

**IWOTA 2008**  
**INTERNATIONAL WORKSHOP**  
**ON OPERATOR THEORY**  
**AND ITS APPLICATIONS**

**PROGRAM**

Sponsors

**National Science Foundation**

**The College of William and Mary:**

**Office of the Vice Provost for Research**

**Office of the Dean of the Faculty of Arts and Sciences**

**Department of Mathematics**

**Reves Center for International Studies**

Endorsed by the **International Linear Algebra Society**

College of William and Mary

Williamsburg, Virginia, USA

July 22 - 26, 2008

Comprehensive, inclusive conference covering many aspects  
of theoretical and applied operator theory

Celebrating the work and career of  
**Israel Gohberg**  
on the occasion of his 80th birthday

**Organizing committee**

**J. A. Ball** (Blacksburg)

**V. Bolotnikov** (Williamsburg)

**J. W. Helton** (La Jolla)

**L. Rodman** (Williamsburg)

**I. M. Spitkovsky** (Williamsburg)

## **PLENARY SPEAKERS**

**Jim AGLER** (San-Diego, USA)

**Estelle L. BASOR** (San Luis Obispo, USA)

**Albrecht BOETTCHER** (Chemnitz, Germany)

**Percy DEIFT** (New York, USA)

**Israel GOHBERG** (Tel-Aviv, Israel)

**Birgit JACOB** (Delft, The Netherlands)

**Marinus A. KAASHOEK** (Amsterdam, The Netherlands)

**Peter LANCASTER** (Calgary, Canada)

**Jurgen LEITERER** (Berlin, Germany)

**Barbara D. MacCLUER** (Charlottesville, USA)

**Scott A. McCULLOUGH** (Gainesville, USA)

**Nikolai K. NIKOLSKI** (Bordeaux, France)

**Pablo A. PARRILO** (Cambridge, USA)

**Gelu POPESCU** (San-Antonio, USA)

**Stephan RICHTER** (Knoxville, USA)

**Hans SCHNEIDER** (Madison, USA), ILAS Speaker

**Victor VINNIKOV** (Beer-Sheva, Israel)

## SPECIAL SESSIONS:

- **Factorization problems, Wiener - Hopf and Fredholm operators**  
**H. Bart** organizer  
Commonwealth  
Tuesday, July 22, 11:20 - 1:05 and 4:40 - 6:25  
Wednesday, July 23, 11:20 - 1:05 and 5:35 - 6:25; Thursday, July 24, 11:20 - 12:40
- **The Kadison-Singer extension problem**  
**P. Casazza, G. Weiss** organizers  
Chesapeake C  
Friday, July 25, 4:40 - 6:25; Saturday, July 26, 10:30 - 12:40 and 2:30 - 3:20
- **Matrix polynomials and related problems**  
**H. Dym, P. Psarrakos** organizers  
Chesapeake C  
Tuesday, July 22, 10:30 - 1:05; Wednesday, July 23, 10:30 - 12:15
- **Linear operators and linear systems**  
**B. Jacob** organizer  
Chesapeake A    Friday, July 25, 10:30 - 12:40
- **Bezoutians, resultants, inertia theorems and spectrum localization:  
new developments and new results**  
**M.A. Kaashoek, L. Lerer** organizers  
Chesapeake C  
Tuesday, July 22, 4:40 - 6:00; Thursday, July 24, 4:40 - 5:55
- **Interpolation problems**  
**A. Kheifets** organizer  
Chesapeake B  
Wednesday, July 23, 10:30 - 1:05; Saturday, July 26, 2:30 - 3:50
- **Matrix and operator inequalities**  
**C.-K. Li** organizer  
Chesapeake B  
Tuesday, July 22, 4:40 - 6:25; Wednesday, July 23, 4:40 - 6:25
- **Indefinite linear algebra**  
**C. Mehl** organizer  
Chesapeake B    Tuesday, July 22, 10:30 - 12:15
- **Composition operators**  
**B. D. MacCluer, C. C. Cowen** organizers  
Chesapeake A  
Thursday, July 24, 10:30 - 1:05; Friday, July 25, 4:40 - 6:25  
Saturday, July 26, 2:30 - 4:15

- **Direct and inverse scattering transforms for integrable systems and their semiclassical limits**  
**P. Miller, A. Tovbis** organizers  
James  
Thursday, July 24, 10:30 - 12:15 and 4:40 - 5:55; Saturday, July 26, 10:30 - 12:15
- **Structured matrices**  
**V. Olshevsky** organizer  
Chesapeake B  
Thursday, July 24, 10:30 - 1:05 and 4:40 - 5:55;  
Friday, July 25, 10:30 - 1:05 and 4:40 - 6:00; Saturday, July 26, 10:30 - 1:05
- **Multivariable operator theory**  
**G. Popescu, M. Putinar** organizers  
Chesapeake C    Wednesday, July 23, 4:40 - 6:25; Thursday, July 24, 10:30 - 1:05  
Commonwealth    Saturday, July 26, 4:20 - 4:45
- **Applications of indefinite inner product spaces**  
**J. Rovnyak, M. A. Dritschel** organizers  
Chesapeake A  
Tuesday, July 22, 4:40 - 6:25; Wednesday, July 23, 4:40 - 6:25  
Saturday, July 26, 10:30 - 1:05
- **Hypercomplex operator theory**  
**M. Shapiro, J. Ryan** organizers  
James    Friday, July 25, 10:30 - 12:40 and 4:40 - 6:25
- **Matrix completion problems, moment problems and factorizations**  
**H. J. Woerdeman** organizer  
Chesapeake A    Wednesday, July 23, 10:30 - 12:15
- **Spectra of operators: theory, computations and applications**  
**H. Wu** organizer  
Chesapeake A    Tuesday, July 22, 10:30 - 1:05  
James    Tuesday, July 22, 4:40 - 6:00; Wednesday, July 23, 4:40 - 6:25  
Commonwealth    Friday, July 25, 11:20 - 1:05 and 6:00 - 6:25  
Commonwealth    Saturday, July 26, 2:30 - 4:15

### FOOD SERVICE

The cafeteria in the University center will open for lunch at 1 pm Tuesday - Saturday, and for dinner at about 6:35 pm Tuesday, Wednesday and Friday. The cafeteria will be open for dinner on Saturday till 6:40 pm.

