Walter Gil GonzÃ;lez

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	On the Conic Convex Approximation to Locate and Size Fixed-Step Capacitor Banks in Distribution Networks. Computation, 2022, 10, 32.	1.0	5
2	An IDA-PBC Design with Integral Action for Output Voltage Regulation in an Interleaved Boost Converter for DC Microgrid Applications. Actuators, 2022, 11, 5.	1.2	9
3	On the optimal reconfiguration of radial AC distribution networks using an MINLP formulation: A GAMS-based approach. Ingenieria E Investigacion, 2022, 42, e91192.	0.2	2
4	Design and implementation of a PI-PBC to manage bidirectional power flow in the DAB of an SST. Results in Engineering, 2022, 14, 100437.	2.2	3
5	Control of Photovoltaic Plants Interconnected via VSC to Improve Power Oscillations in a Power System. Electronics (Switzerland), 2022, 11, 1744.	1.8	2
6	Power Flow in Bipolar DC Distribution Networks Considering Current Limits. IEEE Transactions on Power Systems, 2022, 37, 4098-4101.	4.6	10
7	A mixed-integer second-order cone model for optimal siting and sizing of dynamic reactive power compensators in distribution grids. Results in Engineering, 2022, 15, 100475.	2.2	6
8	A successive approximations method for power flow analysis in bipolar DC networks with asymmetric constant power terminals. Electric Power Systems Research, 2022, 211, 108264.	2.1	9
9	On the convergence of the power flow methods for DC networks with mesh and radial structures. Electric Power Systems Research, 2021, 191, 106881.	2.1	4
10	Toward an adaptive protection scheme in active distribution networks: Intelligent approach fault detector. Applied Soft Computing Journal, 2021, 98, 106839.	4.1	16
11	A MIQP model for optimal location and sizing of dispatchable DGs in DC networks. Energy Systems, 2021, 12, 181-202.	1.8	10
12	A Mixed-Integer Convex Model for the Optimal Placement and Sizing of Distributed Generators in Power Distribution Networks. Applied Sciences (Switzerland), 2021, 11, 627.	1.3	32
13	On the Power Flow Solution in AC Distribution Networks Using the Laurent's Series Expansion. , 2021, , .		3
14	A Mixed-Integer Quadratic Formulation of the Phase-Balancing Problem in Residential Microgrids. Applied Sciences (Switzerland), 2021, 11, 1972.	1.3	11
15	Efficient Operative Cost Reduction in Distribution Grids Considering the Optimal Placement and Sizing of D-STATCOMs Using a Discrete-Continuous VSA. Applied Sciences (Switzerland), 2021, 11, 2175.	1.3	30
16	Genetic-Convex Model for Dynamic Reactive Power Compensation in Distribution Networks Using D-STATCOMs. Applied Sciences (Switzerland), 2021, 11, 3353.	1.3	14
17	LQR-Based Adaptive Virtual Inertia for Grid Integration of Wind Energy Conversion System Based on Synchronverter Model. Electronics (Switzerland), 2021, 10, 1022.	1.8	4
18	A Linearized Approach for the Electric Light Commercial Vehicle Routing Problem Combined with Charging Station Siting and Power Distribution Network Assessment. Applied Sciences (Switzerland), 2021, 11, 4870.	1.3	7

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19	On the mathematical modeling for optimal selecting of calibers of conductors in DC radial distribution networks: An MINLP approach. Electric Power Systems Research, 2021, 194, 107072.	2.1	11
20	Exact minimization of the energy losses and the CO2 emissions in isolated DC distribution networks using PV sources. DYNA (Colombia), 2021, 88, 178-184.	0.2	8
21	Dynamic Reactive Power Compensation in Power Systems through the Optimal Siting and Sizing of Photovoltaic Sources. Resources, 2021, 10, 47.	1.6	8
22	Optimal Power Dispatch in Direct Current Networks to Reduce Energy Production Costs and \$\$hbox {CO}_2\$\$ Emissions Using the Antlion Optimization Algorithm. Arabian Journal for Science and Engineering, 2021, 46, 9995-10006.	1.7	5
23	Microgrids physics model-based fault location formulation: Analytic-based distributed energy resources effect compensation. Electric Power Systems Research, 2021, 195, 107178.	2.1	12
24	High impedance fault modeling and location for transmission line✰. Electric Power Systems Research, 2021, 196, 107202.	2.1	13
