

## Physics and Mathematics Graduate Program (M, D)

Graduate School	Department	Research Group	Supervisor/Staff			
			Professor	Associate Professor	Lecturer	Assistant Professor
Graduate School of Mathematics	Mathematics	Combinatorial Theory	Hiroshi Hirai Soichi Okada	Yusuke NAKAMURA		
		Analytic Number Theory		Henrik Bachmann		
		Algebraic Number Theory	Kazuhiro Fujiwara	Hiroshi Suzuki Henrik Bachmann	Shun Okubo	
		Arithmetic Geometry	Kazuhiro Fujiwara Sho Tanimoto		Shun Okubo	
		Number Theory	Hidekazu Furusho			
		Algebraic Geometry	Akira Ishii Kazuhiro Fujiwara Sho Tanimoto	Shintaro Yanagida Yusuke NAKAMURA		Genki Ouchi
		Fractal Geometry		Johannes Jaerisch		
		Algebraic Analysis				
		Commutative Algebra	Ryo Takahashi			
		Non-Commutative Algebra				
		Representation Theory	Tohru Uzawa Soichi Okada Tomoki Nakanishi Ryo Takahashi	Takahiro Hayashi Shintaro Yanagida Hiroyuki Nakaoka Yuki Arano		Aaron Chan
		Category Theory		Hiroyuki Nakaoka		Aaron Chan
		Topology	Hiroshi Ohta Hitoshi Moriyoshi	Tomomi Kawamura		
		Algebraic Topology	Lars Hesselholt			
		Homotopy Theory	Lars Hesselholt			
		Differential Geometry	Hisashi Naito Hiroshi Ohta Shin Nayatani Hitoshi Moriyoshi	Shinichiroh Matsuo		Takeshi Sato
		Hyperbolic Geometry				
		Complex Geometry		Shinichiroh Matsuo		
		Discrete Geometric Analysis	Hisashi Naito			
		Graph Theory		Futaba Fujie Nanao Kita		
		Complex Analysis				
		Dynamical Systems		Shinichiroh Matsuo Johannes Jaerisch		
		Ergodic Theory		Johannes Jaerisch		
		Global Analysis	Hitoshi Moriyoshi	Shinichiroh Matsuo		
		Functional Analysis	Serge Richard Yoshimichi Ueda	Bourne Chris		
		Operator Algebra	Yoshimichi Ueda	Yuki Arano Bourne Chris		
		Fourier Analysis	Mitsuru Sugimoto Neal Bez	Jun Kato Yutaka Terasawa		
		Partial Differential Equations	Hisashi Naito Mitsuru Sugimoto Neal Bez Toshiaki Hishida Serge Richard	Jun Kato Yutaka Terasawa		Yasuhiro Sasahara
		Differential Equations				
		Probability Theory	Nobuo Yoshida	Makoto Nakashima Masashi Kubo		
		Infinite Analysis	Tomoki Nakanishi	Hidetoshi Awata Takahiro Hayashi Shintaro Yanagida		
		Mathematical Physics	Hiroaki Kanno Tetsuya Shiromizu Taro Nagao Tomoki Nakanishi	Kazuhiko Minami Keisuke Izumi Shintaro Yanagida Bourne Chris	Masashi Hamanaka	
		Applied Mathematics (Mathematical Biology, Nonlinear Dynamics, Quantum Foundations)	Toru Ohira			
		Elementary Particle Theory			Masashi Hamanaka	
		General Relativity	Tetsuya Shiromizu	Keisuke Izumi		
		Cosmology	Tetsuya Shiromizu	Keisuke Izumi		
		Statistical Mechanics	Taro Nagao Nobuo Yoshida	Kazuhiko Minami		
		Theoretical Condensed Matter	Taro Nagao	Kazuhiko Minami		
		Fluid Mechanics	Toshiaki Hishida	Yutaka Terasawa		
		Numerical Analysis	Hisashi Naito			
		Information Theory	Masahito Hayashi	Masashi Kubo Ryuhei Mori		
		Quantum Information Theory	Masahito Hayashi François Le Gall	Ryuhei Mori		
		Quantum Cryptography	Masahito Hayashi			
		Theoretical Computer Science	Hiroshi Hirai Jacques Garrigue François Le Gall	Nanao Kita Ryuhei Mori		
		Algorithm Theory	Hiroshi Hirai François Le Gall	Nanao Kita Ryuhei Mori		
Programming Languages	Jacques Garrigue					
Type Theory	Jacques Garrigue					
Optimization Theory	Hiroshi Hirai					