



About NJES

Introduction:

Al-Nahrain Journal for Engineering Sciences is an open access specialized academic journal that evaluates and publish scientific papers in all engineering subject matters submitted by researchers. The editorial board consists of faculty members from Al-Nahrain University and other international universities, as well as an advisory board from Iraqi and foreign universities, specialized in engineering sciences. The members of these boards typically hold the Professor and Asst. Professor scientific titles.

The editorial board have monthly meetings to follow-up the progress of the submitted papers and the journal affairs, as well as the approval or rejection of concluded papers according to the reviews of the selected professional reviewers for each paper. These reviewers are selected according to the specialized subject matter of each paper.

The journal was founded in 1988 (previously titled; Nahrain University - College of Engineering Journal with the ISSN 1812-187X). It is a quarterly publication in English, issued in Baghdad under the authority of College of Engineering - Al-Nahrain University, with the registration number ISSN 2521-9154 and eISSN 2521-9162. Also, the journal has the DOI prefix 10.29194. NJES became a member of DOAJ since 2018.

Aims and Scope

NJES journal is committed to publish the scientific output of researchers in the full range of engineering fields of architectural, chemical, civil, computer, electrical, electronic, communications, information technology, laser and optoelectronics, mechanical and biomedical engineering as well as any directly related fields. The most significant criteria for accepting papers in this journal is scientific excellence and integrity .

The material of the paper must not violate any intellectual property rights of any person or entity, must not contain any subject matter that contravenes any Iraqi or international laws, and must adhere to the ethical standards applicable for all research disciplines. NJES accepts papers written in English only aside from the Arabic title and abstract for native Arabic speakers.

Publication Ethics

Al-Nahrain Journal for Engineering Sciences (NJES) aspires to publish scientifically excellent research articles while maintaining the integrity of scientific research by following the highest standards of ethical research practice and publication. Our journal is exceedingly serious about its responsibilities. We adhere to the national and international laws of intellectual property, thus all submitted papers shall be thoroughly checked for plagiarism and misconduct before further processing.



Any noted potential breach of our publication ethical standards shall be investigated. If such breaches are proven to be accurate, the journal shall attain the right to reject the submitted material immediately. If necessary, NJES shall attain the right to take legal steps and actions against the offending party.



Guidelines for Authors and Publication Requirements

General Information

Al-Nahrain Journal for Engineering Sciences (NJES), a refereed scientific engineering journal published under the authority of the College of Engineering, Al-Nahrain University four times per year. Our Journal is the winner of Al-Nahrain University prize for the Best Scientific Journal of 2017. The journal publishes the scientific output of researchers in the fields of architectural, chemical, civil, computer, electrical, electronic, communications, information technology, laser and optoelectronics, mechanical and biomedical engineering as well as any directly related fields. Papers are submitted in English only to the journal .

The material of the manuscripts submitted to our journal must not violate any intellectual property rights of any person or entity, must not contain any subject matter that contravenes any Iraqi or international laws, and must adhere to the ethical standards applicable for all research disciplines .

Fees

For the manuscript to be submitted for publications, 50.000.00 ID should be paid upon the submission of the manuscript to NJES office in Al-Nahrain University/ College of Engineering. This does not apply for International submissions .

Requirements

1. **All manuscripts** submitted for publication must not be published or considered for publication or accepted for publication elsewhere .
2. **The manuscript** submitted for publication must be submitted online as an MS Word copy only according to the standards of the journal's research template provided in our website. Please provide a physical copy of the Researcher's Obligation form with the required signatures and physical stamping in person if the researchers are from Iraq or a scanned copy if the researchers are abroad .
3. **The manuscript** must include a title and an abstract that ranges between 200-250 words for each of the English and Arabic versions (in case of native Arabic authors). The manuscript's pages must not exceed 15 printed pages .
4. **Full name(s)**, qualification(s), affiliation(s), address(es) and e-mail addresses of all the authors must be arranged just below the title of the manuscript .
5. **Abbreviations** must not be used in the title of the manuscript and the abstract, except those of the measurement units .
6. **Only** standard international units (SI units) must be used .