## CONDENSED PROGRAM

↓ continuation of the lecture in the preceding slot

TBA to be announced      B coffee break      L lunch

Tuesday, July 22

	Common	Chesap A	Chesap B	Chesap C	James
8:30 - 9:10	opening	-	-	-	-
9:10 - 10:00	Lancaster	-	-	-	-
10:00 - 10:30	B	B	B	B	B
10:30 - 10:55	Garcia	Binding	Mehl	Psarrakos	Kouckekian
10:55 - 11:20	↓	↓	Trunk	Grünbaum	Lomonosov
11:20 - 11:45	Silbermann	Volkmer	NMackey	Papathanasiou	Ito
11:50 - 12:15	↓	Tretter	SMackey	Zaballa	Hou
12:15 - 12:40	Roch		Gupta	Duran	Farrell
12:40 - 1:05	Bastos	Clark	Chavan	Iliev	Furuichi
1:05 - 2:30	L	L	L	L	L
2:30 - 3:20	Gohberg	-	-	-	-
3:20 - 4:10	Schneider	-	-	-	-
4:10 - 4:40	B	B	B	B	B
4:40 - 5:05	Vasilevski	Szafraniec	MDChoi	Dym	Shi
5:05 - 5:30	vdMee	Wojtylak	Furuta	Frazho	Vainberg
5:35 - 6:00	Conceição	Bruzual	Tam	Fuhrmann	Hao
6:00 - 6:25	Marreiros	Hellings	Sze		

Wednesday, July 23

	Common	Chesap A	Chesap B	Chesap C	James
8:20 - 9:10	Richter	-	-	-	-
9:10 - 10:00	Deift	-	-	-	-
10:00 - 10:30	B	B	B	B	B
10:30 - 10:55	Jury	Woerdeman	Kheifets	Dym	PGaspar
10:55 - 11:20	↓	Geronimo	Fialkow	Grünbaum	DGaspar
11:20 - 11:45	Diogo	Bakonyi	Volak	Mehl	Thapa
11:50 - 12:15	Malheiro	Knese	ter Horst	Förster	Yanagida
12:15 - 12:40	Grudsky	Kwon	Curto	Sokolov	Godin
12:40 - 1:05	Ehrhardt		Remling	Guediri	
1:05 - 2:30	L	L	L	L	L
2:30 - 3:20	Popescu	-	-	-	-
3:20 - 4:10	Kaashoek	-	-	-	-
4:10 - 4:40	B	B	B	B	B
4:40 - 5:05	Musat	Belyi	Schulte-Herbrüggen	Douglas	Brown
5:05 - 5:30	↓	Sakhnovich	Poon	Yang	Wood
5:35 - 6:00	Speck	Chugunova	Li	Curto	Boumenir
6:00 - 6:25	Karlovich	Khatskevich		Vinnikov	HWu

Thursday, July 24

	Common	Chesap A	Chesap B	Chesap C	James
8:20 - 9:10	Nikolski	-	-	-	-
9:10 - 10:00	MacCluer	-	-	-	-
10:00 - 10:30	B	B	B	B	B
10:30 - 10:55	Mitrea	Bourdon	Gohberg	Xia	Klaus
10:55 - 11:20	↓	Carswell	Lancaster	Jury	Tovbis
11:20 - 11:45	Widom	Hammond	Neumann	Kaptanoglu	Bronski
11:50 - 12:15	Groenewald	Pons	Rawitscher	Bolotnikov	Aktosun
12:15 - 12:40	Bart	Montes-Rodríguez	YChoi	McCullough	Buse
12:40 - 1:05		Zorboska	Gu	Ball	Klep
1:05 - 2:30	L	L	L	L	L
2:30 - 3:20	Agler	-	-	-	-
3:20 - 4:10	Basor	-	-	-	-
4:10 - 4:40	B	B	B	B	B
4:40 - 5:05	Mascarenhas	-	Sokolov	Kimsey	Miller
5:05 - 5:30	Yannakakis	-	Stewart	Landau	Buckingham
5:30 - 5:55	Assal	-	Grudsky	Rost	Johnson
6:30 - 10:00	-	BANQUET	-	-	-

Friday, July 25

	Common	Chesap A	Chesap B	Chesap C	James
8:10 - 9:10	Parrilo	-	-	-	-
9:10 - 10:00	Vinnikov	-	-	-	-
10:00 - 10:30	B	B	B	B	B
10:30 - 10:55	Nie	Tretter	Woerdeman	Junghanns	Shapiro
10:55 - 11:20	↓	Staffans	Bella	Tarasenko	Brackx
11:20 - 11:45	Mityagin	Opmeer	Zhlobich	Watson	De Schepper
11:50 - 12:15	Djakov	Sasane	Olshevsky		Kaehler
12:15 - 12:40	Remling	Philipp	Eidelman	Kitson	Luna-Elizarrarás
12:40 - 1:05			Sakhnovich	Rastogi	
1:05 - 2:30	L	L	L	L	L
2:30 - 3:20	McCullough	-	-	-	-
3:20 - 4:10	Boettcher	-	-	-	-
4:10 - 4:40	B	B	B	B	B
4:40 - 5:05	Câmara	MJMartín	Chandrasekaran	Casazza	MMartin
5:05 - 5:30	↓	Allen	Keiner	↓	Nolder
5:35 - 6:00		Zhao	Pan	Speegle	Cerejeiras
6:00 - 6:25	Krishtal	Niemenen		Weber	

Saturday, July 26

	Common	Chesap A	Chesap B	Chesap C	James
8:20 - 9:10	Jacob	-	-	-	-
9:10 - 10:00	Leiterer	-	-	-	-
10:00 - 10:30	B	B	B	B	B
10:30 - 10:55	Dominguez	Čurgus	Dewilde	Kovalev	Rybkin
10:55 - 11:20	↓	Tsekanovskiĭ	Holtz	Kovalev	Lyng
11:20 - 11:45	Duduchava	Winkler	Tyaglov	Nikolski	Espinola-Rocha
11:50 - 12:15	Karabash	deSnoo	Püschel		DiFranco
12:15 - 12:40	Virtanen	Fang	Seidel	Raghupathi	
12:40 - 1:05	Hansen	Rovnyak	Bolotnikov		
1:05 - 2:30	L	L	L	L	L
2:30 - 2:55	Latushkin	Tylli	Trent	Zarikian	Trumpf
2:55 - 3:20	Qi	Koo	Biswas	Weiss	Melnikov
3:25 - 3:50	Mingarelli	Smith	Frazho	Bhattacharyya	Gau
3:50 - 4:15				Wenzel	
4:20 - 4:45	Helton	-	-	-	-
4:45 - 4:50	Closing	-	-	-	-

