International Summer School

Pure and Applied Mathematics

Aug 1st-Aug 14th, 2022

Harbin Institute of Technology, Harbin, P.R.China

About the program

The Pure and Applied Mathematics Summer School International program will be held from July 30 to August 14 in 2022 organized by School of Mathematics and supported by the Undergraduate Colledge, Harbin Institute of Technology. The program offers four intensive courses on pure and applied mathematics. These courses relate to partial differential equations, differential geometry, Hilbert space, optimal control, Epidemiological models , game theory and decision science. They will be taught by four distinguished experts from the Ohio State University, Lomonosov Moscow State University, St Petersburg State University and University of Latvia respectively.

In addition, the program will provide opportunities to research on some specific topics related to these courses. In the end of this program, there will be a competition on mathematics. Winners in the competition will get corresponding certificate.

About the experts

Bo Guan, Ph. D.

Professor of the Ohio State University

Research fields: Geometric Analysis, Partial Differential Equations

Vladimir Markovich Manuylov, Ph. D.

Professor of Lomonosov Moscow State University

Research fields: C*-Algebra

Ovanes Petrosian, Ph. D.

Associate Professor of St Petersburg State University

Research fields: Game Theory, Decision Science

Dmitry Gromov, Ph. D.

Senior Researcher of University of Latvia

Research fields: Optimal Control Theory

Requirements

The senior and junior students of related major from universities all over the world will be accepted. Students must have strong English listening and speaking skills since all courses will be given in English.

Courses information

Name of Course	Credit Hours	Credit	Test Form
Partial Differential Equations in Geometry	16	1	Exam/ Report
Hilbert Space and Its Applications	16	1	Exam/ Report
Qualitative Analysis and Control for Epidemiological models	16	1	Exam/ Report
Game Theory and Decision Science	16	1	Exam/ Report

Schedule of the Pure and Applied Mathematics International Summer School

	Jul. 30 (Sat)	Jul. 31 (Sun)	Aug. 2 (Mon)	Aug. 3 (Tue)	Aug. 4 (Wed)	Aug. 5 (Thur)	Aug. 6 (Fri)
8:30-10:00	Partial Differential Equations in Geometry	Partial Differential Equations in Geometry	Partial Differential Equations in Geometry	Partial Differential Equations in Geometry	Partial Differential Equations in Geometry	Partial Differential Equations in Geometry	Partial Differential Equations in Geometry
14:00-15:30	Hilbert Space and Its Applications	Hilbert Space and Its Applications	Hilbert Space and Its Applications	Hilbert Space and Its Applications	Hilbert Space and Its Applications	Hilbert Space and Its Applications	Hilbert Space and Its Applications
15:45-17:15	Qualitative Analysis and Control for Epidemiological models	Qualitative Analysis and Control for Epidemiological models	Qualitative Analysis and Control for Epidemiological models	Qualitative Analysis and Control for Epidemiological models	Qualitative Analysis and Control for Epidemiological models	Qualitative Analysis and Control for Epidemiological models	Qualitative Analysis and Control for Epidemiological models
19:00-20:30							Game Theory and Decision Science
	Aug. 7 (Sat)	**Aug. 8 (Sun)**	**Aug. 9 (Mon)**	**Aug. 10 (Tue)**	**Aug. 11 (Wed)**	**Aug. 12 (Thur)**	**Aug. 13 (Fri)**
8:30-10:00	Partial Differential Equations in Geometry						
14:00-15:30	Hilbert Space and Its Applications	Game Theory and Decision Science	Game Theory and Decision Science	Game Theory and Decision Science	Game Theory and Decision Science	Game Theory and Decision Science	Game Theory and Decision Science
15:45-17:15	Qualitative Analysis and Control for Epidemiological models						
19:00-20:30	Game Theory and Decision Science						
	Aug. 14 (Sat)						
8:30-11:30	Math Competition						

Remarks: Some lectures may be changed; the final schedule will be announced by July 20.