

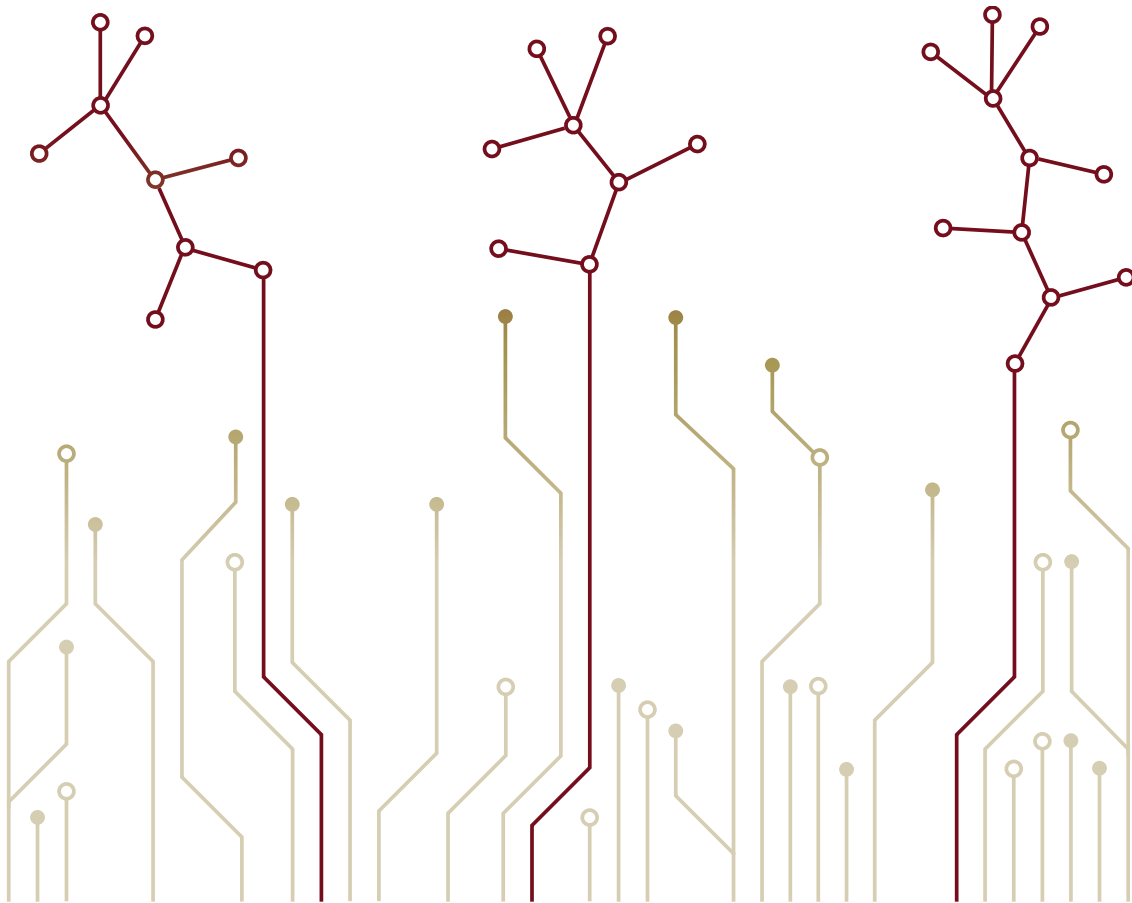


ZiF

Zentrum für interdisziplinäre Forschung
Center for Interdisciplinary Research
Universität Bielefeld

1st International Conference on Data Storage in Molecular Media

21 – 23 March 2022



Convenors Georges Hattab | Dominik Heider | Anke Becker (Marburg, GER)

Contact Marina Hoffmann | Tel +49 521 106-2768 | marina.hoffmann@uni-bielefeld.de

Monday — 21 March*Session Chair: Dominik Heider*10:45 **Start of the conference — Welcome address by the organizers**

11:00 Daniella Bar-Lev Adversarial Torn-paper Codes
Technion, Israel Institute of Technology, Haifa, IL

11:45 Hannah F. Löchel Fractal construction of constrained code words
for DNA storage systems
Philipps-University Marburg, Marburg, DE
12:30 — *Break** —

12:45 — *Lunch break* —

13:30 Belaid Hamoum A DNA Data Storage Channel Model Trained on
Genomic Data with Nanopore Sequencing
Université Bretagne Sud, Lorient, FR

14:15 Gadi Chaykin DNA-Storalator: End-to-End DNA storage
simulator
Technion, Israel Institute of Technology, Haifa, IL
15:00 — *Break** —

15:30 Katharina Markus Digital preservation risks relevant for storage
media
*The German National Library of Medicine,
Cologne, DE*

16:15 Marius Welzel Constrained coding and error correction for DNA
data storage based on arithmetic coding,
sequential decoding, and fountain codes
Philipps-University Marburg, Marburg, DE
17:00 — *Break** —

17:30 **John M. Hoffman** **Keynote**
DNA Data Storage: Opportunities, Challenges,
and Use cases
DNA Data Storage Alliance
18:30 **End of day 1**

Tuesday — 22 March*Session Chair: Sangam Chatterjee*

10:30	Simon Nier	Organotetrachalcogenide Clusters as Molecular Long-Term Data Storage Devices <i>Philipps-University Marburg, Marburg, DE</i>
11:15	Roy Shafir	Sequence Reconstruction Under Stutter Noise in Enzymatic DNA Synthesis <i>Technion, Israel Institute of Technology, Haifa, IL</i>
12:00	— <i>Break*</i> —	
<hr/>		
12:30	— <i>Lunch</i> —	
<hr/>		
13:30	Brenda Rubenstein	Keynote Computing with molecules <i>Brown University, Providence, Rhode Island, USA</i>
14:30	— <i>Break*</i> —	
<hr/>		
15:00	Chisom Ezekannagha	DNAsmart: Multiple Attribute Ranking Tool for DNA Data Storage Systems <i>Philipps-University Marburg, Marburg, DE</i>
15:45	Omer Sabary	Reconstruction Algorithms for DNA-Storage Systems <i>University of California San Diego, California, USA</i>
16:30	— <i>Break*</i> —	
17:00	Open discussion	Data storage challenges in molecular media Moderated by Georges Hattab
18:00	End of day 2	

Wednesday — 23 March*Session Chair: Anke Becker*

11:00	Dominique Lavenier	Experimental DNA storage platform <i>IRISA/CNRS, Rennes, FR</i>
11:45	Tolganay Kabdullayeva	Digital information storage in bacterial cells <i>Philipps-University Marburg, Marburg, DE</i>
12:30	Chloé Berton	A first proposal for secure data storage into DNA molecules compliant with biological constraints <i>Institut Mines-Télécom Atlantique, Brest, FR</i>
13:15	— <i>Break*</i> —	
<hr/>		
13:30	— <i>Lunch</i> —	
<hr/>		
14:30	Alex El-Shaikh	High-Scale Random Access on DNA Storage Systems <i>Philipps-University Marburg, Marburg, DE</i>
15:15	Swapnil Bhatia	Encoding Data in Identifier Subsets <i>CATALOG Technologies, Boston, MA, USA</i>
16:00	— <i>Break*</i> —	
<hr/>		
16:30	Georg Seelig	Keynote DNA computing for DNA data storage and disease diagnosis <i>University of Washington, Seattle, WA, USA</i>
18:00	Concluding remarks — End of the conference	

* *Breakout room(s) to enable further discussions. All times are reported in CET.*