## DETAILED SCHEDULE

### Tuesday, July 22, Morning

**8:30 - 9:10** Opening (Commonwealth)

**9:10 - 10:00** **P. Lancaster** *Quadratic eigenvalue problems: Old and new*  
Chair: P. Binding (Commonwealth)

#### Special Sessions

**10:30 - 12:15** *Indefinite linear algebra*  
**C. Mehl** organizer (Chesapeake B)

**10:30 - 1:05** *Spectra of operators: theory, computations and applications*  
**H. Wu** organizer (Chesapeake A)

**10:30 - 1:05** *Matrix polynomials and related problems*  
**H. Dym, P. Psarrakos** organizers (Chesapeake C)

**10:30 - 1:05** Contributed session (James)  
Chair: V. Lomonosov

**11:20 - 1:05** *Factorization problems, Wiener - Hopf and Fredholm operators*  
**H. Bart** organizer (Commonwealth)

**12:15 - 1:05** Contributed session (Chesapeake B)  
Chair: C. Mehl



## Tuesday, July 22, Morning

- 10:30 - 10:55** **C. Mehl** *Singular-value-like decompositions for matrix triples*  
Chesapeake B
- 10:30 - 10:55** **P. Psarrakos** *Normal matrix polynomials*  
Chesapeake C
- 10:30 - 10:55** **S. Kouckian** *On orthogonality of McDonald functions*  
James
- 10:30 - 11:20** **S. Garcia**, Invited Lecture:  
*Unitary equivalence to a complex symmetric matrix*  
Chair: B. D. MacCluer    Commonwealth
- 10:30 - 11:20** **P. Binding** *A comparison of spectra for some nonlinear eigenvalue problems*  
Chesapeake A
- 10:55 - 11:20** **C. Trunk** *Normal and hyponormal matrices in inner product spaces*  
Chesapeake B
- 10:55 - 11:20** **F.A. Grünbaum** *The Darboux process in the matrix valued case*  
Chesapeake C
- 10:55 - 11:20** **V. Lomonosov** *On Burnside's Theorem on matrix algebras*  
James
- 11:20 - 11:45** **H. Volkmer** *Eigenvalue problems for the  $p$ -Laplacian with coefficients of bounded variation*  
Chesapeake A
- 11:20 - 11:45** **N. Mackey** *On the definition of some natural classes of scalar products*  
Chesapeake B
- 11:20 - 11:45** **N. Papathanasiou** *The distance from a matrix polynomial to matrix polynomials with a prescribed multiple eigenvalue, and condition numbers of eigenvalues*  
Chesapeake C
- 11:20 - 11:45** **M. Ito** *Extensions of the results on powers of  $p$ -hyponormal operators to class  $wF(p, r, q)$  operators*  
James
- 11:20 - 12:15** **B. Silbermann** *Invertibility of half plane Toeplitz operators with generating functions having homogeneous discontinuities*  
Commonwealth

## Tuesday, July 22, Morning

- 11:50 - 12:15** **C. Tretter** *Spectral theory of block operator matrices and applications*  
Chesapeake A
- 11:50 - 12:15** **D.S. Mackey** *Structured mapping problems for matrices associated with an indefinite inner product*  
Chesapeake B
- 11:50 - 12:15** **I. Zaballa** *Standard pairs of matrix polynomials and vibrating systems*  
Chesapeake C
- 11:50 - 12:15** **J. Hou** *Extension of maps on operator spaces and completely preserver problems*  
James
- 12:15 - 12:40** **S. Roch** *The Fredholm index of band-dominated operators*  
Commonwealth
- 12:15 - 12:40** **M. Gupta** *On the ideals of Orlicz type operators*  
Chesapeake B
- 12:15 - 12:40** **A. Duran** *Orthogonal matrix polynomials which are eigenfunctions of differential operators*  
Chesapeake C
- 12:15 - 12:40** **B. Farrell** *Regional information capacity of the linear, time-varying channel*  
James
- 12:40 - 1:05** **M.A. Bastos** *A  $C^*$ -algebra of operators with shifts having a nonempty set of periodic points*  
Commonwealth
- 12:40 - 1:05** **S. Clark** *Borg-Marchenko-type uniqueness results for CMV operators with matrix-valued Verblunsky Coefficients*  
Chesapeake A
- 12:40 - 1:05** **S. Chavan** *Hyperexpansivity version of the Berger-Shaw theorem*  
Chesapeake B
- 12:40 - 1:05** **P. Iliev** *Two variable measures and matrix orthogonal polynomials*  
Chesapeake C
- 12:40 - 1:05** **S. Furuichi** *Matrix trace inequalities on a generalized Wigner-Yanase skew information*  
James

## Tuesday, July 22, Afternoon

**2:30 - 3:20** **I. Gohberg** *Resultant. The past and the present*  
Chair: M. A. Kaashoek (Commonwealth)

**3:20 - 4:10** **H. Schneider**, ILAS Lecture: *Max balancing matrices*  
Chair: M. A. Kaashoek (Commonwealth)

### Special Sessions

**4:40 - 6:00** *Bezoutians, resultants, inertia theorems and spectrum localization: new developments and new results*

**M.A. Kaashoek, L. Lerer** organizers (Chesapeake C)

**4:40 - 6:00** *Spectra of operators: theory, computations and applications*  
**H. Wu** organizer (James)

**4:40 - 6:25** *Factorization problems, Wiener - Hopf and Fredholm operators*  
**H. Bart** organizer (Commonwealth)

**4:40 - 6:25** *Applications of indefinite inner product spaces*  
**J. Rovnyak, M. Dritschel** organizers (Chesapeake A)

**4:40 - 6:25** *Matrix and operator inequalities*  
**C.-K. Li** organizer (Chesapeake B)

### Talks

**4:40 - 5:05** **N. Vasilevski** *Anatomy of the  $C^*$ -algebra generated by Toeplitz operators with piece-wise continuous symbols*  
Commonwealth

**4:40 - 5:05** **F. Szafraniec** *Complexifying the Krein space*  
Chesapeake A

**4:40 - 5:05** **M.-D. Choi** *Magic in non-commutative computation*  
Chesapeake B

**4:40 - 5:05** **H. Dym** *Degree bounds on polynomials of symmetric matrices*  
Chesapeake C

**4:40 - 5:05** **G. Shi** *Spectral theory of Sturm-Liouville difference operators*  
James

**5:05 - 5:30** **C. van der Mee** *Inverse scattering transform and matrix Zakharov-Shabat system*  
Commonwealth

**5:05 - 5:30** **M. Wojtylak** *Domination in Krein spaces*  
Chesapeake A

**5:05 - 5:30** **T. Furuta** *Further extension of order preserving operator inequality and its application*  
Chesapeake B