7. **Tables and illustrations** such as figures, photographs and drawings must be clear, numbered, titled and referred to in the text consequently.
8. **Footnotes** can be used to clarify information, and, when used, footnotes must be numbered.
9. **Font description** for manuscripts written in English using the "Garamond" font and submitted in MS word only .
 - Title: 16pt (Bold) in the middle.
 - Authors Name/Names : 12pt (Bold) .
 - Affiliations: 10pt (Regular).
 - Headings: Capital initial letters size 12pt (Bold) and placed flush to the left-hand margin.
 - Sub-headings: Capital initial letters size 11pt (Bold) and placed flush to the left-hand margin.
 - The manuscript should be written in TWO columns except for the abstracts section.
 - Both the English and Arabic abstracts should be located at the beginning of the submitted manuscript .
 - The Arabic abstract should be in "Arabic Typesetting" font with single line spacing and the Arabic title 18pt (Bold)
 - Keywords: should be written after both abstracts. 10pt.
 - Text: 10pt. The first line should be flushed to the right by 5 mm .
 - Equations: Must be numbered in parentheses flush to the right-hand margin with dots leading the numbers; a single line blank space should be left before and after the equation. Equations are referenced within the text as follows :
eq. (x), where x is the equation number.
10. **Figures and Tables:** Should be referenced in bold as follows: Fig.1, Table 1. Figure captions should [Figure ():] appear below the figure in small letters sized 10 and must be centered above the table [Table ():] in small letter size 10; a single line blank space should be left before and after the table heading.
11. **References:** References should be grouped together at the end of the manuscript, after the acknowledgment. They must be referred to as they appear in the text with square brackets []. References should follow the **IEEE 2006** referencing style using "Garamond" 10pt .

Submission, Revision, and Final Decision Procedures

After submitting the manuscript to our journal, the author/s shall receive a confirmation email with their manuscript reference number within 24 hours. If the author/s do not receive the confirmation email, please have the



corresponding author check their SPAM E-mail folder just in case the confirmation email got delivered there instead of the inbox .

All materials submitted to the Journal are checked for plagiarism using **Turnitin**, Plagiarism per source should be less than 5%. Total Plagiarism must not exceed 20%. (Bibliography and sources with less than "5 words" are excluded) .

Then after the material must be approved by the assigned reviewers and the Editorial Panel before being published in the Journal. The manuscripts are usually reviewed at least by two referees, selected by the Editorial Panel according to the paper's subject matter. Referees are required to conduct a review and provide an assessment report within three weeks of receiving the manuscript. If the two manuscript reviews contradicted each other, then a third reviewer shall be assigned and the majority opinion shall be conclusive .

The author/s shall receive the reviewers' reports and the required modifications, if available, then are requested to make these revisions within three weeks of receiving them, which shall be resubmitted to the referees for reassessment (if required). A letter detailing the requested revisions, addressed to the reviewers, should be submitted along with the revised manuscript to be sent to the reviewers with no reference whatsoever to the authors names in that letter .

The minimum period for submissions to be either accepted or declined is approximately two months. Declined submissions are returned to the corresponding author as soon as possible.

If the manuscript is accepted for publishing, the author/s are requested to provide a final electronic copy of the manuscript integrating the journal's typesetting requirements, and incorporating all the modifications requested and made during the assessment process .

When a manuscript is accepted for publication, it shall be sent for typesetting. One set of page proofs will be sent to the corresponding author to check thoroughly before publication. The marked proof must be returned to the Journal within seven days .

Review Papers

NJES accepts review papers exclusively from authors who have been publishing papers in an Engineering specialized field, or an Interdisciplinarity field with Engineering such as biomedical engineering, for at least five years prior to submitting their review manuscript to our journal .

NJES requires 25 listed references minimum per each manuscript submitted to our journal.



Useful Keywords

Architectural Engineering	
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Electronic and Communications Engineering	69
Laser, Optics and Opto-Electronics Engineering	70
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Architectural Engineering

