



# DNA 23

<b>START TIME</b>	<b>END TIME</b>	<b>EVENT</b>	<b>SPEAKERS/AUTHORS</b>	<b>PRESENTATION TITLE</b>
<b>SUNDAY</b>				
<b>9AM</b>	<b>11AM</b>	Registration & Check-in	At San Jacinto Main Hall	Coffee and light snacks provided
<b>11AM</b>	<b>11:45AM</b>	Education Workshop	Eric Klavins	<b>Teaching Synthetic Biology with the Aquarium Laboratory Operating System</b>
<b>11:45AM</b>	<b>12:30PM</b>	Education Workshop	Carlos Castro	<b>Engaging undergraduate (and younger) students in DNA nanotechnology</b>
<b>12:30PM</b>	<b>1:30PM</b>	Lunch	At San Jacinto Main Hall	Boxed lunch provided
<b>1:30PM</b>	<b>2:150PM</b>	Education Workshop	Brian Korgel	<b>Using Virtual Reality to Teach Materials</b>
<b>2:15PM</b>	<b>3PM</b>	Synthetic Biology Workshop	Bill Peck	<b>Scaling Synthetic Biology</b>
<b>3PM</b>	<b>3:45PM</b>	Synthetic Biology Workshop	Sri Kosuri	<b>Synthetic Approaches to Studying Sequence-Function Relationships</b>
<b>3:45PM</b>	<b>4PM</b>	Refreshments	Coffee and light snacks	
<b>4PM</b>	<b>4:45PM</b>	Synthetic Biology	Reinhard Heckel	<b>Robust preservation of digital information on DNA with error correcting codes</b>
<b>4:45PM</b>	<b>5:45PM</b>	Tutorial Lecture	Rebecca Schulman & Ilya Finkelstein	<b>2D Computation</b>
<b>6PM</b>	<b>9PM</b>	Arrival Mixer	At UT Alumni Center	Drinks and Appetizers provided

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<b>MONDAY</b>					
<b>8:30AM</b>	<b>9AM</b>	Registration & Check-in	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>9AM</b>	<b>9:15AM</b>	Opening Remarks	Andrew Ellington		
<b>9:15AM</b>	<b>10:15AM</b>	Plenary Presentation	Karin Strauss	<b>Storing Digital Data in Synthetic DNA</b>	<b>Reif</b>
<b>10:15AM</b>	<b>10:40AM</b>	Presentation, Track A	Matthew R. Lakin and Andrew Phillips.	<b>Automated, constraint-based analysis of tethered DNA nanostructures.</b>	<b>Reif</b>
<b>10:40AM</b>	<b>10:55AM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>10:55AM</b>	<b>11:20AM</b>	Presentation, Track B	Cheulhee Jung, Peter Allen and Andrew Ellington.	<b>A simple, cleated DNA walker that hangs on to surfaces</b>	<b>Kawamata</b>
<b>11:20AM</b>	<b>11:45AM</b>	Presentation, Track A	Abdulmelik Mohammed and Mustafa Hajji	<b>Unknotted Strand Routings of Triangulated Meshes</b>	<b>Kawamata</b>
<b>11:45AM</b>	<b>1:00PM</b>	Lunch	At San Jacinto Main Hall	Boxed lunch provided	
<b>1:00PM</b>	<b>1:25PM</b>	Presentation, Track A	Bjarke N. Hansen, Kim S. Larsen, Daniel Merkle and Alexei Mihalchuk	<b>DNA-Templated Synthesis Optimization</b>	<b>Orponen</b>
<b>1:25PM</b>	<b>1:50PM</b>	Presentation, Track B	Jocelyn Kishi, Thomas Schaus, Nikhil Gopalkrishnan, Feng Xuan and Peng Yin.	<b>Programmable autonomous synthesis of single-stranded DNA</b>	<b>Orponen</b>
<b>1:50PM</b>	<b>2:15PM</b>	Presentation, Track A	Yo-Sub Han and Hwee Kim	<b>Ruleset Optimization on Isomorphic Oritatami Systems</b>	<b>Orponen</b>
<b>2:15PM</b>	<b>2:30PM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>2:30PM</b>	<b>2:45PM</b>	Presentation, Track C	Wen Wang, Silian Chen, Tanxi Bai, Ye Xiang and Bryan Wei	<b>Self-assembly of addressable DNA wireframe nanostructures from junction motifs</b>	<b>Seeman</b>
<b>2:45PM</b>	<b>3:00PM</b>	Presentation, Track C	Fei Zhang, Xiaodong Qi, Zhaoming Su, Shuoxing Jiang, Wah Chiu, Yan Liu and Hao Yan	<b>Programming Highly Knotted Molecular Topologies Using Single-stranded Nucleic Acids</b>	<b>Seeman</b>
<b>3:00PM</b>	<b>3:15PM</b>	Presentation, Track C	Cheulhee Jung, John Hawkins, Stephen Jones Jr., Yibei Xiao, James Rybarski, Kaylee Dillard, Jeffrey Hussmann, Fatema Saifuddin, Siyuan Wang, Andrew Ellington, Ailong Ke, William Press and Ilya Finkelstein	<b>Adaptation of the Next Generation Sequencing Platform for Molecular Applications</b>	<b>Seeman</b>
<b>3:15PM</b>	<b>4:15PM</b>	Tutorial Lecture	David Taylor & Nicoli Francesca	<b>Electron Microscopy</b>	<b>Seeman</b>
<b>5:30PM</b>	<b>7PM</b>	Poster Session I	At San Jacinto Main Hall	Drinks and Appetizers provided	