**5:05 - 5:30** **A. Frazho** *Contractive inversion formulas of Gohberg-Heinig type*  
Chesapeake C

## Tuesday, July 22, Afternoon

- 5:05 - 5:30** **B. Vainberg** *Some generalizations of Lieb-Thirring inequalities*  
James
- 5:35 - 6:00** **A.C. Conceição** *Factorization algorithm for some classes of Hermitian matrix functions*  
Commonwealth
- 5:35 - 6:00** **R. Bruzual** *On extension of locally defined indefinite functions on ordered groups*  
Chesapeake A
- 5:35 - 6:00** **T.-Y. Tam** *Extensions of Heinz's inequality and related inequalities for semisimple Lie groups*  
Chesapeake B
- 5:35 - 6:00** **P. Fuhrmann** *Tensor products of functional models, the Sylvester equation and Bezoutians*  
Chesapeake C
- 5:35 - 6:00** **Y. Hao** *Spectra of self-adjoint extensions of a symmetric operator and its application in sampling theory*  
James
- 6:00 - 6:25** **R. C. Marreiros** *An estimate for the number of solutions of an homogeneous generalized Riemann boundary value problem with shift*  
Commonwealth
- 6:00 - 6:25** **C. Hellings** *Two-isometries on Pontryagin spaces*  
Chesapeake A
- 6:00 - 6:25** **R. N.-S. Sze** *Optimization of the spectral radius of nonnegative matrices*  
Chesapeake B

## Wednesday, July 23, Morning

- 8:20 - 9:10** **S. Richter** *A quantitative estimate for bounded point evaluations in  $P^t(\mu)$ -spaces*  
Chair: A. Boettcher (Commonwealth)
- 9:10 - 10:00** **P. Deift** *Universality for mathematical and physical systems*  
Chair: A. Boettcher (Commonwealth)

### Special Sessions

- 10:30 - 12:15** *Matrix completion problems, moment problems and factorizations*  
**H.J. Woerdeman** organizer (Chesapeake A)

## Wednesday, July 23, Morning

### Special Sessions

- 10:30 - 12:15** *Matrix polynomials and related problems*  
**H. Dym, P. Psarrakos** organizers (Chesapeake C)
- 10:30 - 1:05** *Interpolation problems*  
**A. Kheifets** organizer (Chesapeake B)
- 10:30 - 12:40** Contributed session (James)  
Chair: Y. Godin
- 11:20 - 1:05** *Factorization problems, Wiener - Hopf and Fredholm operators*  
**H. Bart** organizer (Commonwealth)
- 12:15 - 12:40** Contributed session (Chesapeake A)  
Chair: H.J. Woerdeman
- 12:15 - 1:05** Contributed session (Chesapeake C)  
Chair: V. Bolotnikov

### Talks

- 10:30 - 10:55** **H.J. Woerdeman** *Classes of tuples of commuting contractions satisfying the multivariable von Neumann inequality*  
Chesapeake A
- 10:30 - 10:55** **A. Kheifets** *CMV matrices and Adamjan-Arov scattering*  
Chesapeake B
- 10:30 - 10:55** **H. Dym** *Zero distribution of continuous analogues of matrix polynomials*  
Chesapeake C
- 10:30 - 10:55** **P. Gaspar** *The shift of a random distribution*  
James
- 10:30 - 11:20** **M. Jury**, Invited Lecture:  
*Function-theoretic aspects of Schur class mappings of the ball*  
Chair: S. Garcia Commonwealth
- 10:55 - 11:20** **J.S. Geronimo** *Bivariate orthogonal polynomials and the Christoffel-Darboux formula*  
Chesapeake A
- 10:55 - 11:20** **L. Fialkow** *Abstract vs. concrete solutions to the truncated moment problem*  
Chesapeake B
- 10:55 - 11:20** **F.A. Grünbaum** *Direct and inverse problems for networks*  
Chesapeake C
- 10:55 - 11:20** **D. Gaspar** *Positive definite locally Hilbert space operator - valued kernels*  
James

## Wednesday, July 23, Morning

- 11:20 - 11:45 **C. Diogo** *Corona conditions in a strip and invertibility for a class of Toeplitz operators*  
Commonwealth
- 11:20 - 11:45 **M. Bakonyi** *Moment problems for real measures on the unit circle*  
Chesapeake A
- 11:20 - 11:45 **D. Volok** *Operator-valued Herglotz functions and Carathéodory-Fejér interpolation*  
Chesapeake B
- 11:20 - 11:45 **C. Mehl** *Linearization of structured matrix polynomials*  
Chesapeake C
- 11:20 - 11:45 **M. Thapa** *A new hybrid method for finding eigenpairs of a symmetric quadratic eigenvalue problem in an interval*  
James
- 11:50 - 12:15 **M.T. Malheiro** *Meromorphic factorization and Toeplitz operators: some new relations*  
Commonwealth
- 11:50 - 12:15 **G. Knese** *Stable polynomials and distinguished varieties*  
Chesapeake A
- 11:50 - 12:15 **S. ter Horst** *Redheffer representations in commutant lifting theory*  
Chesapeake B
- 11:50 - 12:15 **K.H. Förster** *Properties of Perron-Frobenius matrix polynomials*  
Chesapeake C
- 11:50 - 12:15 **M. Yanagida** *Operator inequalities obtained from Uchiyama's results on operator monotonicity*  
James
- 12:15 - 12:40 **S. Grudsky** *Toeplitz operators with frequency modulated almost periodic and semi-almost periodic symbols*  
Commonwealth
- 12:25 - 12:40 **H. Kwon** *Similarity of operators and the contractive assumption*  
Chesapeake A
- 12:15 - 12:40 **R. Curto** *An analogue of the Riesz-Haviland Theorem for the truncated moment problem*  
Chesapeake B
- 12:15 - 12:40 **V. Sokolov** *Solution of affine parametric quadratic inverse eigenvalue problem via alternating projections method*  
Chesapeake C
- 12:15 - 12:40 **Y. Godin** *An efficient solution of the inverse boundary impedance problem in the half-space*  
James

## Wednesday, July 23, Morning

- 12:40 - 1:05** **T. Ehrhardt** *Invertibility theory for some classes of Toeplitz plus Hankel operators and applications*  
Commonwealth
- 12:40 - 1:05** **C. Remling** *Reflectionless Herglotz functions and Jacobi matrices*  
Chesapeake B
- 12:40 - 1:05** **H. Guediri** *Remarks to dual Toeplitz operators*  
Chesapeake C

## Wednesday, July 23, Afternoon

- 2:30 - 3:20** **G. Popescu** *Operator theory on noncommutative domains*  
Chair: J.A. Ball (Commonwealth)
- 3:20 - 4:10** **M.A. Kaashoek** *Resultant and Bezoutian for entire matrix functions: theory and applications*  
Chair: J.A. Ball (Commonwealth)

