Call 2020-2, Research and Innovation Activities, Topics

Topics and Major Challenges		Open/ Closed
Transport & Smart Mobility		
	Major Challenge 1: Developing clean, affordable and sustainable propulsion	Open
	Major Challenge 2: Ensuring secure connected, cooperative and automated mobility and transportation	Open
	Major Challenge 3: Managing interaction between humans and vehicles	Open
	Major Challenge 4: Implementing infrastructure and services for smart personal mobility and logistics	Open
Health and Wellbeing		
	Moving healthcare from hospitals into our homes and daily life requiring preventive and patient centric care	Open
	Restructuring healthcare delivery systems, from supply-driven to patient-oriented	Open
	Engaging individuals more actively in their own health and wellbeing	Open
	Ensuring affordable healthcare for the growing amount of chronic, lifestyle related diseases and an ageing population	Open
	Developing platforms for wearables/implants, data analytics, artificial intelligence for precision medicine and personalised healthcare and wellbeing	Open
Energy		
	Major Challenge 1: Ensuring sustainable power generation and energy conversion	Open
	Major Challenge 2: Achieving efficient community energy management	Open
	Major Challenge 3: Reducing energy consumption	Open
Digital Industry		
	Major Challenge 1: Developing digital twins, simulation models for the evaluation of industrial assets at all factory levels and over system or product life-cycles	Open
	Major Challenge 2: AI-enabled cognitive, resilient, adaptable manufacturing	Open
	Major challenge 3: Developing digital platforms, application development frameworks that integrate sensors/actuators and systems	Open
	Major Challenge 4: Human-centred manufacturing	Open
	Major Challenge 5: Sustainable manufacturing in a circular economy	Open
Digital Life		
	Major Challenge 1: Ensuring safe and secure spaces	Open
	Major Challenge 2: Ensuring healthy and comfortable spaces	Open
	Major Challenge 3: Ensuring anticipating spaces	Open
	Major Challenge 4: Ensuring sustainable spaces	Open
Systems and Components: Architecture, Design and Integration		
	Major Challenge 1: Managing critical, autonomous, cooperating, evolvable systems	Open

	Major Challenge 2: Managing Complexity	Open
	Major Challenge 3: Managing Diversity	Open
	Major Challenge 4: Managing Multiple Constraint	Open
	Major Challenge 5: Integrating features of various technologies and materials into miniaturised smart components	Open
	Major Challenge 6: Effectively integrating modules for highly demanding environments	Open
	Major Challenge 7: Increasing compactness and capabilities by functional and physical systems integration	Open
Connectivity and Interoperability		
	Major Challenge 1: Strengthening the EU position on differentiated technologies and enabling it to capture higher value by moving to system/module level	Open
	Major Challenge 2: Autonomous interoperability translation for communication protocol, data encoding, security and information semantics	Open
	Major Challenge 3: Architectures and reference implementations of interoperable, secure, scalable, smart and evolvable IoT and SoS connectivity	Open
Safety, Security and Reliability		
	Major Challenge 1: Safety, security and privacy by design	Open
	Major Challenge 2: Reliability and Functional Safety	Open
	Major Challenge 3: Secure, safe and trustable connectivity and infrastructure	Open
	Major Challenge 4: Privacy, data protection and human interaction	Open
	Computing and Storage	
	Increasing performance at acceptable costs	Open
	Making computing systems more integrated with the real world	Open
	Making "intelligent" machines	Open
	Developing new disruptive technologies	Open
Process Technology, Equipment, Materials and Manufacturing for Electronic Components & Systems		
	Major Challenge 1: Develop advanced logic and memory technology for nanoscale integration and application-driven performance	Open
	Major Challenge 2: Develop Technology for Heterogeneous System-on-Chip (SoC) Integration	Open
	Major Challenge 3: Develop technology for Advanced Packaging and Heterogeneous System-in-Package (SiP) integration	Open
	Major Challenge 4: Extend world leadership in Semiconductor Equipment, Materials and Manufacturing solutions	Open
Long-term vision		
	New computing paradigms (‘Beyond CMOS’).	Open
	Process technology, equipment and materials	Open
	Systems and components: architecture, design and integration	Open
	Health & wellbeing	Open

	Energy	Open
	Digital Industry	Open
	Transport and smart mobility	Open
	Connectivity and interoperability	Open
	Data science and Artificial Intelligence	Open