Access	Flexibility	Plan
Acoustics	Formation	Pragmatic
Aesthetic		Public buildings
Alley	Glazing	
Antinational index	Ground Floor	Ramp
Arcade	Gutter	Rehabilitation
Arch		Reinforced renewal
Architect	Hanging	Restoration
Architecture	Hard Core	Residential buildings
Autonomous	Head room high-tech	Retaining wall
Axe	Housing	Roof
		Rough
Base	Image	
Basement	Indicator	Section
Bay	Industrial building	Semantic
Beam	Insulation	Semiotic
Block	Interpretation	Significance
Building		Silt
Bulky	Jack Arch	Site
		Skeleton
Cantilever	Maintenance	Smooth staircase
Ceiling	Masonry	Structuralism
Center	Material	Style of architecture
Characteristics	Meaning	Sustainable
Code	Mechanism	Symbolic
Color	Model	Syntax
Column	Modern	System
Conservation	Modernity	
Construction	Moumanility	Tower building
Constructivism	Mortar	Town planning
Context	Mullions	Tradition type
Core		Type
Court	Key Stone	Typology
Crack		
	Landscape	Urban
Decoration	Level	Urban Fabric
Defect		
Design	Order	Variability
Dimension		Ventilation
Dome	Partition	
	Pattern	Zoning
Elevation	Percepts	
Entrance	Phenomenology	



Chemical Engineering

Absorption	Economics	Laminar flow	Radiation
Activity coefficient	Equation of state	Liquid-liquid separation	Reaction engineering
Adsorption	Equilibrium properties	Mass transfer	Reactors
Adsorbents	Electrochemical	Material engineering	Reactive separation
Air pollution	Energy conservation	Membrane separation	Reboilers
Alkylation	Energy	Membrane bioreactors	Refinery process
Azeotropes	Environmental heat transfer	Mixing	Refinery energy
Batch distillation	Evaporation	Modeling	Reforming
Batch operation	Exergy	Modeling electrolyte	Refrigerants
Batch reactor	Extraction	Molecular separation	Reliability engineering
Biomass	Extraction distillation	Momentum transfer	Reverse osmosis
Bioreactors	Filtration	Multiphase flow	Rheology
Biotechnology	Finned exchanges	Multi component systems	Safety
Bio processing	Fixed bed process	Natural gas production	Serubbers
Bioengineering	Flotation	Natural products	Sedimentation
Boiling	Flow meters	Newtonian fluid	Separations
Boundary layer	Fluid flow	Non-newtonian fluid	Simulation
Bubble column	Fluidization	Oil production	Simulation distillation
Catalysis	Food	Optimization	Size reduction
Catalytic distillation	Fuels	Osmotic distillation	Solid-liquid separation
Catalytic reactors	Fugacity	Packed towers	Transport phenomena
Centrifugation	Furnaces	Particle technology	Thermodynamic
Chemical reaction	Gas engineering	Particle size	Thermal management
Chromatography	Gas-liquid separation	Particulate removal	Thermal coupled distillation
Coating	Heat exchangers	Petrochemicals	Thickeners
Combustion	Heat transfer	Petroleum refinery	Turbulent flow
Complex fluids	Heat transfer coefficient	Phase equilibrium	Two phase flow
Computer simulation	Heat pumps	Polymers	Unsteady-state flow
Composites	High temperature corrosion	Process system engineering	Viscosity
Conduction	Interface	Process design	Viscous fluids
Control	Ion exchange	Process dynamics	Waste treatment
Convection	Interfacial phenomena	Process synthesis	Water pollution
Cooling towers	Isomerization	Process control	Water treatment
Corrosion	Kinetics	Process simulation	
Crude distillation			
Crystallization			
Cyclones			
Dehumidification			
Desorption			
Diffusion			
Distillation			
Distillation control			
Drying			