### Special Sessions

- 4:40 - 6:25** *Applications of indefinite inner product spaces*  
**J. Rovnyak, M. Dritschel** organizers (Chesapeake A)
- 4:40 - 6:00** *Matrix and operator inequalities*  
**C.-K. Li** organizer (Chesapeake B)
- 4:40 - 6:25** *Multivariable operator theory*  
**G. Popescu, M. Putinar** organizers (Chesapeake C)
- 4:40 - 6:25** *Spectra of operators: theory, computations and applications*  
**H. Wu** organizer (James)
- 5:35 - 6:25** *Factorization problems, Wiener - Hopf and Fredholm operators*  
**H. Bart** organizer (Commonwealth)

### Talks

- 4:40 - 5:05** **S. Belyi** *Inverse Stieltjes like functions and systems with Schrödinger operator*  
Chesapeake A
- 4:40 - 5:05** **T. Schulte-Herbrüggen** *Least-squares approximations by elements from matrix orbits*  
Chesapeake B
- 4:40 - 5:05** **R. Douglas** *Some remarks on essentially reductive Hilbert modules*  
Chesapeake C

## Wednesday, July 23, Afternoon

### Talks

- 4:40 - 5:05** **M. Brown** *Spectral properties of a class of difference operators*  
James
- 4:40 - 5:30** **M. Musat** Invited Lecture:  
*Grothendieck inequalities—from classical to noncommutative*  
Chair: I. Mitrea      Commonwealth
- 5:05 - 5:30** **L. Sakhnovich** *On the solutions of Knizhnik-Zamolodchikov system*  
Chesapeake A
- 5:05 - 5:30** **Y.-T. Poon** *The joint essential numerical range of operators:  
convexity and related results*  
Chesapeake B
- 5:05 - 5:30** **R. Yang** *Projective spectrum in Banach algebras*  
Chesapeake C
- 5:05 - 5:30** **I. Wood** *M-functions for closed extensions of adjoint pairs of operators*  
James
- 5:35 - 6:00** **F. Speck** *A direct approach to convolution type operators with symmetry*  
Commonwealth
- 5:35 - 6:00** **M. Chugunova** *Factorization of a J-selfadjoint  
convection-diffusion operator*  
Chesapeake A
- 5:35 - 6:00** **C.-K. Li** *The sum of unitary similarity orbits contains only special operators*  
Chesapeake B
- 5:35 - 6:00** **R. Curto** *Spectral obstructions to lifting  
for commuting pairs of subnormal operators*  
Chesapeake C
- 5:35 - 6:00** **A. Boumenir** *Computing eigenvalues by Poincaré determinants*  
James
- 6:00 - 6:25** **Y. Karlovich** *Wiener-Hopf operators with symbols generated  
by semi-almost periodic and slowly oscillating  
matrix functions on weighted Lebesgue spaces*  
Commonwealth
- 6:00 - 6:25** **V. Khatskevich** *The König problem and extreme fixed points*  
Chesapeake A



## Wednesday, July 23, Afternoon

- 6:00 - 6:25** **V. Vinnikov** *On the embedding of pairs of commuting contractions into a conservative overdetermined 2D system*  
Chesapeake C
- 6:00 - 6:25** **H. Wu** *The index problem for Sturm-Liouville eigenvalues for coupled boundary conditions*  
James

## Thursday, July 24, Morning

- 8:20 - 9:10** **N.K. Nikolski** *Well and ill posed inversion problems*  
Chair: C.C. Cowen (Commonwealth)
- 9:10 - 10:00** **B.D. MacCluer** *A survey of some recent results on composition operators*  
Chair: C.C. Cowen (Commonwealth)

### Special Sessions

- 10:30 - 12:15** *Direct and inverse scattering transforms for integrable systems and their semiclassical limits*  
**P. Miller, A. Tovbis** organizers (James)
- 10:30 - 1:05** *Composition operators*  
**B.D. MacCluer, C.C. Cowen** organizers (Chesapeake A)
- 10:30 - 1:05** *Structured matrices*  
**V. Olshevsky** organizer (Chesapeake B)
- 10:30 - 1:05** *Multivariable operator theory*  
**G. Popescu, M. Putinar** organizers (Chesapeake C)
- 12:15 - 1:05** Contributed session (James)  
Chair: C.-K. Li
- 11:20 - 12:40** *Factorization problems, Wiener - Hopf and Fredholm operators*  
**H. Bart** organizer (Commonwealth)

### Talks

- 10:30 - 10:55** **P. Bourdon** *Adjoint composition operators on  $H^2(\mathbb{U})$  induced by strongly outer regular rational selfmaps of  $\mathbb{U}$*   
Chesapeake A
- 10:30 - 10:55** **I. Gohberg** *Fast algorithms for integral equations and Krein-Sobolev equation*  
Chesapeake B
- 10:30 - 10:55** **J. Xia** *Singular integral operators and essential commutativity on the sphere*  
Chesapeake C
- 10:30 - 10:55** **M. Klaus** *On the eigenvalues of Non-Hermitian Schrödinger operators*  
James

## Thursday, July 24, Morning

- 10:30 - 11:20** **I. Mitrea**, Invited Lecture:  
*Sobolev estimates for the Green potential associated with the Robin-Laplacian in Lipschitz domains satisfying a uniform exterior ball condition*  
Chair: J. Rovnyak      Commonwealth
- 10:55 - 11:20** **B. Carswell** *Composition operators with maximal norm on weighted Bergman spaces*  
Chesapeake A
- 10:55 - 11:20** **P. Lancaster** *A note on the Fourier matrix*  
Chesapeake B
- 10:55 - 11:20** **M. Jury** *Operator-valued Herglotz kernels and functions of positive real part on the ball*  
Chesapeake C
- 10:55 - 11:20** **A. Tovbis** *Semiclassical limit of scattering transforms for the focusing NLS*  
James
- 11:20 - 11:45** **H. Widom** *On the inverse and determinant of certain truncated Wiener-Hopf operators*  
Commonwealth
- 11:20 - 11:45** **C. Hammond** *Norm inequalities for composition operators on Hardy and weighted Bergman spaces*  
Chesapeake A
- 11:20 - 11:45** **M. Neumann** *An upper bound on the characteristic polynomial of a nonnegative matrix leading to a proof of the Boyle-Handelman conjecture*  
Chesapeake B
- 11:20 - 11:45** **H.T Kaptanoglu** *Reproducing kernels for harmonic Besov spaces on the unit ball*  
Chesapeake C
- 11:20 - 11:45** **J. Bronski** *Defect eigenvalues and Diophantine conditions*  
James
- 11:50 - 12:15** **G. Groenewald** *LU and UL factorization of integral operators with semi-separable kernel and symmetries*  
Commonwealth
- 11:50 - 12:15** **M.A. Pons** *Composition operators and complex interpolation*  
Chesapeake A
- 11:50 - 12:15** **G. Rawitscher** *Application of a spectral expansion method to problems in physics*  
Chesapeake B

