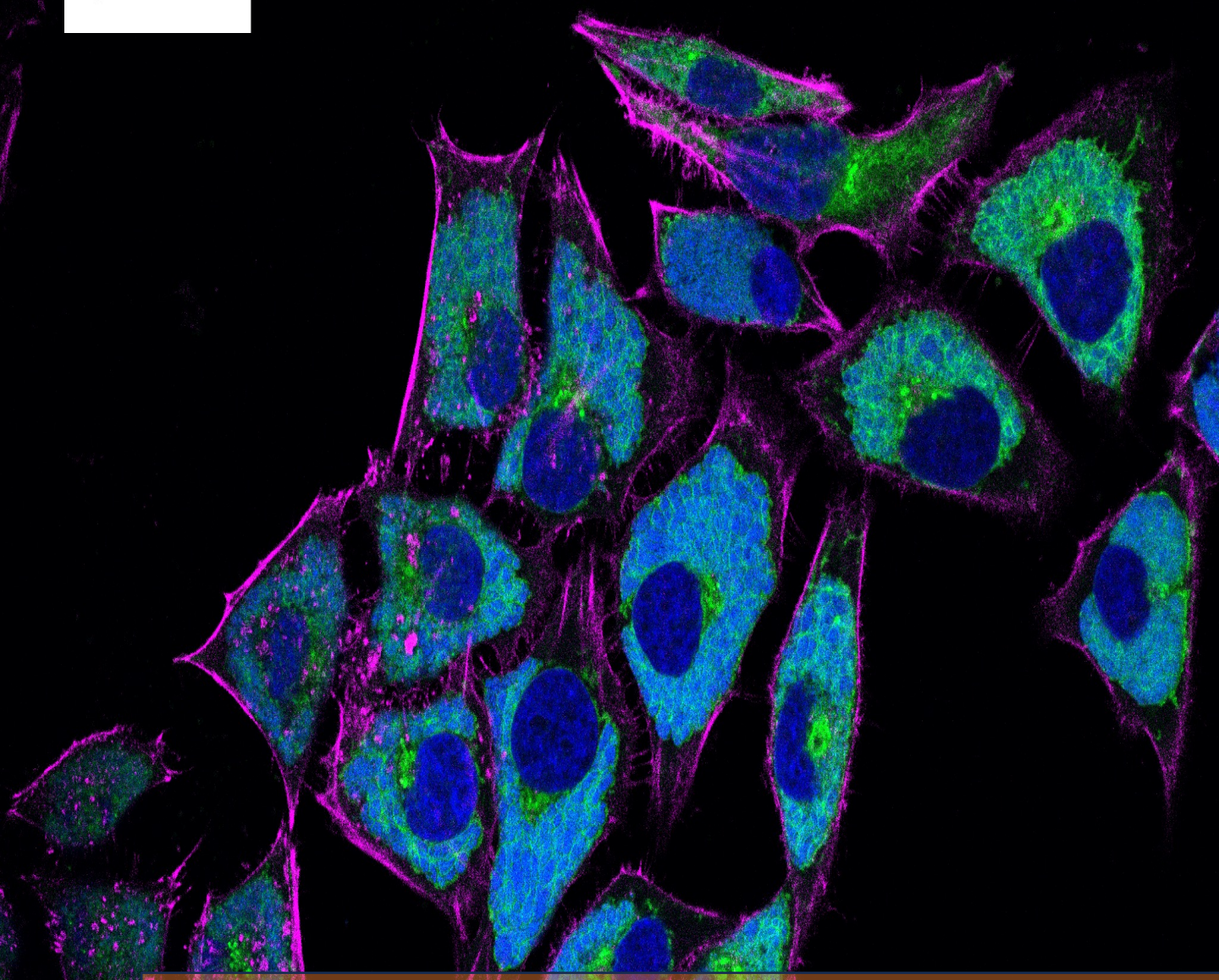
Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG



Indo-German Workshop-2023

# ENABLING METHODOLOGIES FOR RATIONAL DESIGN OF COMPLEX SYSTEMS

**11-13 October 2023. Würzburg Germany**

Organizers: Prof. Dr. Jürgen Seibel, Prof. Dr. Bernd Engels, Prof. Dr. Sandeep Verma