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<b>TUESDAY</b>					
<b>8:30AM</b>	<b>9AM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>9AM</b>	<b>10AM</b>	Plenary Presentation	David Doty	<b>The limits of chemical computing</b>	<b>Condon</b>
<b>10AM</b>	<b>10:25AM</b>	Presentation, Track A	William Poole, Andres Ortiz-Munoz, Abhishek Behera, Nick Jones, Thomas Ouldrige, Erik Winfree and Manoj Gopalkrishnan.	<b>Chemical Boltzmann Machines</b>	<b>Condon</b>
<b>10:25AM</b>	<b>10:40AM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>10:40AM</b>	<b>11:05AM</b>	Presentation, Track A	Monir Hajiaghayi, Anne Condon, David Kirkpatrick and Jan Manuch.	<b>Simplifying Analyses of Chemical Reaction Networks for Approximate Majority</b>	<b>Stefanovic</b>
<b>11:05PM</b>	<b>11:30AM</b>	Presentation, Track A	Dan Alistarh, Bartłomiej Dudek, Adrian Kosowski, Daivid Soloveichik and Przemysław Uznański.	<b>Robust Detection in Leak-Prone Population Protocols</b>	<b>Stefanovic</b>
<b>11:30PM</b>	<b>11:55AM</b>	Presentation, Track A	Muppirala Viswa Virinchi, Abhishek Behera and Manoj Gopalkrishnan.	<b>A stochastic molecular scheme for an artificial cell to infer its environment from partial observations</b>	<b>Stefanovic</b>
<b>11:55AM</b>	<b>1:30PM</b>	Lunch on own	<b>Break for self-sourced lunch. List of nearby restaurants suggestions available on our website.</b>		
<b>1:30PM</b>	<b>2:30PM</b>	Plenary Presentation	Eric Klavins	<b>Genetic Circuits and Multicellular Systems with CRISPR/dCas9</b>	<b>Phillips</b>
<b>2:30PM</b>	<b>2:55PM</b>	Presentation, Track A	Marta Andrés Arroyo, Sarah Cannon, Joshua J. Daymude, Dana Randall and Andréa W. Richa.	<b>A Stochastic Approach to Shortcut Bridging in Programmable Matter</b>	<b>Phillips</b>
<b>2:55PM</b>	<b>3:20PM</b>	Presentation, Track A	David Doty, Trent Rogers, David Soloveichik, Chris Thachuk and Damien Woods.	<b>Thermodynamic Binding Networks</b>	<b>Phillips</b>
<b>3:20PM</b>	<b>3:35PM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>3:35PM</b>	<b>4PM</b>	Presentation, Track A	Stefan Badelt, Seung Woo Shin, Robert F. Johnson, Qing Dong, Chris Thachuk and Erik Winfree.	<b>A general-purpose CRN-to-DSD compiler with formal verification, optimization, and simulation capabilities.</b>	<b>Woods</b>
<b>4PM</b>	<b>5PM</b>	Tutorial Lecture	David Soloveichik & David Doty	<b>Strand displacement &amp; tile assembly</b>	<b>Woods</b>
<b>5:30PM</b>	<b>7PM</b>	Poster Session II	At San Jacinto Main Hall	Drinks and Appetizers provided	

