

Degree Programs in Comprehensive Human Sciences

<Doctoral Program in Neuroscience>

Field of Research	Faculty	Detailed Description of Research Field
Neuroscience	YAMADA Kazuo	<ul style="list-style-type: none"> •Behaviora •Behavioral neuroscience on neural mechanisms of learning, memory, and forgetting using rodents. •Behavioral neuroscience on rodents' models of post-traumatic stress disorder (PTSD) and drug dependence.
	TAKAHASHI Aki	<ul style="list-style-type: none"> •Neuroscience, behavior genetics, and neuroimmunological approaches to study biological mechanism of animal behavior including emotion and social behaviors (especially aggressive behavior) using animal model.
	AYABE Saho	<ul style="list-style-type: none"> •human olfactory perception / cognition and odor hedonics •haptic space perception / cognition and perceptual learning •perception / cognition of facial expressions
	YAMANAKA Katsuo	<ul style="list-style-type: none"> •Psychosocial approaches for dementia care •Psychological assessment tools for dementia care •Social attitudes for dementia
	ARAI Tetsuaki	<ul style="list-style-type: none"> •Early diagnosis of dementia using biomarkers •Clinical study of dementia prevention •Clinicopathological, biochemical and neuroimaging study of dementia •Clinical study of presenile dementia
	OTA Miho	<ul style="list-style-type: none"> •Relationship between the aphasia and the regional brain function in dementia revealed by magnetic resonance imaging •Psychiatric disease-related brain change revealed by magnetic resonance imaging
	MATSUMOTO Masayuki	<ul style="list-style-type: none"> •Roles of brain's monoamine systems in cognition, emotion, and motivation.
	YAMADA Hiroshi	<ul style="list-style-type: none"> •Using primate model for human cognitive function, neural mechanisms for economic decision makings are examined. •Examination of neural circuitry underlying economic decision makings. •Examining how the motivation and willingness to act are emerged in the brain.
	TAKEI Yosuke	<ul style="list-style-type: none"> •Analysys of molecular pathology of schizophrenia and autism spectrum disorder •Analysis of mechanism of intracellular transport in neurons

	MASUDA Tomoyuki	<ul style="list-style-type: none"> • Elucidation of the molecular mechanism of neurogenesis • Functional analyses of axonal guidance molecules • Functional analyses of novel candidate genes involved in axonal guidance
	LAZARUS Michael	<ul style="list-style-type: none"> • Understanding the control of sleep and wake by motivation • Sleep circuits as potential therapeutic targets for insomnia • Link between REM sleep loss and the desire for junk food
	SAKAGUCHI Masanori	<ul style="list-style-type: none"> • Mechanisms of diseases caused by sleep and memory dysfunction • Functional significance of hippocampal activity for memory consolidation during sleep • Elucidation of the mechanisms of adult-neurogenesis in memory consolidation
	HAYASHI Yu	<ul style="list-style-type: none"> • The function and evolution of REM sleep • The roles of sleep in the neonatal brain • Molecular pathways with conserved roles in sleep regulation across the animal kingdom
	ABE Takashi	<ul style="list-style-type: none"> • Neurobehavioral consequences of sleep loss • Understanding the psychological functions of sleep • Developing novel methods for measuring sleep and alertness
	HONJOH Sakiko	<ul style="list-style-type: none"> • Synaptic plasticity and sleep • Neural circuits underlying NREM sleep specific brain activity

[Cooperative Graduate School]

Field of Research	Faculty	Detailed Description of Research Field
Neuroscience (Cooperative Graduate School)	IWAKI Sunao (AIST)	<ul style="list-style-type: none"> • Quantitative evaluation of subjective experience using non-invasive neuroimaging techniques. • Development of multimodal neuroimaging to visualize and model neural networks in the human brain.
	TAKEDA Yuji (AIST)	<ul style="list-style-type: none"> • Research on characteristics of human visual attention and memory • Development of psychophysiological indices of cognitive states
	SATO Chikara (AIST)	<ul style="list-style-type: none"> • Structural biology of receptors and ion channels of neural system. • Study of subcellular machinery of neurons and brain
	TAKASHIMA Ichiro (AIST)	<ul style="list-style-type: none"> • Functional architecture of the cortex • Neural mechanisms of functional recovery
	MIO Kazuhiro (AIST)	<ul style="list-style-type: none"> • Molecular biology of the macromolecular complexes essential for maintaining and functioning of neuronal cells • Structural biology of the signal transduction molecules in the cell and in the nucleus

(AIST) National Institute of Advanced Industrial Science and Technology

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