Civil Engineering

Aggregate	Durability	Mathematical models	Settlements
Airport	Dynamic	Military engineering	Seismic engineering
Alluvium		Mining & quarrying	Sewers
Asphalt	Earth pressure	Mudstone	Sewage treatment
	Earth works	Municipal engineering	Soil mechanics
Backfill	Economics		Shells
Beams	Elasticity	Noise	Silos
Bearing capacity	Embankments	Numerical methods	Silt
Bricks	Engineering geology		Site investigation
Bridges	Environment	Offshore engineering	Slabs
Building	Erosion	Organic materials	Slope stability
	Excavation	Overburden	Social impact
Cables			Soil-structure interaction
Caissons	Failures	Pavements	Stability
California bearing ratio	Fatigue	Permeability	Statistical analysis
Canals	Finite elements	Petroleum	Steel structures
Car parks	Floods	Photogrammetry	Streets
Cavities	Foundation engineering	Piles	Strength of materials
Cement	Frost action	Pipes	Stress analysis
Clay		Planning	Structural frameworks
Coastal engineering	Geomaterials	Plasticity	Subsidence
Codes & standards	Geophysics	Pollution	Surface water
Cofferdams	Geotechnique	Pore pressure	Surveying
Columns	Geotextilos	Power station	
Compaction	Gravel	Public health	
Composite structures	Grouting	Quality control	Thermal effects
Concrete technology	Groundwater	Quarries	Timbre structures
Concrete structures			Town planning
Conservation	Highways	Railroads	Traffic engineering
Consolidation	Hydrology	Recreational facilities	Transportation engineering
Contracts		Recycling of materials	Triaxial tests
Corrosion	Infrastructure	Rehabilitation	Tunnels
Cranes	In-situ tests	Reclamation	
Cyclic loading	Ion exchange	Reservoirs	Underwater engineering
	Irrigation	Resins	Urban design
Dams		Risk	
Deformation	Joints	Retaining walls	
Demolition		River engineering	Vibration
Diaphragm walls	Laboratory tests	Rock mechanics	
Diffusion	Landfill		Waste management
Disaster engineering	Land reclamation	Safety	Water quality
Disposal		Sand	Water supply
Docks	Maintenance	Saturation	Waterways
Drainage	Management	Seepage	Weather
Dredging	Marketing		Wind engineering
Drilling	Material technology		



Computer Engineering

Algorithms	Fault tolerance
Analog computers	Fault-tolerant computer networks
Artificial cybernetics	
Artificial intelligence	Games theory
Assembly language	
	High performance software
Code development	Image segmentation
Color vision	Information systems
Complex systems	Information technology
Computational linguistics	Information engineering
Computational methods	Integrated hardware software systems
Computer network security	
Computer security	Local area networks
Computer aided design	Logic and switching circuits
Computer applications	Logic design
Computer architecture	
Computer circuits	Network communication
Computer data	
Computer engineering	Object technology
Computer graphics	Online learning
Computer hardware	Optical computer technology
Computer interface	
Computer methods	Parallel algorithms
Computer modelling	Parallel processing systems
Computer network	Parallel programming
Computer operating system	Pattern recognition
Computer peripherals	Performability
Computer programming languages	Program verification
Computer science	
Computer simulation	Realtime systems
Computer software	Reverse code engineering,
Computer storage	
Computer system analysis	Security analysis
Computer systems	Software engineering
Computer theory	Software-protection
Computer vision	Stochastic activity network
Computers,	Stochastic Petri nets
Cryptanalysis	Supercomputers
Cryptology	Switching theory
DASD	Texture analysis
Digital computers	Token ring
Distributed computing systems	
	Virus-research
Educational technology	
Experiment design	
Expert systems	



Electronic and Communication Engineering

Absorption	EIRP	Microstrip	Satellite
Access	Electromagnetic	Microwave	Scanning
Acquisition	Electronic	Mobile	Scattering
Algorithms	Electronic warfare	Mode	Shielding
Ambiguity	Enhancement	Modeling	Security
Amplifiers	ESM	Modulation	Semiconductor
Antennas		Monopulse	Sensor
Arrays	Fading	Multipath	Side lobes
Artificial intelligence	Feeder	Multiplex	Signals
Atmosphere	Ferrites		Signal processing
Attenuation	Ferromagnetic	Noise	Simulation
	Filter	Nonlinearity	SLAR
Band width	Field effect transistor	Numerical	Smoothing
Baseband	Format		Software
Beam forming	Free space	Omnidirectional	Solid state
Beam width	Frequency	Optical fiber	Sounders
Bit error rate		Optimization	Space
Broad band	Gain	Orbit	Spread spectrum
Broadcasting	Gates		Spectral analysis
Burst	GIS	Pager	Strip lines
	Ground waves	Parallel processing	Switching
Cable	GSM	Pattern recognition	Synchronization
CAD		Permittivity	Synthesizer
Cattier	Harmonics	Phase array	
Cellular	Homing	Photogrametry	Telemetry
Channel	Hopping	Polarization	Telephony
Circuit	Hardware	Power amplifier	Thermal noise
Code	Horizon	Power and machines	Tracking
Communications		Power electronics	Transducer
Compatibility	Identification	Prediction	Transform
Conductivity	Image processing	Probability	Transient analysis
Control	Industrial electronics	Propagation	Transistors
Correlation	Information	Protocol	Transmission
Counters	Integrated circuits		Transponder
	Interference	Quality factor	Troposphere
Data	Intermodulation	Quantization	TWT
Decoding	Ionosphere	Quantum electronics	
Demodulation	Isolator		Ultra-high-frequency
Detector	Isotropic	Radar	Up-link
Dielectrics		Radiation pattern	
Diffraction	Jamming	Radio frequency	Video
Digital		Radio-link	VLSI
Dipole	Kalman filter	Real time	Voice channel
Directivity		Receiver	VSAT
Direct sequence	Link	Reflection	VSWR
Diversity	Line-of-sight	Refractivity	
Down link	Logic	Reliability	Waveguides
Drives and actuators	Matching	Remote sensing	Waves
Ducting	Memory	Repeaters	Wireless
	Message	Resolution	
ECCM	Meteors		Yagi antennas
ECM	microprocessor	Sampling	
Efficiency		SAR	