Venue: Residenz Würzburg (Toscanasaal), Germany

## Wednesday, 11th October 2023

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| 08.00 - 8:45 | **Registration** |
| 08.45 - 9.00 | **Welcome & Introduction** |
| 09.00 - 9.35 | **Prof. Dr. Sivapriya Kirubakaran**<br>Targeting one kinase and addressing two types of cancers:<br>A new class of TLK (Tousled-like kinase) inhibitors |
| 09.35 - 10.10 | **Prof. Dr. Thiruvancheril G. Gopakumar**<br>2D Molecular Materials for Electronics Applications |
| 10.10 - 10.45 | **Prof. Dr. Thomas Schrader**<br>Advanced Molecular Tweezers – Revolutionary Treatment<br>of Neurodegenerative Diseases and Viral Infections |
| 10.45 - 11.15 | **Coffee break** |
| 11.15 - 11.50 | **Prof. Dr. Florian Beuerle**<br>Functional Porous Boronate Ester Cage Materials |
| 11.50 - 12.25 | **Prof. Dr. Satish Patil**<br>Science of Triplet Excitons |
| 12.25 - 13.00 | **Prof. Dr. Nadja Simeth**<br>Opto-Bioorganic Chemistry for Smart<br>Biological Tools and Labeling Agents |
| 13.00 - 14.30 | **Lunch** |
| 14.30 - 15.05 | **Prof. Dr. Markus Sauer**<br>Molecular Resolution Fluorescence Imaging |
| 15.05 - 15.40 | **Dr. Westphal**<br>The Indo-German Science and Technology Centre (IGSTC):<br>Mandate, Mission and Programme Portfolio |
| 15.40 - 16.00 | **Coffee break** |
| 16.00 - 16.35 | **Prof. Dr. Sandeep Verma**<br>Round table for projects and initiatives |
| 19.00 - 21.00 | **Frankonian Postersession** |

## Thursday, 12th October 2023

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| 08.45 - 9.00 | **Introduction** |
| 09.00 - 9.35 | **Prof. Dr. Holger Braunschweig**<br>Activation of Small Molecules: Can Boron act as a Transition Metal? |
| 09.35 - 10.10 | **Prof. Dr. R. Boomi Shankar**<br>Molecular Ferroelectric Materials and their Piezoelectric Nanogenerators Supported by Amino-P(V) Cations |
| 10.10 - 10.45 | **Marcel Bamberg**<br>Chloride-Encapsulating [20]Silafulleranes: Making Use of the Endohedral Guest by 35Cl NMR Spectroscopy |
| 10.45 - 11.15 | **Coffee break** |
| 11.15 - 11.50 | **Prof Frank Würthner**<br>Nanographene Dicarboximides – New Horizons in Colorant Research |
| 11.50 - 12.25 | **Prof. Dr. Govindasamy Sekar**<br>Asymmetric Synthesis of Chiral Pyrrolothiazine and Tetrasubstituted Dihydropyrrole using Domino Cycloaddition/Rearrangement |
| 12.25 - 13.00 | **Prof. Vishal Rai**<br>Disintegrate theory for precision engineering of proteins and antibodies |
| 13.00 - 14.30 | **Lunch** |
| 14.30 - 15.05 | **Prof. Dr. Claudia Höbarthner**<br>Molecular architectures of functional nucleic acids |
| 15.05 - 15.40 | **Prof. Dr. S. G. Srivatsan**<br>Probing pathogenic nucleic acid motifs using functionalized nucleoside toolbox |
| 15.40 - 16.00 | **Coffee break** |
| 16.00 - 16.35 | **Prof. Sonu Gandhi**<br>Nanomaterials: major advancements in disease diagnostics |
| 16.35 - 17.10 | **Prof. Dr. C. Eggeling**<br>Studying molecular membrane dynamics with advanced optical microscopy |
| 17.10 - 17.45 | **Prof. Dr. Aamir Nazir**<br>Understanding Neurological Resilience Employing *C. elegans* model:<br>The Role of Glia-enriched PTR-10 in Neuronal Health |
| 19.00 - 22.00 | **Residence cellar with dinner** |

