

Program

International Workshop The Neumann-Poincaré Operator, Plasmonics, and Field Concentrations

Ramada Jeju Hamdeok Hotel, Jeju, S. Korea

February 8, Thursday, 2018

Chair: Hyeonbae Kang

8:30-9:00, Registration and Opening

9:00-9:50, Mihai Putinar (UC-Santa Barbara)

Carleman's legacy in the spectral analysis of the Neumann-Poincaré operator

10:00-10:50, Yoshihisa Miyanishi (Osaka)

Spectral geometry of the Neumann-Poincaré operator on three dimensional smooth domains

Coffee Break

11:20-12:10, Karl-Mikael Perfekt (Reading)

The spectrum of the Neumann-Poincaré operator on domains with corners and conical points

Lunch

Chair: Mihai Putinar

2:00-2:50, Charles Dapogny (Grenoble)

Homogenization of the eigenvalues of the Neumann-Poincaré operator

3:00-3:50, KiHyun Yun (HUFS)

Blow-up estimates of the field in a narrow region between two conducting inclusions

Coffee Break

4:20-5:10, Haigang Li (Beijing Normal)

Optimal estimates for Lamé systems from composite material

5:20-6:10, Mikyung Lim (KAIST)

Corner effects of planar domains on the electric potential

Dinner

February 9, Friday, 2018

Chair: Mikyoung Lim

9:00-9:50, Victor Nistor (Lorraine)

Integral operators and Fredholm conditions on polyhedral domains

10:00-10:50, Johan Helsing (Lund)

On a Helmholtz transmission problem in planar domains with corners

Coffee Break

11:20-12:10, Brian Fitzpatrick (ETH)

Subwavelength acoustic resonators: From super-resolution to metamaterials

Lunch

Excursion to
Seongsan Ilchulbong Peak

6:00-8:00, Banquet
all participants are invited

February 10, Saturday, 2018

Chair: Eric Bonnetier

9:00-9:50, Graeme Milton (Utah)

Optimal design for shielding or field enhancement in electrostatics and linear elasticity

10:00-10:50, Kazunori Ando (Ehime)

Spectral analysis of the elastic NP operator in two dimensions and cloaking by anomalous localized resonance

Coffee Break

11:20-12:10, Hai Zhang (HKUST)

Mathematical studies of extraordinary field enhancement in subwavelength slits

Lunch

Chair: Graeme Milton

2:00-2:50, Hongyu Liu (HK Baptist)

Anomalous localized resonance and plasmonic cloaking in linear elasticity

3:00-3:50, Faouzi Triki (Grenoble)

On the electro-sensing of weakly electric fish

Coffee Break

4:20-5:10, Sanghyeon Yu (ETH)

Field concentrations in plasmonics and linear elasticity

5:20-6:10, Eric Bonnetier (Grenoble)

Spectral properties of the Neumann-Poincaré operators in domains with a point degeneracy

Dinner