# The 19th international conference PHHQP XIX 

TSIMF, Sanya, China, March 18-22, 2019

$\rightarrow$ programme $\leftarrow$
the version of March 12, 2019

The first day, March 18th, Monday

Morning session

| session I <br> chair: Shao-Ming Fei |  |
| :---: | :---: |
| 8:30-8:40 | OPENING |
| 8:40-9:20 | Carl M. Bender (St. Louis) <br> PT symmetry in quantum mechanics and quantum field theory |
| 9:30-10:10 | Yogesh Joglekar (Indianapolis) <br> From fluids to quantum - PT symmetric systems everywhere |
| 10:15-10:20 | GROUP PHOTO |
| 10:20-10:45 | COFFEE BREAK |
| 10:45-11:15 | Oleg Novikov (St. Petersburg) <br> Scattering in the pseudo-Hermitian quantum field theory |
| 11:25-11:55 | Minyi Huang (Hangzhou) <br> Simulating broken PT-symmetric Hamiltonian systems by weak measurement |
| 12:00-14:00 | LUNCH |

The first day, March 18th, Monday

## Afternoon session

| session II <br> chair: Carl M. Bender |  |
| :---: | :---: |
| 14:00-14:40 | Sergii Kuzhel (Cracow) <br> Generalized Riesz systems and complete orthonormal sequences in Krein spaces |
| 14:45-15:25 | Peng Xue (Beijing) <br> Topology in Parity-Time-symmetric quantum walks |
| 15:30-16:00 | COFFEE BREAK |
| 16:00-16:30 | Franck Assogba Onanga (Indianapolis) <br> Robust and fragile aspects of topological transition in non-unitary discrete time quantum walks |
| 16:40-17:10 | Iveta Semorádová (Řež) <br> The problem of coexistence of several non-Hermitian observables in PT-symmetric quantum mechanics |
| 17:15-17:55 | Le Luo et al (Zhuhai) Floquet PT system |
| 18:00-19:30 | DINNER |

The second day, March 19th, Tuesday

## Morning session

|  | session III <br> chair: Miloslav Znojil |
| :---: | :---: |
| 8:30-9:10 | Qing-Hai Wang (Singapore) <br> Piecewise adiabatic following in non-Hermitian cycling |
| 9:20-10:00 | Li Ge (New York) <br> Chiral symmetry in non-Hermitian systems: <br> product rule and Clifford algebra |
| 10:05-10:45 | COFFEE BREAK |
| 10:45-11:15 | Guenter Wunner (Stuttgart) <br> Dynamics in PT-symmetric nonlinear metamaterials |
| 11:25-11:55 | Rajkumar Roychoudhury (Kolkata) <br> Isospectral real and PT symmetric partners <br> of a PT-symmetric Hamiltonian: A brief summary |
| 12:00-14:00 | $\quad$LUNCH |

The second day, March 19th, Tuesday

## Afternoon session

| $\begin{gathered} \text { session IV } \\ \text { chair: Naomichi Hatano } \end{gathered}$ |  |
| :---: | :---: |
| 14:00-14:40 | Géza Lévai (Debrecen) <br> On the breakdown of super- and/or PT symmetry of solvable potentials |
| 14:50-15:30 | Cemile Nur (Istanbul) <br> On the estimates of eigenvalues of Sturm-Liouville operators with PT-symmetric potentials |
| 15:35-16:00 | COFFEE BREAK |
| 16:00-16:30 | Ananya Ghatak (Amsterdam) <br> New prospects of topology with pseudo-Hermitian systems |
| 16:40-17:10 | Le Luo et al (Zhuhai) <br> PT-symmetry and quantum Zeno effect |
| 17:15-17:55 | Mustapha Maamache (Sétif) <br> Particle in a complex time-dependent linear potential |
| 18:00-19:30 | DINNER |

the list of posters (the version of March 12, 2019)

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| :--- | :--- |
| 1. | Le Luo et al (Zhuhai) <br> PT random walk in a honeycomb lattice |
| 2. | Le Luo et al (Zhuhai) <br> PT system with trapped ion qubits |
| 3. | Bijan Bagchi (Dedri) <br> Evolution operator for time-dependent non-Hermitian systems |
| 4. | Sachin Kumar (Mumbai) <br> Three types of discrete energy eigenvalues <br> in complex PT-symmetric scattering potentials |
| 5. | Alexander Andrianov (St. Petersburg) <br> Quantum models with Liouville field: |
| energy density self-adjointness and semiclassical wave packets |  |\(\left|\left\lvert\, \begin{array}{l|l||}\hline Himadri Barman (Hangzhou) <br>