## Friday, 13th October 2023

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| 08.45 - 9.00 | **Introduction** |
| 09.00 - 9.35 | **Prof. Dr. Thomas Basché**<br>The energy gap law at work: Emission yield and rate fluctuations of single NIR emitters |
| 09.35 - 10.10 | **Prof. Dr. Anand Singh**<br>Photochemical Functionalization of π-Systems: New Synthetic Strategies |
| 10.10 - 10.45 | **Prof. Dr. Caroline Kisker**<br>The other side of XPD: the crucial role of the Arch domain for helicase action |
| 10.45 - 11.15 | **Coffee break** |
| 11.15 - 11.50 | **Prof. Dr. Tanja Schirmeister**<br>Inhibitors and tool compounds for methyltransferases and TME proteases |
| 11.50 - 12.25 | **Prof. Dr. Tapasya Srivastava**<br>Epigenetic modulations in the hypoxic tumour microenvironment |
| 12.25 | **End of symposium** |
| 13.00 - 14.30 | **Lunch** |

*optional*

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| 15.00 - 17.00 | **Guided tour of the UNESCO world heritage site Residence** |
| 18.00 - 21.00 | **Campus tour**<br>**E**xploring the chemistry of Würzburg |

**Saturday, 14th October 2023**

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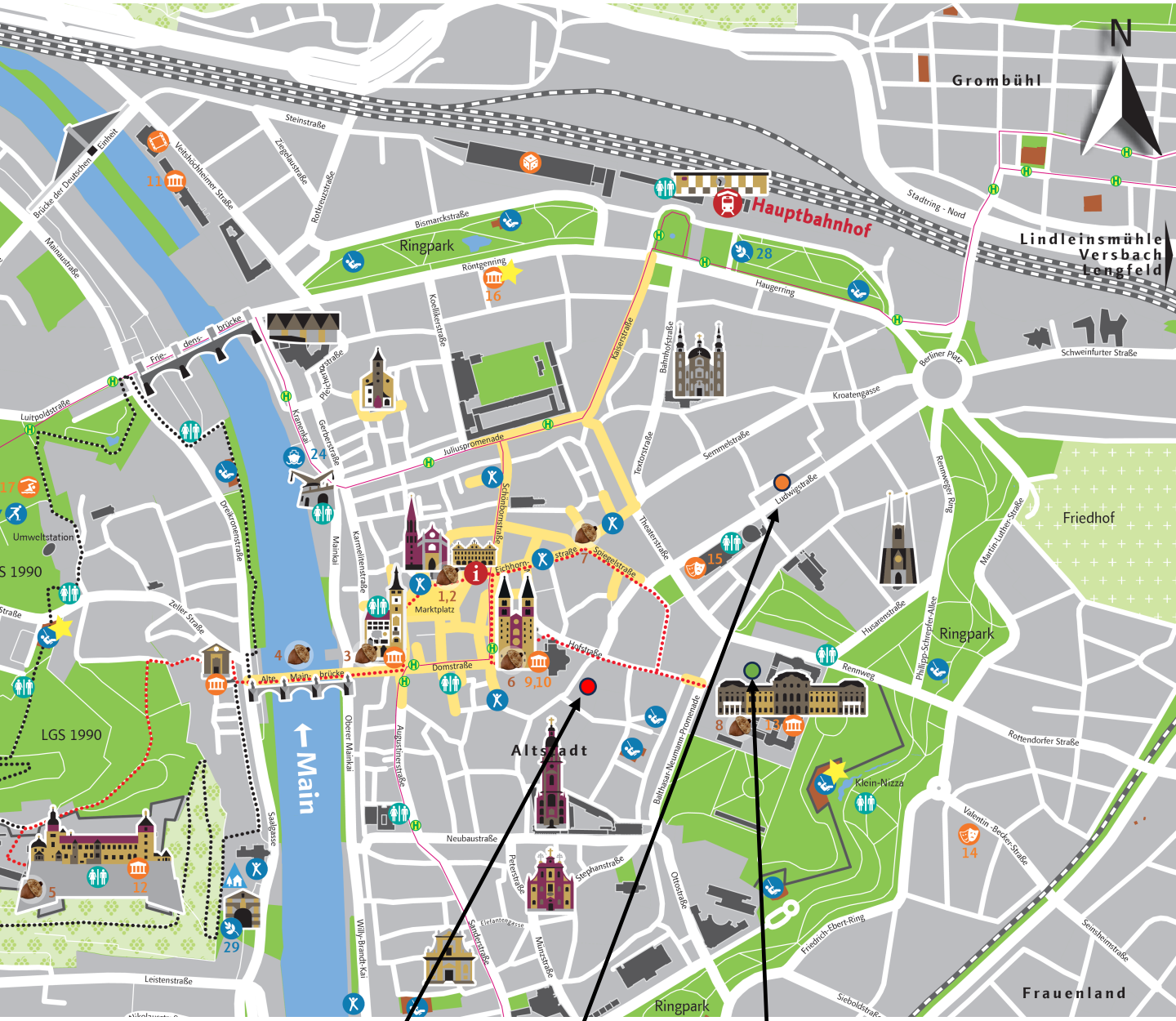
| 9.00 - 15.00 | **Boat trip to Veitshöchheim** |