25	Stabilization of MT-HVDC grids via passivity-based control and convex optimization. Electric Power Systems Research, 2021, 196, 107273.	2.1	8
26	Sensorless Adaptive Voltage Control for Classical DC-DC Converters Feeding Unknown Loads: A Generalized PI Passivity-Based Approach. Sensors, 2021, 21, 6367.	2.1	14
27	Vortex Search Algorithm Applied to the Parametric Estimation in PV Cells Considering Manufacturer Datasheet Information. IEEE Latin America Transactions, 2021, 19, 1581-1589.	1.2	2
28	A Convex Approximation for the Tertiary Control of Unbalanced Microgrids Electric Power Systems Research, 2021, 199, 107423.	2.1	7
29	Stationary-state analysis of low-voltage DC grids. , 2021, , 195-213.		0
30	Adaptive control for second-order DC–DC converters: PBC approach. , 2021, , 289-310.		7
31	Clobal Optimal Stabilization of MT-HVDC Systems: Inverse Optimal Control Approach. Electronics (Switzerland), 2021, 10, 2819.	1.8	2
32	Stability Analysis for a Grid-Forming Converter with Inverse Droop Connected to an Infinite Bus. , 2021, , .		4
33	Adaptive Control of a Single-Phase Grid-Forming for Feeding Unknown Resistive Loads. , 2021, , .		1
34	Optimal Economic–Environmental Operation of BESS in AC Distribution Systems: A Convex Multi-Objective Formulation. Computation, 2021, 9, 137.	1.0	8
35	Nonlinear analysis and control of a reaction wheel pendulum: Lyapunov-based approach. Engineering Science and Technology, an International Journal, 2020, 23, 21-29.	2.0	16
36	Voltage Stability Margin in DC Grids With CPLs: A Recursive Newton–Raphson Approximation. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 300-304.	2.2	10

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37	Relaxed convex model for optimal location and sizing of DGs in DC grids using sequential quadratic programming and random hyperplane approaches. International Journal of Electrical Power and Energy Systems, 2020, 115, 105442.	3.3	23
38	Triangular Matrix Formulation for Power Flow Analysis in Radial DC Resistive Grids With CPLs. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 1094-1098.	2.2	12
39	Passivity-Based Control of Power Systems Considering Hydro-Turbine With Surge Tank. IEEE Transactions on Power Systems, 2020, 35, 2002-2011.	4.6	29
40	An exact MINLP model for optimal location and sizing of DGs in distribution networks: A general algebraic modeling system approach. Ain Shams Engineering Journal, 2020, 11, 409-418.	3.5	64
41	Standard passivity-based control for multi-hydro-turbine governing systems with surge tank. Applied Mathematical Modelling, 2020, 79, 1-17.	2.2	12
42	Modeling and control of a small hydro-power plant for a DC microgrid. Electric Power Systems Research, 2020, 180, 106104.	2.1	22
43	Vortex search and Chu-Beasley genetic algorithms for optimal location and sizing of distributed generators in distribution networks: A novel hybrid approach. Engineering Science and Technology, an International Journal, 2020, 23, 1351-1363.	2.0	26
44	Second-Order Cone Approximation for Voltage Stability Analysis in Direct-Current Networks. Symmetry, 2020, 12, 1587.	1.1	1
45	Voltage Stability Analysis in Medium-Voltage Distribution Networks Using a Second-Order Cone Approximation. Energies, 2020, 13, 5717.	1.6	8
46	Bilinear Control for Three-Phase Microgrids: A Proportional-Integral Passivity-Based Design. Electric Power Components and Systems, 2020, 48, 447-458.	1.0	1
47	Discrete-Inverse Optimal Control Applied to the Ball and Beam Dynamical System: A Passivity-Based Control Approach. Symmetry, 2020, 12, 1359.	1.1	11
48	A Mixed-Integer Nonlinear Programming Model for Optimal Reconfiguration of DC Distribution Feeders. Energies, 2020, 13, 4440.	1.6	12
49	Passivity-Based Control for Small Hydro-Power Generation With PMSG and VSC. IEEE Access, 2020, 8, 153001-153010.	2.6	17
50	On the Matricial Formulation of Iterative Sweep Power Flow for Radial and Meshed Distribution Networks with Guarantee of Convergence. Applied Sciences (Switzerland), 2020, 10, 5802.	1.3	15