## Thursday, July 24, Morning

- 11:50 - 12:15** **V. Bolotnikov** *Interpolation problems for Schur-Agler functions of the unit ball: from Nevanlinna-Pick to Abstract Interpolation Problem*  
Chesapeake C
- 11:50 - 12:15** **T. Aktosun** *Exact solutions to the nonlinear Schrödinger equation*  
James
- 12:15 - 12:40** **H. Bart** *The state space approach to factorization*  
Commonwealth
- 12:15 - 12:40** **A. Montes-Rodríguez** *Spectral synthesis and the lattice of certain weighted composition operators*  
Chesapeake A
- 12:15 - 12:40** **Y. Choi** *Convergence study on Gross-Pitaevskii equation*  
Chesapeake B
- 12:15 - 12:40** **S. McCullough** *Partial Matrix Convexity*  
Chesapeake C
- 12:15 - 12:40** **C. Buse** *Boundedness and stability for evolution families of operators acting on Banach spaces*  
James
- 12:40 - 1:05** **N. Zorboska** *Composition operators on Bloch-type spaces*  
Chesapeake A
- 12:40 - 1:05** **M. Gu** *TBA*  
Chesapeake B
- 12:40 - 1:05** **J.A. Ball** *Robust  $H$ -infinity control theory and Nevanlinna-Pick interpolation: extensions to multidimensional systems and multivariable functions*  
Chesapeake C
- 12:40 - 1:05** **I. Klep** *TBA*  
James

## Thursday, July 24, Afternoon

- 2:30 - 3:20** **J. Agler** *Applications of toral algebraic sets to operator theory and function theory on the bidisk*  
Chair: H. Widom (Commonwealth)
- 3:20 - 4:10** **E. Basor** *Toeplitz operators and random matrices*  
Chair: H. Widom (Commonwealth)

### Special Sessions

- 4:40 - 5:55** Contributed session  
Chair: N. Yannakakis (Commonwealth)
- 4:40 - 5:55** *Structured matrices*  
**V. Olshevsky** organizer (Chesapeake B)

## Thursday, July 24, Afternoon

### Special Sessions

- 4:40 - 5:55** *Bezoutians, resultants, inertia theorems and spectrum localization: new developments and new results*  
**M.A. Kaashoek, L. Lerer** organizers (Chesapeake C)
- 4:40 - 5:55** *Direct and inverse scattering transforms for integrable systems and their semiclassical limits*  
**P. Miller, A. Tovbis** organizers (James)

### Talks

- 4:40 - 5:05** **H. Mascarenhas** *Algebras of approximation sequences. Applications to spectra of convolution type operators on cones*  
Commonwealth
- 4:40 - 5:05** **V. Sokolov** *Finite element model updating : A structured inverse eigenvalue problem for quadratic matrix pencil*  
Chesapeake B
- 4:40 - 5:05** **D. Kimsey** *Minimal normal and commuting completions*  
Chesapeake C
- 4:40 - 5:05** **P. Miller** *On the semiclassical limit for the Sine-Gordon equation*  
James
- 5:05 - 5:30** **N. Yannakakis** *Subspaces with a common complement in a Banach space*  
Commonwealth
- 5:05 - 5:30** **M. Stewart** *Reduction of a unitary matrix to quasiseparable form*  
Chesapeake B
- 5:05 - 5:30** **H. Landau** *Two-dimensional covariance matrices*  
Chesapeake C
- 5:05 - 5:30** **R. Buckingham** *Asymptotic analysis of the semiclassical Sine-Gordon equation*  
James
- 5:30 - 5:55** **M. Assal** *Strichartz estimate for the wave equations on a deformation of the Heisenberg group*  
Commonwealth
- 5:30 - 5:55** **S. Grudsky** *Uniform boundedness of Toeplitz matrices with variable coefficients*  
Chesapeake B
- 5:30 - 5:55** **K. Rost** *Toeplitz-plus-Hankel Bezoutians and inverses of Toeplitz and Toeplitz-plus-Hankel matrices*  
Chesapeake C
- 5:30 - 5:55** **M. Johnson** *Krein signatures for eigenvalue problems associated to integrable systems*  
James

## Friday, July 25, Morning

**8:10 - 9:10** **P. Parrilo** *TBA*  
Chair: J.W. Helton (Commonwealth)

**9:10 - 10:00** **V. Vinnikov** *Noncommutative functions and their  
difference-differential calculus*  
Chair: J.W. Helton (Commonwealth)

### Special Sessions

**10:30 - 12:40** *Linear operators and linear systems*  
**B. Jacob** organizer (Chesapeake A)

**10:30 - 12:40** *Hypercomplex operator theory*  
**M. Shapiro, J. Ryan** organizers (James)

**10:30 - 1:05** *Structured matrices*  
**V. Olshevsky** organizer (Chesapeake B)

**10:30 - 1:05** Contributed session (Chesapeake C)  
Chair: P. Junghanns

**11:20 - 12:40** *Spectra of operators: theory, computations and applications*  
**H. Wu** organizer (Commonwealth)

### Talks

**10:30 - 10:55** **C. Tretter** *Block operator matrices with unbounded entries*  
Chesapeake A

**10:30 - 10:55** **H.J. Woerdeman** *Estimates of inverses of multivariable  
Toeplitz matrices*  
Chesapeake B

**10:30 - 10:55** **P. Junghanns** *On the numerical solution of the notched  
half plane problem*  
Chesapeake C

**10:30 - 10:55** **M. Shapiro** *On relations between some operators of  
quaternionic analysis and their counterparts in Clifford analysis*  
James

**10:30 - 11:20** **J. Nie**, Invited Lecture:  
*Lifted linear matrix inequality (LMI) representation of convex sets*  
Chair: M. Musat (Commonwealth)

**10:55 - 11:20** **O.J. Staffans** *Hilbert spaces contained in quotients of Kreĭn  
spaces with applications to passive state/signal realization theory*  
Chesapeake A

**10:55 - 11:20** **T. Bella** *Fast algorithms for polynomial–Vandermonde matrices  
related to quasiseparable matrices*  
Chesapeake B

