:45 [Nambu Hall (2F)] **Coffee Break**

14:45 – 16:45 **P01-P18** **Flash Talk & Poster Presentation (Maximum 4 minutes)**

<Chairperson : Masaki Nakahata, Kenji Yamaoka >

P01 [Nambu Hall (2F)]
Sun Bin *(Graduate School of Science, The University of Osaka)*
"Mechanical Reinforcement and Tunable Degradation of Polycaprolactone via Movable Crosslink Materials with Size-Specific Cyclic Polyphenylene Sulfides"

P02 [Nambu Hall (2F)]
Fabiana Ferracina *(Tohoku University/Mathematics Center for Cocreative Society)*
"Topological Data Analysis for Smarter CT Phantoms"

P03 [Nambu Hall (2F)]
Hosei Kinoshita *(Graduate School of Science, The University of Osaka/ Macromolecular Science)*
"Effect of recombination behavior of cross-linking points on polymer viscoelasticity"

P04 [Nambu Hall (2F)]
Kamolphat Intawong *(Tohoku University, Graduate School of Information Sciences, Research Center for Pure and Applied Mathematics)*
"Topological Invariants for Secure Authentication Systems"

P05 [Nambu Hall (2F)]
Koki Nishida *(Graduate School of Science, The University of Osaka)*
"Mechanical Properties of Composites of Cyclic [n] Phenylene Sulfide and Polystyrene"

P06 [Nambu Hall (2F)]
Marco Hug *(Karlsruhe Institute of Technology (KIT) Zoological Institute Cell and Neurobiology)*
"AI-generated 2.5D micro-scaffolds influence stem cell behavior"

P07 [Nambu Hall (2F)]
Naohiro Okamoto *(Department of Macromolecular Science, Graduate School of Science, The University of Osaka)*
"Supramolecular gel crosslinked with light-responsive pseudorotaxanes"

P08 [Nambu Hall (2F)]
Naoki Yamashita *(Graduate School of Science, The University of Osaka)*
"Viscoelastic behavior of polydimethylsiloxane with reversible cross-links"

P09 [Nambu Hall (2F)]
Ramona Marten *(Physical Chemistry of Biosystems Institute of Physical Chemistry Heidelberg University)*
"Spatio-temporal Dynamics of Pancreatic Cancer Cells in Defined Micro-Environments"

P10 [Nambu Hall (2F)]
Ryo Ejima *(Graduate School of Science, The University of Osaka)*
"Synthesis of dense triazole polymers carrying cysteine residue and interaction with heavy metal ions"

P11 [Nambu Hall (2F)]
Yuko Nishimatsu *(Graduate School of Science, The University of Osaka)*
"Investigating Toughness of Reversible Cross-linked Polymers Through Dynamic Viscoelasticity"

P12 [Nambu Hall (2F)]
Tonklar Khaimuk *(Tohoku University, Graduate School of Information Sciences, Image Analysis Laboratory)*
"From Neurons to Networks: Gaussian Field Spatial Routing for Efficient Global Context"

P13 [Nambu Hall (2F)]
HU XIUYUAN *(Graduate School of Science, The University of Osaka)*
"Highly Sensitive and Stretchable Strain Sensors Based on Conductive Elastomer Composites"

P14 [Nambu Hall (2F)]
Yuta Fukao *(Graduate School of Science, The University of Osaka)*
"Reinforcement of Polycarbonate by Reversible Crosslinks and Mechanism of Mechanical Property Enhancement"

P15 [Nambu Hall (2F)]
Naoki Makita *(Graduate School of Science, The University of Osaka)*
"Synthesis of Thermoresponsive Stereoregular Uniform Oligomers Bearing the Dense Triazole Backbone"

Xin Zhou *(Graduate School of Science, The University of Osaka)*

P16 [Nambu Hall (2F)] "Photoresponsive Polyester with Movable Cross-links for On-Demand Enzymatic Degradation"

Shuto Okuda *(Graduate School of Science, The University of Osaka)*

P17 [Nambu Hall (2F)] "Synthesis of stereoregular uniform cyclic oligomers possessing a dense 1,2,3-triazole backbone"

María Laura Herrera *(Heidelberg University, Centre for Organismal Studies - Developmental Biology/Physiology)*

P18 [Nambu Hall (2F)] "Retinal neurogenesis in adaptation and regeneration in Austrolebias charrua and Oryzias latipes fish"

Oct. 28th (Tue)

<Chairperson : Yoshinori Takashima >

9:45 – 10:45 **Kenji Urayama** *(Department of Material Chemistry, Kyoto University)*
L09 "Flaw Management in Soft Polymer Materials: Resistance and Tolerance
[Nambu Hall (2F)] Strategies"

10:45 – 11:00 **Coffee Break**
[Nambu Hall (2F)]

11:00 – 12:00 **Hiroshi Jinnai** *(Institute of Multidisciplinary Research for Advanced Materials*
L10 *(IMRAM), Tohoku University)*
[Nambu Hall (2F)] "Mechanical Properties and Nano-scale Structural Relation in Polymer Composites Studied by Advanced Electron Microscopy"

12:00 – 13:30 **Lunch Break**

13:30 – 14:00 **Yuichiro Kobayashi** *(Department of Macromolecular Science, Graduate School*
S02 *of Science, The University of Osaka)*
[Nambu Hall (2F)] "Creation of sulfur polymer materials using elemental sulfur"

14:00 – 14:30 **Kenji Yamaoka** *(Department of Macromolecular Science, Graduate School of*
S03 *Science, The University of Osaka)*
[Nambu Hall (2F)] "Interdiffusion of Polymer with Reversible Bonds"

14:00 - 14:45 **Coffee Break**
[Nambu Hall (2F)]