51	Hybrid GA-SOCP Approach for Placement and Sizing of Distributed Generators in DC Networks. Applied Sciences (Switzerland), 2020, 10, 8616.	1.3	4
52	Optimal Selection and Location of BESS Systems in Medium-Voltage Rural Distribution Networks for Minimizing Greenhouse Gas Emissions. Electronics (Switzerland), 2020, 9, 2097.	1.8	7
53	On the nonlinear control of a single-phase current source converter for sinusoidal voltage generation. Journal of Physics: Conference Series, 2020, 1448, 012011.	0.3	0
54	Sine-cosine algorithm for parameters' estimation in solar cells using datasheet information. Journal of Physics: Conference Series, 2020, 1671, 012008.	0.3	9

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55	Passivity–Based PI Controller of a Buck Converter for Output Voltage Regulation. , 2020, , .		4
56	A Comparative Study on Power Flow Methods for Direct-Current Networks Considering Processing Time and Numerical Convergence Errors. Electronics (Switzerland), 2020, 9, 2062.	1.8	15
57	An MI-SDP Model for Optimal Location and Sizing of Distributed Generators in DC Grids That Guarantees the Global Optimum. Applied Sciences (Switzerland), 2020, 10, 7681.	1.3	11
58	Optimal Selection and Location of Fixed-Step Capacitor Banks in Distribution Networks Using a Discrete Version of the Vortex Search Algorithm. Energies, 2020, 13, 4914.	1.6	36
59	Global Stabilization of a Reaction Wheel Pendulum: A Discrete-Inverse Optimal Formulation Approach via A Control Lyapunov Function. Symmetry, 2020, 12, 1771.	1.1	2
60	A Second-Order Cone Programming Reformulation of the Economic Dispatch Problem of BESS for Apparent Power Compensation in AC Distribution Networks. Electronics (Switzerland), 2020, 9, 1677.	1.8	19
61	Nonlinear Voltage Control for Three-Phase DC-AC Converters in Hybrid Systems: An Application of the PI-PBC Method. Electronics (Switzerland), 2020, 9, 847.	1.8	27
62	On the numerical analysis based on successive approximations for power flow problems in AC distribution systems. Electric Power Systems Research, 2020, 187, 106454.	2.1	50
63	Optimal Location-Reallocation of Battery Energy Storage Systems in DC Microgrids. Energies, 2020, 13, 2289.	1.6	19
64	Intelligent Fault Detection System for Microgrids. Energies, 2020, 13, 1223.	1.6	30
65	Economic Dispatch of Renewable Generators and BESS in DC Microgrids Using Second-Order Cone Optimization. Energies, 2020, 13, 1703.	1.6	35
66	Dynamic active and reactive power compensation in distribution networks with batteries: A day-ahead economic dispatch approach. Computers and Electrical Engineering, 2020, 85, 106710.	3.0	42
67	Numerical methods for power flow analysis in DC networks: State of the art, methods and challenges. International Journal of Electrical Power and Energy Systems, 2020, 123, 106299.	3.3	33
68	Vortex Search Algorithm for Optimal Power Flow Analysis in DC Resistive Networks With CPLs. IEEE Transactions on Circuits and Systems II: Express Briefs, 2020, 67, 1439-1443.	2.2	15
69	Optimal Location and Sizing of PV Sources in DC Networks for Minimizing Greenhouse Emissions in Diesel Generators. Symmetry, 2020, 12, 322.	1.1	31
70	Small-signal stability in island residential microgrids considering droop controls and multiple scenarios of generation. Electric Power Systems Research, 2020, 185, 106371.	2.1	20
71	Optimal Placement and Sizing of Wind Generators in AC Grids Considering Reactive Power Capability and Wind Speed Curves. Sustainability, 2020, 12, 2983.	1.6	24
72	Direct Power Compensation in AC Distribution Networks with SCES Systems via PI-PBC Approach. Symmetry, 2020, 12, 666.	1.1	10

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73	Predictive Power Control for Electric Vehicle Charging Applications. , 2020, , .		3
74	Direct Power Control Design for Charging Electric Vehicles: A Passivity-Based Control Approach. , 2020, , .		1
75	PI-PBC Approach for Voltage Regulation in Ćuk Converters with Adaptive Load Estimation. , 2020, , .		2
76	A New Iterative Power Flow Method for AC Distribution Grids with Radial and Mesh Topologies. , 2020, , .		5
