

PROGRAM

The 12th International Workshop on

SEquences and Their Applications (SETA)



https://seta-2024.github.io

July 1-5, 2024

University of Essex, Essex, United Kingdom.

$\operatorname{SETA2024}$ - Schedule (July 01-05, 2024)

08:30-09:50	Monday	Tuesday	Thursday	Friday
Registration Coffee & Tea	08:30-09:50	08:30-09:00	08:30-09:00	08:30-09:00
Coffee & Tea		Coffee & Tea	Coffee & Tea	Coffee & Tea
Pingzhi Fan Christos Masouros Nam Yul Yu	Registration	09:00-10:00	09:00-10:00	09:00-10:00
09:50-10:00 Opening 10:00-11:00 10:00-10:30 10:00-10:30 10:00-10:30 Keynote Talk 1 Sihem Mesnager Break Break Break 11:00-11:20 Session 4 Pantelimon Stănică Featured Invited Talk Session 8 10:30-11:20 4 papers 11:20-12:10 Session 1 2 papers Pantelimon Stănică 11:20-12:10 Wai-Ho Mow Closing Lumb 14:00-15:15 Session 2 Keynote Talk 3 Papers Panel Discussion TBA Departure 15:10-15:30 Break Break Break Break Break Departure 15:30-16:45 Session 3 Papers Session 5 Papers Departure 15:30-16:45 Session 3 Papers Session 5 Papers Papers 15:30-16:45 Session 3 Papers Session 5 Papers Papers 15:30-16:45 Session 5 Papers Session 7 Papers Papers 15:30-16:45 Session 7 Papers Papers Papers 15:	Coffee & Tea	Keynote Talk 2	Keynote Talk 4	Keynote Talk 5
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10:00-11:00	09:50-10:00			
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Session 2: Crypt. Functions and Algebraic Codes Session 6: Linear Compl. and deBruijn Sequences	Session Topics			
	Session 1: Autocorrelation of Sequences		Session 5: Permutations over Finite Fields,	
Session 3: Randomness of Sequences Session 7: Complementary Sequences II	Session 2: Crypt. Functions and Algebraic Codes		Session 6: Linear Compl. and deBruijn Sequences	
	Session 3: Randomn	ness of Sequences	Session 7: Complementary Se	equences II
Session 4: Complementary Sequences I	Session 4: Complem	entary Sequences I		

- \bullet Brief introductions of the invited speaks can be found at the conference link
- The arrangement on Wednesday can be found at the conference link

SETA2024 Program (Monday)

08:30-9:50	Registration Break			
	Coffee & Tea			
09:50-10:00		Conference Opening		
	Dean of	Maria Fasli Dean of the Faculty of Science and Health, the University of Essex		
10:00-11:00	Sihem Mesnager Keynote Talk	On algebraic problems on finite fields and their importance more than ever in the study of S-boxes in block ciphers	abstract	
11:00-11:20		Break		
	Session 1:	Autocorrelation of Sequences		
11:20-11:45	Gangsan Kim	Balanced binary sequences with favorable autocorrelation from cyclic relative difference sets	paper	
11:45-12:10	Daniel Katz	Moments of autocorrelation demerit factors	paper	
12:10-14:00		Lunch		
	Session 2:	Cryptographic Functions for and Algebraic Codes		
14:00-14:25	Yongbo Xia	A direct method for calculating the differential spectrum of an APN power mapping	paper	
14:25-14:50	Ana Salagean	Bounds for the average degree- k monomial density of Boolean functions	paper	
14:50-15:10	Guangkui Xu	Optimal few-weight codes from projective spaces	paper	
15:10-15:30		Coffee & Tea Break		
Session 3: De Bruijn Sequences and Linear Complexity				
15:30-15:55	Guang Gong	Filtering modified de Bruijn sequences with designated linear complexity	paper	
15:55-16:20	Martianus Frederic Ezerman	New successor rules to efficiently produce exponentially many binary de Bruijn sequences	paper	
16:20-16:45	Domingo Gomez	On the linear complexity of shrunken sequences	paper	

SETA2024 Program (Tuesday)

08:30-09:00	Coffee & Tea			
09:00-10:00	Pingzhi Fan Keynote Talk	Recent advances in signal design for integrated sensing & communications	abstract	
10:00-10:30		Coffee & Tea Break		
	Session 4: Co	omplementary Sequences I		
10:30-10:55	Rajen Kumar	Multiple spectrally null constrained complete complementary codes of various lengths over small alphabet	paper	
10:55-11:20	Kai Liu	Construction of cross Z-complementary sequence set with large CZC ratio	paper	
11:20-11:45	Dian Li	On average zero-correlation zone of Golay complementary pairs	paper	
11:45-12:10	Qi Zeng	Hierarchical frequency hopping technique for heterogeneous multi-tier networks	paper	
12:10-14:00	Lunch			
14:00-15:00	Steven (Qiang) Wang Keynote Talk	A survey of compositional inverses of permutation polynomials over finite fields	paper	
15:00-15:30		Coffee & Tea Break		
	Session 5: Pe	ermutations over Finite Fields		
15:30-15:55	Mohit Pal	A proof of a conjecture on trivariate permutations	paper	
15:55-16:20	Lucas Krompholz	On the bijectivity of the map χ	paper	
16:20-16:45	Steven Wang	An effective approach to enumerate universal cycles for k -permutations	paper	
End of Program				

SETA2024 Program (Thursday)

08:30-09:00	Coffee & Tea			
09:00-10:00	Christos Masouros Keynote Talk	Sustainable and multifunctional wireless networks	abstract	
10:00-10:30		Coffee & Tea Break		
	Featured Inv	ited Talk		
10:30-11:20	Pantelimon Stănică Featured Invited Talk	Threshold implementations and permutations' decompositions: a number theoretical approach	abstract	
11:20-12:10	Wai-Ho Mow Featured Invited Talk	Bus coding for low-power on-chip interconnects	abstract	
12:10-14:00		Lunch		
14:00-15:00		Panel Discussion		
15:00-15:30	Coffee & Tea Break			
	Session 6: Randomness of Sequences			
15:30-15:55	Melis Aslan	Observations on NIST SP 800-90B entropy estimators	paper	
15:55-16:20	Michael Vielhaber	Two pattern properties of binary sequences invariant under the continued fraction operator K (the Berlekamp-Massey Algorithm)	paper	
16:20-16:45	Muhiddin Uğuz	RW-9: A Family of Random Walk Tests	paper	
End of Program				

SETA2024 Program (Friday)

08:30-09:00	Coffee & Tea			
09:00-10:00	Nam Yul Yu Keynote Talk	Pseudorandom sequences for grant-free access in massive machine-type communications	abstract	
	Session 7: Complementary Sequences II			
10:00-10:30	Coffee & Tea Break			
10:30-10:55	Tao Yu	A construction of optimal Z-complementary code sets on partially m -shift orthogonal complementary codes	paper	
11:20-11:45	Avik Ranjan Adhikary	Circular quasi-Florentine rectangles and its application in designing optimal polyphase sequence sets	paper	
11:20-11:45	Yubo Li	Construction of multiple quasi-complementary sequence sets with low inter-set cross-correlation	paper	
11:45-12:10	Kai Liu	New constructions of two-dimensional binary Z-complementary array pairs	paper	
12:10-14:00		Lunch		
End of SETA-2024				