## Friday, July 25, Morning

- 10:55 - 11:20** **A. Tarasenko** *Presentation of the kernel of a matrix characteristic operator by the kernels of two operators one of them is a scalar characteristic operator*  
Chesapeake C
- 10:55 - 11:20** **F. Brackx** *Differential forms in Hermitean Clifford analysis*  
James
- 11:20 - 11:45** **B. Mityagin** *Instability zones of Hill operators with singular  $H^{-1}$ -potentials*  
Commonwealth
- 11:20 - 11:45** **M.R. Opmeer** *Nuclearity of Hankel operators: applications in control theory*  
Chesapeake A
- 11:20 - 11:45** **P. Zhlobich** *Classifications of recurrence relations for polynomials via subclasses of Hessenberg-quasiseparable matrices of arbitrary order*  
Chesapeake B
- 11:20 - 11:45** **B.A. Watson** *Oscillation theory for a quadratic eigenvalue problem*  
Chesapeake C
- 11:20 - 11:45** **H. De Schepper** *The Hilbert–Dirac operator on  $\mathbf{R}^{2n}$  in Hermitean Clifford analysis*  
James
- 11:50 - 12:15** **P. Djakov** *Deviations of Riesz projections of Hill operators with singular potentials*  
Commonwealth
- 11:50 - 12:15** **A. Sasane** *The Hermite property of a causal Wiener algebra used in control theory*  
Chesapeake A
- 11:50 - 12:15** **V. Olshevsky** *Can one invert a matrix via graph manipulations?*  
Chesapeake B
- 11:50 - 12:15** **U. Kaehler** *Connections between Clifford analysis and co-orbit space theory*  
James
- 12:15 - 12:40** **C. Remling** *The absolutely continuous spectrum and reflectionless Jacobi matrices*  
Commonwealth
- 12:15 - 12:40** **F. Philipp** *Indefinite Sturm-Liouville operators*  
Chesapeake A

## Friday, July 25, Morning

- 12:15 - 12:40** **Y. Eidelman** *Quasiseparable matrices and discrete systems with boundary conditions*  
Chesapeake B
- 12:15 - 12:40** **D. Kitson** *Ascent and descent in multivariable spectral theory*  
Chesapeake C
- 12:15 - 12:40** **M.E. Luna-Elizarrarás** *On some categories and functors in the theory of quaternionic Bergman spaces*  
James
- 12:40 - 1:05** **L.A. Sakhnovich** *Positive operator which does not admit triangular factorization*  
Chesapeake B
- 12:40 - 1:05** **A. Rastogi** *Almost periodic factorization of matrix functions with Bohr-Fourier spectrum in a two-generator grid*  
Chesapeake C

## Friday, July 25, Afternoon

- 2:30 - 3:20** **S. McCullough** *Semi-algebraic geometry in a free  $*$ -algebra*  
Chair: H. Dym (Commonwealth)
- 3:20 - 4:10** **A. Boettcher** *Probability in Matrix Theory*  
Chair: H. Dym (Commonwealth)

### Special Sessions

- 4:40 - 6:25** *Composition operators*  
**B.D. MacCluer, C. C. Cowen** organizers (Chesapeake A)
- 4:40 - 6:00** *Structured matrices*  
**V. Olshevsky** organizer (Chesapeake B)
- 4:40 - 6:25** *The Kadison-Singer extension problem*  
**P. Casazza, G. Weiss** organizers (Chesapeake C)
- 4:40 - 6:00** *Hypercomplex operator theory*  
**M. Shapiro, J. Ryan** organizers (James)
- 6:00 - 6:25** *Spectra of operators: theory, computations and applications*  
**H. Wu** organizer (Commonwealth)

### Talks

- 4:40 - 5:05** **M.J. Martín** *Hyperbolic geometry and norms of some composition operators on the Bloch space*  
Chesapeake A

## Friday, July 25, Afternoon

- 4:40 - 5:05 S. Chandrasekaran** *Fast algorithms for minimum Sobolev norm methods*  
Chesapeake B
- 4:40 - 5:05 M. Martin** *Integral representation formulas for Dirac and semi-Dirac pairs of differential operators*  
James
- 4:40 - 5:30 C. Câmara** Invited Lecture:  
*Matrix Wiener-Hopf factorization and Riemann-Hilbert problems in a Riemann surface*  
Chair: Y. Karlovich    Commonwealth
- 4:40 - 5:30 P. Casazza** *The Kadison-Singer problem in mathematics and engineering*  
Chesapeake C
- 5:05 - 5:30 R. Allen** *Weighted composition operators on the Bloch space on bounded homogeneous domains*  
Chesapeake A
- 5:05 - 5:30 J. Keiner** *Classical orthogonal functions and semiseparable matrices*  
Chesapeake B
- 5:05 - 5:30 C. Nolder** *Nonlinear A-Dirac equations*  
James
- 5:35 - 6:00 R. Zhao** *Composition operators and closures of some Mobius invariant spaces in the Bloch space*  
Chesapeake A
- 5:35 - 6:00 V. Pan** *Additive preconditioning in matrix computations*  
Chesapeake B
- 5:35 - 6:00 D. Speegle** *The Feichtinger conjecture for exponential frames*  
Chesapeake C
- 5:35 - 6:00 P. Cerejeiras** *Clifford analysis and reflection invariant Dirac operators*  
James
- 6:00 - 6:25 I. Krishtal** *On almost periodic causal factorizations*  
Commonwealth
- 6:00 - 6:25 P. Nieminen** *Shapiro-Sundberg component problem for composition operators on the Hardy space*  
Chesapeake A
- 6:00 - 6:25 E. Weber** *Some algebraic properties of the Feichtinger conjecture for exponential frames*  
Chesapeake C



## Saturday, July 26, Morning

- 8:20 - 9:10** **B. Jacob** *Spectrum of block operator matrices associated to second order systems*  
Chair: Y. Latushkin (Commonwealth)
- 9:10 - 10:00** **J. Leiterer** *Cocycles in the theory of holomorphic operator functions*  
Chair: Y. Latushkin (Commonwealth)

### Special Sessions

- 10:30 - 12:15** *Direct and inverse scattering transforms for integrable systems and their semiclassical limits*  
**P. Miller, A. Tovbis** organizers (James)
- 10:30 - 12:40** *The Kadison-Singer extension problem*  
**P. Casazza, G. Weiss** organizers (Chesapeake C)
- 10:30 - 1:05** *Applications of indefinite inner product spaces*  
**J. Rovnyak, M. Dritschel** organizers (Chesapeake A)
- 10:30 - 1:05** *Structured matrices*  
**V. Olshevsky** organizer (Chesapeake B)
- 11:20 - 1:05** Contributed session  
Chair: J. Virtanen (Commonwealth)