14:45 – 16:45 **Flash Talk & Poster Presentation (Maximum 4 minutes)**
P19-P38

<Chairperson : Masaki Nakahata, Kenji Yamaoka >

Yusuke Tani *(Kyoto University, Graduate School of Engineering, Department*
P19 *of Polymer Chemistry)*
[Nambu Hall (2F)] "Analysis of Intercellular Adhesion Mechanisms Using Claudin-1 Reconstituted Particles for Drug Permeability Control"

Zijun Yan *(Graduate School of Science, The University of Osaka)*
P20 "Synthesis of Amphiphilic Alternating Copolymers of the Dense Triazole
[Nambu Hall (2F)] Backbone with Controlled Stereochemistry and Degree of Polymerization"

Kenta Homma *(The University of Osaka Department of Applied Chemistry)*
P21 "Fabrication of stiffness-tunable gelatin gels to explore effects
[Nambu Hall (2F)] of mechanical preconditioning on cellular senescence"

Naho Matsuura *(Graduate School of Science, The University of Osaka)*
P23 "Polymer synthesis using boronic acid ester formation"
[Nambu Hall (2F)]

P24 [Nambu Hall (2F)]
Iori Ogasa *(Graduate School of Science, The University of Osaka)*
"Effect of Reversible Bonds on Polymer Interfacial Diffusion"

P25 [Nambu Hall (2F)]
Norifumi Fujii *(Department of Applied Physics, Graduate School of Engineering,The University of Osaka)*
"Crystallization Control by laser with beam shaping"

P26 [Nambu Hall (2F)]
Yunpeng Qian *(Graduate School of Science, The University of Osaka)*
"Actuators via Host-guest Complexes for Photoswitchable Adhesives: Selective Peeling-off Property and Reusability"

P27 [Nambu Hall (2F)]
Shogo Nagai *(Physical Chemistry of Biosystems, Institute for Physical Chemistry,Heidelberg University)*
"Spatiotemporal Dynamics of Patient-derived Colorectal Cancer Organoids"

P28 [Nambu Hall (2F)]
Takahisa Matsuzaki *(The University of Osaka /Department of Applied Physics)*
"Biophysical Evaluation of Single Cells to Multi-Cellular Tissues Toward Understanding Life-phenomena"

P29 [Nambu Hall (2F)]
Wijak Yospanya *(Tohoku University / Advanced Institute for Materials Research)*
"Chiral Nano-Morphological Materials - The Space in Between"

P30 [Nambu Hall (2F)]
Xue Li *(Department of Macromolecular Science, Graduate School of Science, The University of Osaka)*
"Creation of Polymeric Materials with Multiple Energy Dissipation Mechanisms"

P31 [Nambu Hall (2F)]
Riki Yoshida *(Department of Applied Physics, Graduate school of Engineering, The University of Osaka)*
"Evaluation of the structure-function relationship of laser-fabricated microtubule networks"

P32 [Nambu Hall (2F)]
Yuta Kameya *(Graduate School of Science, The University of Osaka)*
"Preparation of Citric Acid-Modified Cellulose Composites and Elucidation of Their Toughening Mechanism"

P33 [Nambu Hall (2F)]
Zhuohui Liang *(Graduate School of Science, The University of Osaka)*
"A visible light-curable bio-synthetic hybrid hydrogel for artificial mucus consisting of mucin and boronic acidcontaining polymers"

P34 [Nambu Hall (2F)]
Chunlin Xiao *(Department of Macromolecular Science, Graduate School of Science, The University of Osaka)*
"Reversible Mechanical Interlocking via Stimuli-Triggered Nonhomeomorphic Topology Transformation Enables Highly Efficient Rotaxane Synthesis"

P35 [Nambu Hall (2F)]
Christina Schlagheck *(Heidelberg University Centre for Organismal Studies)*
"Matrix Matters: Guiding Retinal Patterning in Organoid Models"

P36 [Nambu Hall (2F)]
Ma Yunting *(Kyoto University, Graduate School of Engineering, Department of Polymer Chemistry)*
"Effective complexation of Polysaccharide Scaffolds with Proteins using Single-wavelength Microwave"

P37 [Nambu Hall (2F)]
Hiroki Harada *(Graduate School of Science, The University of Osaka)*
"Reversible Crosslinking Networks Composited with Conductive Carbon Filler Enabled High Sensitivity and Recycling Strain Sensor"

P38 [Nambu Hall (2F)]
Hikaru Kimura *(Kyoto University, Graduate School of Engineering, Department of Polymer Chemistry)*
"Development of a Flow-Based System for Membrane Protein Continuous Synthesis"

Oct. 29th (Wed)

<Chairperson : Joachim Wittbrodt >

9:45 – 10:45 **L11** [Nambu Hall (2F)]
Martin Bastmeyer *(Karlsruhe Institute of Technology (KIT) Zoological Institute Cell- and Neurobiology)*
"3D Cellular Microenvironments to Study Cell Mechanics"

10:45 – 11:00 [Nambu Hall (2F)]
Coffee Break

11:00 – 12:00 **L12** [Nambu Hall (2F)]
Makoto Sato *(The University of Osaka/ ・Department of Child Development, Graduate School of Child Development (UGSCD); ・Department of Anatomy and Neuroscience, Graduate School of Medicine)*
"Core Principles Underlying the Formation and Function of Neocortical Neuronal Circuits"

12:00 – 12:45 **L13** [Nambu Hall (2F)]
Yoshinori Takashima *(Graduate School of Science, The University of Osaka)*
"Enzymatic Degradation of Movable Cross-Linked Polymeric Materials"

12:45 – 13:00 [Nambu Hall (2F)]
Discussion, Evaluation & Photo