Parity-time symmetry-breaking mechanism\end{array}\right.\right.\)

The third day, March 20th, Wednesday

## Morning session

| $\begin{gathered} \text { session V } \\ \text { chair: Xianqing Li-Jost } \end{gathered}$ |  |
| :---: | :---: |
| 8:30-9:10 | Naomichi Hatano (Tokyo) <br> Exceptional points of the quantum Liuovillean dynamics |
| 9:20-10:00 | Andrei I. Shafarevich (Moscow State University) Semiclassical states, corresponding to separatrices of classical Hamiltonian systems |
| 10:05-10:45 | COFFEE BREAK |
| 10:45-11:15 | Alan Kamuda (Cracow) <br> Naimarks dilation theorem and its application |
| 11:25-11:55 | Ray-Kuang Lee (Hsinchu) <br> PT-symmetry in phase space |
| 12:00-14:00 | LUNCH |

The third day, March 20th, Wednesday

## Afternoon programme

| 14:00-18:00 | SIGHTSEEING (transport $=$ free ) |
| :---: | :---: |
| option A: | Yalong Bay Tropical Paradise Forest Park |
| option B | ( = available also on other days/times): seaside |
| 18:00-19:30 | DINNER |

The fourth day, March 21st, Thursday

## Morning session

| chair: Qing-hai Wang |  |
| :---: | :---: |
| 8:30-9:10 | Uwe Günther (Rossendorf) <br> The IR-truncated PT-symmetric $V=i x^{3}$ model and its asymptotic spectral scaling graph |
| 9:20-10:00 | Miloslav Znojil (Řež) <br> Non-Hermiticities and exceptional points |
| 10:05-10:45 | COFFEE BREAK |
| 10:45-11:15 | Himadri Barman (Hangzhou) <br> Parity-time symmetry-breaking mechanism <br> of dynamic Mott transitions in dissipative systems |
| 11:25-11:55 | Taha Koohrokhi (Gorgan) <br> Complex superpartners in spherical symmetry |
| 12:00-14:00 | LUNCH |

The fourth day, March 21st, Thursday

## Afternoon session

|  | session VII <br> chair: Li Ge |
| :--- | :--- |
| $14: 00-14: 40$ | Lucrezia Cossetti (Rome) <br> Multipliers method for Spectral Theory |
| $14: 50-15: 30$ | Shao-Ming Fei (Beijing) <br> On characterization of quantum uncertainties |
| $15: 35-16: 00$ | COFFEE BREAK |$|$| $16: 00-16: 30$ | Bo-Bo Hua (Fudan University) <br> Graphs in Quantum Theory |
| :--- | :--- |
| $16: 40-17: 10$ | Mauricio P. Pato (Sao Paulo) <br> Some eigenvalue properties of pseudo-Hermitian matrices |
| $17: 20-17: 50$ | Anna Alliluieva (Moscow Institute of Physics and Technology) <br> Behavior of short-wave and localized perturbations <br> in relativistic hydrodynamics |
| 18:00-19:30 | DINNER |
| $19: 30-20: 30$ | INFORMAL DISCUSSIONS |
| $20: 30-21: 00$ | COMMITTEES |

The fifth day, March 22nd, Friday

## Morning session

|  | session VIII <br> chair: Uwe Günther |
| :---: | :---: |
| $8: 30-9: 10$ | Yu Guo (Shanxi Datong University) <br> Monogamy of entanglement |
| $9: 20-9: 55$ | Anna Okopinska (Kielce) <br> Entanglement in resonant states |
| 10:00-10:45 | COFFEE BREAK |
| 10:45-11:15 | Li-Jun Zhao (Beihang) <br> via entanglement-breaking space |
| 11:20-11:50 | Bing-Kun Qi (New York) <br> Linear Localization of non-Hermitian Zero Modes |
| 11:55-12:00 | a few farewell remarks |
| $12: 00-14: 00$ | LUNCH |
| $14: 00$ | THE END OF THE MEETING |