Laser, Optics and Opto-Electronics Engineering

Aberrations	Image	Physiological optics
Acousto-optical devices	Infrared	Photography
Apertures	Interconnects	Phase shifting
Atmospheric optics	Integrated optics	interferometry
	Interference	Polarization
Beam trapping		
Birefringence	Lasers	Quantum optics
	Laser diodes	Quantum fluctuations
Cherenkov radiation	Laser design and operation	Q-switching
Chemical lasers	Laser resonators	
Color detection	Laser modulation	Radiation
Color vision	Laser efficiency	Raman lasers
Coherence	Laser continuous operation	Range finders
	Laser applications	Reflectors
Design of optical systems	Laser measurements	
Diode-pumped lasers	Laser spectroscopy	Scales for light
Display devices	Lenses	Scanners
Dye lasers	Liquid crystals	Schlieren devices
Dynamic Stark shift	Light-sensitive materials	Semiconductor lasers
		Sensors, gyros
Edge and boundary effects	Magneto-optical devices	Solar collectors and
	Mechanical effects of light	concentrators
Fiber lasers	Modulation	Solitons in fibers
Filters		Synchrotron radiation
Fiber optics	Nonlinear optics	
Fiber-optic instruments		Ultrafast processes
Fiber fabrication	Optical system design	
Fiber testing	Optical spectrometers	Visible and ultraviolet sources
Fourier optics	Optical processors	Vision
Free-electron lasers	Optical communication	Volume holograms
	Optical computers	
Gas lasers	Optical storage systems	Wave fronts and ray tracing
Geometrical optics	Optical coatings	Waveguides
Glasses, quartz		Wave optics
Gratings	Pattern recognition	Wave propagation
	Phase retrieval	
Harmonic generation	Photon statistics	X- and y-ray lasers
Holography	Photonic bandgap materials	X-ray



Mechanical Engineering

Aerodynamic	Detect	Laminate	Solar energy
Aerolastisity	Detection	Linear	Stability
Air-conditioning	Dies	Loading	Static
Analysis	Divergence		Steady
Axial compressor	Dynamic	Mass transfer	Steam
		Material	Stiffened
Bar	Edge	Matrix	Stiffness
Beam	Elastic	Metal	Strain gauge
BEM	Energy	Modulus	Strength
Bending	Extrusion		Stress
Bevel		Non-linear	Structure
Blade	Fixed	Non-symmetric	Symmetric
Boundary layer	Fatigue	Nuclear power	
Buckling	FEM	Numerical	Tension
	Fillet		Tensional
CAD	Fluid	Ocean power	Thermal power
CAM	Flutter	Optimum	Thermo siphon
Centrifugal CNC	Fracture	Orthotropic	Thermodynamic
Centrifugal CFD	Free		Thermoelastic
Chamber		Photoelasticity	Thermoplastic
Collectors	Gas	Pipes	Tooth
Column	Gas dynamic	Plastic	Toughness
Compatibility	Gear	Plate	Transfer
Composite	Geometry	Ply angle	Transient
Compressor	Geometry power	Polymers	Tubes
Compustional		Power	Turbine
Computer	Heat	Power plant	Two phase flow
Concentration	Heat exchanger	Pressure	
Concentrators	Helical	Profile	Unstiffened
Conduction	Hoop		
Conical	Hydroelectric	Radial	Vibration
Convection		Radiation	Viscoelastic
Creep	I.C.E	Refrigeration	Viscoplastic
Cut out	Impact	Renewable	
Cyclic	Industrial	Resin	Wall
Cylindrical	Intersection	Restraints	Wind energy
	Involutes	Rigidity	Worm
Degradation	Isotropic	Rotation	
Delamination		Shearing	Yield
Deflection	Jet engine	Sheet	
Design	J-internal	Shell	