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**WEDNESDAY**

<b>8:30AM</b>	<b>9AM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>9AM</b>	<b>10AM</b>	Plenary Presentation	Christopher Moore	<b>Universality, Hardness, Engineering, and Messiness</b>	<b>Schweller</b>
<b>10:00AM</b>	<b>10:15AM</b>	Presentation, Track C	Pierre-Étienne Meunier and Damien Woods	<b>The non-cooperative tile assembly model is not intrinsically universal or capable of bounded Turing machine simulation</b>	<b>Schweller</b>
<b>10:15AM</b>	<b>10:40AM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>10:40AM</b>	<b>11:05AM</b>	Presentation, Track A	Robert Schweller, Andrew Winslow and Tim Wylie	<b>Complexities for High-Temperature Two-Handed Tile Self-Assembly</b>	<b>Patitz</b>
<b>11:05AM</b>	<b>11:30PM</b>	Presentation, Track A	Yen-Ru Chin, Jui-Ting Tsai and Ho-Lin Chen	<b>A Minimal Requirement for Self-Assembly of Lines in Polylogarithmic Time</b>	<b>Patitz</b>
<b>11:30PM</b>	<b>11:55PM</b>	Presentation, Track B	Damien Woods, David Doty, Cameron Myhrvold, Joy Hui, Felix Zhou, Peng Yin and Erik Winfree	<b>Iterated Boolean circuit computation via a programmable DNA tile array</b>	<b>Patitz</b>
<b>11:55AM</b>	<b>1:00PM</b>	Lunch	At San Jacinto Main Hall	Boxed lunch provided	
<b>1:00PM</b>	<b>1:25PM</b>	Presentation, Track B	Anna J Simon, Arti Pothukuchy, Jillian Gerberich, Janelle Leggere, Jimmy Golihar, Cheulhee Jung, David Taylor and Andrew Ellington.	<b>Supercharging enables tunable hierarchical assembly of synthetic proteins</b>	<b>Fygenson</b>
<b>1:25PM</b>	<b>1:50PM</b>	Presentation, Track B	Dongsheng Liu	<b>Two-dimensional assembly of amphiphilic molecules into free-floating nanosheets with tailored size and shape</b>	<b>Fygenson</b>
<b>1:50PM</b>	<b>2:15PM</b>	Presentation, Track B	Sifang Chen and Georg Seelig	<b>Programmable DNA pattern formation</b>	<b>Fygenson</b>
<b>2:15PM</b>	<b>2:30PM</b>	Group Photo			
<b>2:30PM</b>		Free time to explore Austin	Please see our Explore Austin page for suggestions and tips.		

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<b>THURSDAY</b>					
<b>8:30AM</b>	<b>9AM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>9AM</b>	<b>10:00AM</b>	Plenary Presentation	Yannick Rondelez	<b>DNA circuits for diagnostics and evolution</b>	<b>Qian</b>
<b>10:00AM</b>	<b>10:25AM</b>	Presentation, Track A	Sherry Xi Chen and Georg Seelig	<b>A DNA neural network constructed from molecular variable gain amplifiers</b>	<b>Qian</b>
<b>10:25AM</b>	<b>10:40AM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>10:40AM</b>	<b>11:05AM</b>	Presentation, Track B	Sundipta Rao, Yuan-Jyue Chen and Georg Seelig	<b>Next generation plasmid-derived DNA gates with quantitatively controlled kinetics</b>	<b>Zhang</b>
<b>11:05AM</b>	<b>11:30AM</b>	Presentation, Track A	Sedigheh Zolaktaf, Frits Dannenberg, Xander Rudelis, Anne Condon, Joseph M Schaeffer, Mark Schmidt, Chris Thachuk and Erik Winfree	<b>Inferring Parameters for an Elementary Step Model of DNA Structure Kinetics with Locally Context-Dependent Arrhenius Rates</b>	<b>Zhang</b>
<b>11:30AM</b>	<b>11:45AM</b>	Presentation, Track C	Gourab Chatterjee, Neil Dalchau, Richard Muscat, Andrew Phillips and Georg Seelig	<b>A spatially localised architecture for fast and modular DNA computing</b>	<b>Zhang</b>
<b>11:45AM</b>	<b>1:15PM</b>	Lunch on Own	Break for self-sourced lunch. List of nearby restaurants suggestions available on our website.		
<b>1:15PM</b>	<b>1:40PM</b>	Presentation, Track B	Antoine Bader and Scott Cockroft	<del>Enhancing the fidelity of toehold-sequestered nucleic acid devices</del>	<b>Seelig</b>
<b>1:40PM</b>	<b>2:05PM</b>	Presentation, Track A	Boya Wang, Chris Thachuk, Andrew Ellington and David Soloveichik	<b>The design space of strand displacement cascades with toehold-size clamps</b>	<b>Seelig</b>
<b>2:05PM</b>	<b>2:30PM</b>	Presentation, Track C	Shohei Kotani and William Hughes	<b>Multi-Arm Junctions for Dynamic DNA Nanotechnology</b>	<b>Seelig</b>
<b>2:30PM</b>	<b>2:45PM</b>	Refreshments	At San Jacinto Main Hall	Coffee and light snacks provided	
<b>2:45PM</b>	<b>3:45PM</b>	Plenary Presentation	Vincent Noireaux	<b>The all E. coli TXTL: from gene circuits to synthetic cells in test tubes</b>	<b>Rondelez</b>
<b>3:45PM</b>	<b>4PM</b>	Presentation, Track C	Samuel Schaffter and Rebecca Schulman	<b>An orthogonal genelet architecture for inducible state-switching of a bistable circuit</b>	<b>Rondelez</b>
<b>4PM</b>	<b>4:15PM</b>	Presentation, Track C	Aurore Dupin, Berta Tino and Friedrich C. Simmel	<b>Compartmentalization and signaling in cell-free synthetic gene circuits</b>	<b>Rondelez</b>
<b>6PM</b>	<b>9PM</b>	Banquet/Awards	At UT Alumni Center	Buffet dinner provided	