77	Model Predictive Direct Power Control Applied to Grid-Connected Voltage Source Inverters. , 2020, , .		2
78	Passivity-Based Current Control of a Dual-Active Bridge to Improve the Dynamic Response of a Solid-State Transformer During Power and Voltage Variations. , 2020, , .		2
79	Adaptive IDA-PBC Applied to On-Board Boost Converter Supplying a Constant Power Load. , 2020, , .		3
80	A Convex OPF Approximation for DC Networks Considering Voltage-Dependent Load Models. , 2020, , .		1
81	Economic dispatch in DC Microgrids considering different battery technologies: A Benchmark Study. , 2020, , .		1
82	Voltage and Frequency Regulation on Isolated AC Three-phase Microgrids via s-DERs. , 2019, , .		1
83	A Potential Function for the Power Flow in DC Microgrids: An Analysis of the Uniqueness and Existence of the Solution and Convergence of the Algorithms. Journal of Control, Automation and Electrical Systems, 2019, 30, 794-801.	1.2	16
84	Direct power control of electrical energy storage systems: A passivity-based PI approach. Electric Power Systems Research, 2019, 175, 105885.	2.1	18
85	Current PI Control for PV Systems in DC Microgrids: A PBC Design. , 2019, , .		3
86	Integration of energy storage systems in AC distribution networks: Optimal location, selecting, and operation approach based on genetic algorithms. Journal of Energy Storage, 2019, 25, 100891.	3.9	39
87	Stability Analysis of DC-Microgrids: A Gradient Formulation. Journal of Control, Automation and Electrical Systems, 2019, 30, 985-993.	1.2	4
88	Power flow approximation for DC networks with constant power loads via logarithmic transform of voltage magnitudes. Electric Power Systems Research, 2019, 175, 105887.	2.1	16
89	Distributed energy resources integration in single-phase microgrids: An application of IDA-PBC and PI-PBC approaches. International Journal of Electrical Power and Energy Systems, 2019, 112, 221-231.	3.3	20
90	Direct power control for VSC-HVDC systems: An application of the global tracking passivity-based PI approach. International Journal of Electrical Power and Energy Systems, 2019, 110, 588-597.	3.3	34

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91	Active and reactive power conditioning using SMES devices with PMW-CSC: A feedback nonlinear control approach. Ain Shams Engineering Journal, 2019, 10, 369-378.	3.5	11
92	Control for EESS in Three-Phase Microgrids Under Time-Domain Reference Frame via PBC Theory. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 2007-2011.	2.2	10
93	Passivity-Based Control Applied of a Reaction Wheel Pendulum: an IDA-PBC Approach. , 2019, , .		1
94	Mitigating fluctuations of wind power generation using superconducting magnetic energy storage: a passivity-based approach. , 2019, , .		0
95	Optimal power flow solution in direct current grids using Sine-Cosine algorithm. Journal of Physics: Conference Series, 2019, 1403, 012009.	0.3	7
96	Alternative power flow method for direct current resistive grids with constant power loads: A truncated Taylor-based method. Journal of Physics: Conference Series, 2019, 1403, 012011.	0.3	1
97	Optimal power flow studies in direct current grids: An application of the bio-inspired elephant swarm water search algorithm. Journal of Physics: Conference Series, 2019, 1403, 012010.	0.3	2
98	PBC Approach Applied on a DC-DC Step-Down Converter for Providing Service to CPLs. , 2019, , .		3
99	A Sequential Quadratic Programming Model for the Economic–Environmental Dispatch in MT-HVDC. , 2019, , .		3
100	VSC with Direct PI Power Control for Frequency Compensation in a Microgrid: a PBC Approach. , 2019,		0
101	Economic Dispatch of BESS and Renewable Generators in DC Microgrids Using Voltage-Dependent Load Models. Energies, 2019, 12, 4494.	1.6	33
102	PBC Design for Voltage Regulation in Buck Converters with Parametric Uncertainties. , 2019, , .		3
103	Comparison of PIR and MPC Control Schemes to Reduce Circulating Current in a Modular Multilevel Converter Terminal. , 2019, , .		5
104	Dynamics and Stability of Meshed Multiterminal HVDC Networks. IEEE Transactions on Power Systems, 2019, 34, 1824-1833.	4.6	26