### Talks

- 10:30 - 10:55** **B. Čurgus** *Eigenvalue problems with boundary conditions depending polynomially on the eigenparameter*  
Chesapeake A
- 10:30 - 10:55** **P. Dewilde** *Model reduction in symbolically semi-separable systems with application to building pre-conditioners for 3D sparse systems of equations*  
Chesapeake B
- 10:30 - 10:55** **L. Kovalev** *Constant-diagonal projections in finite-dimensional spaces*  
Chesapeake C
- 10:30 - 10:55** **A. Rybkin** *On conservation laws for the KdV equation with rough initial data*  
James
- 10:30 - 11:20** **M. Dominguez**, Invited Lecture:  
*On dilation and extension problems on ordered groups*  
Chair: M. Bakonyi Commonwealth
- 10:55 - 11:20** **E.R. Tsekanovskii** *On non-self-adjoint Jacobi matrices*  
Chesapeake A
- 10:55 - 11:20** **O. Holtz** *Structured matrices, continued fractions, and the generalized Routh-Hurwitz problem: Part I*  
Chesapeake B

## Saturday, July 26, Morning

- 10:55 - 11:20** **L. Kovalev** *TBA*  
Chesapeake C
- 10:55 - 11:20** **G. Lyng** *The Gaussian semiclassical soliton ensemble for the focusing nonlinear Schrödinger equation*  
James
- 11:20 - 11:45** **R. Duduchava** *On the Maxwell system*  
Commonwealth
- 11:20 - 11:45** **H. Winkler** *Spectral problems for generalized indefinite strings*  
Chesapeake A
- 11:20 - 11:45** **M. Tyaglov** *Structured matrices, continued fractions, and the generalized Routh-Hurwitz problem: Part II*  
Chesapeake B
- 11:20 - 11:45** **N.K. Nikolski** *Multipliers of Muckenhoupt bases, and the bounded inversion conjecture*  
Chesapeake C
- 11:20 - 11:45** **J.A. Espinola-Rocha** *Factorization of the scattering matrix and the location of the eigenvalues of the Manakov-Zakharov-Shabat System*  
James
- 11:50 - 12:15** **I. Karabash** *Forward-backward parabolic equations, the case of singular critical point at zero*  
Commonwealth
- 11:50 - 12:15** **H. de Snoo** *Boundary relations and functional models*  
Chesapeake A
- 11:50 - 12:15** **M. Püschel** *Algebraic theory of signal transform algorithms*  
Chesapeake B
- 11:50 - 12:15** **J. DiFranco** *The semiclassical modified nonlinear Schrödinger equation*  
James
- 12:15 - 12:40** **J. Virtanen** *Toeplitz operators on Bergman spaces  $A^p$*   
Commonwealth
- 12:15 - 12:40** **Q. Fang** *The left tangential operator-argument interpolation problem on the ball (commutative or noncommutative)*  
Chesapeake A
- 12:15 - 12:40** **M. Seidel** *Banach algebras of structured matrix sequences*  
Chesapeake B
- 12:15 - 12:40** **M. Raghupathi** *Logmodularity and the Kadison-Singer problem*  
Chesapeake C

## Saturday, July 26, Morning

- 12:40 - 1:05** **A. Hansen** *On the complexity index and approximations of spectra and pseudospectra*  
Commonwealth
- 12:40 - 1:05** **J. Rovnyak** *Generalized difference kernels having a finite number of negative squares*  
Chesapeake A
- 12:40 - 1:05** **V. Bolotnikov** *Inertia of certain structured Hermitian matrices*  
Chesapeake B

## Saturday, July 26, Afternoon

### Special Sessions

- 2:30 - 3:50** *Spectra of operators: theory, computations and applications*  
**H. Wu** organizer (Commonwealth)
- 2:30 - 3:20** *The Kadison-Singer extension problem*  
**P. Casazza, G. Weiss** organizers (Chesapeake C)
- 2:30 - 3:50** *Interpolation problems*  
**A. Kheifets** organizer (Chesapeake B)
- 2:30 - 3:50** *Composition operators*  
**B.D. MacCluer, C.C. Cowen** organizers (Chesapeake A)
- 2:30 - 3:50** Contributed session  
Chair: J. Trumpf (James)
- 3:25 - 4:15** Contributed session  
Chair: L. Rodman (Chesapeake C)
- 4:20 - 4:45** *Multivariable operator theory*  
**G. Popescu, M. Putinar**, organizers (Commonwealth)

### Talks

- 2:30 - 2:55** **Y. Latushkin** *The Gohberg theory of operators with semiseparable kernels, and the Evans function in stability of traveling waves*  
Commonwealth
- 2:30 - 2:55** **H.-O. Tylli** *Composition operators on spaces of vector-valued functions*  
Chesapeake A
- 2:30 - 2:55** **T.T. Trent** *An F. and M. Riesz theorem for reproducing kernel Hilbert spaces*  
Chesapeake B
- 2:30 - 2:55** **V. Zarikian** *3-Paving small matrices and the Kadison-Singer extension problem*  
Chesapeake C
- 2:30 - 2:55** **J. Trumpf** *Generalized singular values*  
James

## Saturday, July 26, Afternoon

- 2:55 - 3:20** **J.-G. Qi** *Non-relatively compact perturbations and related topics*  
Commonwealth
- 2:55 - 3:20** **H. Koo** *Revisit to a theorem of Wogen*  
Chesapeake A
- 2:55 - 3:20** **A. Biswas** *Multivariable generalization of the Schur class and some weighted interpolation problems*  
Chesapeake B
- 2:55 - 3:20** **G. Weiss** *3-Paving small matrices, experimental data for possible research directions*  
Chesapeake C
- 2:55 - 3:20** **A. Melnikov** *Mittag-Leffler interpolation for rational matrix valued functions intertwining a pair of ODEs with a spectral parameter*  
James
- 3:25 - 3:50** **A. Mingarelli** *A discrete version of a theorem of Appell with applications to irrationality and transcendence questions in number theory*  
Commonwealth
- 3:25 - 3:50** **W. Smith** *Composition operators on function spaces related to Brennan's conjecture*  
Chesapeake A
- 3:25 - 3:50** **A. Frazho** *A numerical method for solving the relaxed Sarason problem*  
Chesapeake B
- 3:25 - 3:50** **T. Bhattacharyya** *Completely positive kernels*  
Chesapeake C
- 3:25 - 3:50** **H.-L. Gau** *Finite Blaschke products of numerical contractions*  
James
- 3:50 - 4:15** **D. Wenzel** *The Hilbert-Schmidt norm and the commutator*  
Chesapeake C
- 4:20 - 4:45** **J.W. Helton** *Signed matrices and applications to chemical reaction networks*  
Chair: H. Bart      Commonwealth

## INDEX

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