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**How to get from Frankfurt Airport to Würzburg?**

Frankfurt Airport train station is located at Terminal 1 and offers high-speed ICE train connections to Würzburg. The train journey time between Frankfurt Airport (FRA) and Würzburg is around 1h 9m and covers a distance of around 130 km. Operated by Deutsche Bahn Intercity-Express the Frankfurt Airport (FRA) to Würzburg train service departs from Frankfurt and arrives in Würzburg main train station (direct train). Tickets can be either booked in advance with www.deutsche-bahn.de or at the ticket counter at Frankfurt Airport train station.

# About the venue

**The Residence:**

The Würzburg Residence, often simply referred to as "the Residence," is a UNESCO World Heritage Site and one of the most magnificent palaces in Europe. It was built in the 18th century under the patronage of the Prince-Bishops of Würzburg, particularly Prince-Bishop Johann Philipp Franz von Schönborn. The architects responsible for this architectural marvel were Balthasar Neumann and Johann Lukas von Hildebrandt. The Residence stands as a testament to the opulence and power of the prince-bishops during that era.

The exterior of the Residence is an exquisite example of Baroque architecture, featuring ornate facades, lavish sculptures, and meticulously landscaped gardens. However, it's the interior that truly takes one's breath away. The highlight of the Residence is the grand staircase, a masterpiece of illusionistic frescoes painted by the Venetian artist Giovanni Battista Tiepolo. This masterpiece gives the illusion of a vast, open space leading to the heavens.

Inside, visitors can explore numerous opulent rooms, including the White Hall, the Imperial Hall, and the Mirror Cabinet. These rooms are adorned with lavish decorations, stunning frescoes, and period furniture, all reflecting the wealth and artistic sophistication of the time.

**The Toscanasaal:**

The Toscanasaal, or the Tuscany Hall, is one of the most exquisite rooms within the Würzburg Residence. It's named after its Italian-inspired design, and it serves as a prime example of Rococo architecture. Located on the second floor of the Residence, the Toscanasaal was designed by the aforementioned architect Balthasar Neumann.

What makes the Toscanasaal truly special is its ornate stucco work and magnificent frescoes. The ceiling fresco, painted by Giovanni Battista Tiepolo, depicts scenes from the life of Emperor Constantine and is considered one of Tiepolo's masterpieces. The walls are adorned with delicate stucco decorations, mirrors, and gilded accents, creating an atmosphere of unparalleled beauty and luxury.

The Toscanasaal was historically used for ceremonial and state events, adding a sense of grandeur and significance to any occasion held within its walls. Today, it continues to host events and serves as a stunning backdrop for special occasions and cultural gatherings.

In conclusion, the Würzburg Residence and the Toscanasaal are not only architectural gems but also symbols of the rich history and cultural heritage of Würzburg. They offer visitors a glimpse into the opulence of the past, showcasing the artistic achievements of their time while providing a sense of wonder and inspiration to all who have the privilege to explore them.

# Content

The behavior of complex systems is based on a multilayered interplay of many processes occurring at the molecular level. Precise knowledge of these processes and how they influence each other is necessary for fundamental understanding and targeted manipulation of these systems. Getting to the bottom of these fundamentals requires collaboration among groups with very different skills. Since such groups often belong to very different scientific communities, assembling suitable consortia is very difficult. The goal of the proposed workshop entitled *Enabling Methodologies for Rational Design of Complex Systems* is to remedy this situation and to bring together German and Indian groups with the necessary complementary research directions and expertise. The workshop will take place in Würzburg (Oct. 11$^{th}$ – 13$^{th}$) and comprises speakers from India and Germany.


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INDO-GERMAN SCIENCE AND TECHNOLOGY CENTRE

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