BioMedical Engineering

Accelerometer	Control Unit	Image Processing	Reflex Action
Action Potential	Coronary Care Unit	Implants	Reflection
Active Media		Inductor(s)	Refraction Index
Alarm System	DC Shock	Infrared Radiation	Rehabilitation
Amplifier(s)	Defibrillator	Intensity	Engineering
Analog to Digital Converter	Depolarization	Intensive Care Unit	Respiratory
Angle(s)	Dental Chair Unit	Interaction	Monitors
Anthropometry	Detector Circuit	Isolation transformer	Resting Potential
Argon Laser	Dialysis Machine		Rotation Axis
Articulation	Diaphragm	Joint Movements	R-R Interval
Artificial Organs	Diastole	Kinesiology	Ruby Laser
A-Scan	Differential Amplifier(s)		R-Wave
Atrial Fibrillation	Digital to Analog Converter	Lever(s)	SA Node
Atrioventricular node	Doppler Effect	Ligament(s)	Sagittal Plane
Artifacts	Dye Laser	Lubrication	Simulation
Attenuation		Lung Volumes	Spectrophotometer
Auto Analyzer	Efficiency	Magnetic Resonance Imaging	Sphygmomanometer
	Electrical Safety	Medical Imaging	Spirometer
Balance	Electrocardiography	Moment Arm	Stethoscope
Bandwidth	Electroencephalography	Moment of Inertia	Stimulation
Bed side monitor	Electromyography	Motor Unit	Strain Gauge(s)
Biocompatibility	Electroneurography	M-Scan	Stress Distribution
Bioelectric Amplifier(s)	Electroretinography	Muscle(s)	Synovial Fluid
Bioinstrumentation	Electrode(s)	Muscloskeletal modeling	Systole
Biomaterials	Electrosurgery	Myoelectrical activity	
Biomechanics	Endoscope	Nd:YAG Laser	Tachycardia
Biopotentials	Equilibrium	Neural Networks	Telemetry Medicine
Biosensors	Excimer Laser	Newtonian Properties	Temperature
Biostatistics		Noise	Tendon(s)
Blood Cell Counter	Fatigue	Occupational	Tension
Blood Flow Measurement	Feedback	Biomechanics	Tissue Engineering
Blood Viscosity	Fiber Optics	Optical Resonator	Thermistor
Body Mass Index	Filter(s)	Oscillators	Threshold
Body Weight	Finite Element Analysis	Osteoarthritis	Transducer(s)
Bone(s)	Flame Photometer	Oximeter	Transmittance
Bradycardia	Fluids		Tribology
Brain Waves	Fluoroscopy		Torsion
Breathing Mechanics	Force(s)	Paddles	
B-Scan	Fracture(s)	Piezoelectric Effect	Ultrasonic Waves
	Free Body Diagram	Penetration	Ultraviolet Radiation
Capacitor(s)	Frequency Response	PH Meters	
Cardio Pacemaker	Friction	Physiological Modeling	Valve(s)
Cardio Tachometer	Fulcrum	Plethysmograph	Vector(s)
Cardioverter		Population Inversion	Ventricular Assist
Cartilage(s)	Gain	Pressure Manometers	Device
Catheterization	Gait Analysis	Probe(s)	Vibration Analysis
Center of Gravity	Galvanometer	Prostheses	
Clinical Engineering	Glucometer	Pulmonary Ventilators	Wheatstone Bridge
CO ₂ Laser	Goniometer	Pulsed Wave	X-Ray Machine
Coefficient of Friction		QRS-Complex	X-Ray Tube
Colorimeter	Haemostasis	Range of Motion	
Common Mode Signal	Hb-Meter	Rectifier(s)	Young Modulus
Compartmental Modeling	Heart-Lung Machine		
Compression	He:Ne Laser		
Computerized Tomography	Hospital Organization		
Continuos Wave	Human Joint(s)		