105	Passivity-based control and stability analysis for hydro-turbine governing systems. Applied Mathematical Modelling, 2019, 68, 471-486.	2.2	28
106	Sequential quadratic programming models for solving the OPF problem in DC grids. Electric Power Systems Research, 2019, 169, 18-23.	2.1	44
107	Optimal Power Flow on DC Microgrids: A Quadratic Convex Approximation. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 1018-1022.	2.2	40
108	Economic dispatch of energy storage systems in dc microgrids employing a semidefinite programming model. Journal of Energy Storage, 2019, 21, 1-8.	3.9	94

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109	Power Flow Analysis in DC Grids: Two Alternative Numerical Methods. IEEE Transactions on Circuits and Systems II: Express Briefs, 2019, 66, 1865-1869.	2.2	54
110	Sine-Cosine Algorithm for OPF Analysis in Distribution Systems to Size Distributed Generators. Communications in Computer and Information Science, 2019, , 28-39.	0.4	9
111	Integración de REDs en Redes AC: una Familia de Controladores Basados en Pasividad. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2019, 16, 212.	0.6	7
112	A generalized passivity-based control approach for power compensation in distribution systems using electrical energy storage systems. Journal of Energy Storage, 2018, 16, 259-268.	3.9	27
113	Indirect IDA-PBC for active and reactive power support in distribution networks using SMES systems with PWM-CSC. Journal of Energy Storage, 2018, 17, 261-271.	3.9	19
114	PBC Approach for SMES Devices in Electric Distribution Networks. IEEE Transactions on Circuits and Systems II: Express Briefs, 2018, 65, 2003-2007.	2.2	22
115	On the Convergence of Newton's Method in Power Flow Studies for DC Microgrids. IEEE Transactions on Power Systems, 2018, 33, 5770-5777.	4.6	122
116	DERs integration in microgrids using VSCs via proportional feedback linearization control: Supercapacitors and distributed generators. Journal of Energy Storage, 2018, 16, 250-258.	3.9	31
117	Controller Design for VSCs in Distributed Generation Applications: an IDA-PBC Approach. , 2018, , .		0
118	Time-Domain Analysis for Current Control in Single-Phase Distribution Networks Using SMES Devices With PWM-CSCs. Electric Power Components and Systems, 2018, 46, 1938-1947.	1.0	2
119	Integration of PV Arrays in DC Power Grids via Unidirectional Boost Converters: a PBC Approach. , 2018, , .		2
120	An Exact Feedback Linearization Control of a SMES System to Support Power in Electrical Grids. , 2018, , .		0
121	Linear–based Newton–Raphson Approximation for Power Flow Solution in DC Power Grids. , 2018, , .		4
122	Control of a Detailed Model of Microgrids from a Hamiltonian Approach ⎠âŽPart of this work was supported by DGAPA-UNAM under grant IN116516 IFAC-PapersOnLine, 2018, 51, 187-192.	0.5	10
123	Optimal Location of DGs in DC Power Grids Using a MINLP Model Implemented in GAMS. , 2018, , .		5
124	Passivity-Based Control for Hydro-Turbine Governing Systems. , 2018, , .		1
125	Group-Theory for the Analysis of Heuristic Algorithms in Power Distribution Systems. , 2018, , .		0
126	SCES Integration in Power Grids: a PBC Approach under abc, $\hat{I} \pm \hat{I}^2 O$ and dqO Reference Frames. , 2018, , .		2

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127	Optimal Conductor Size Selection in Radial Distribution Networks Using a Mixed-Integer Non-Linear Programming Formulation. IEEE Latin America Transactions, 2018, 16, 2213-2220.	1.2	13
128	Wirtinger's Calculus for the Load Flow in Power Distribution Grids. , 2018, , .		0
129	Small-Signal Stability in Low-Voltage DC-Grids. , 2018, , .		1
130	Control of a SMES for mitigating subsynchronous oscillations in power systems: A PBC-PI approach. Journal of Energy Storage, 2018, 20, 163-172.	3.9	21
131	Linear power flow formulation for low-voltage DC power grids. Electric Power Systems Research, 2018, 163, 375-381.	2.1	80
132	Passivity-based PI control of a SMES system to support power in electrical grids: A bilinear approach. Journal of Energy Storage, 2018, 18, 459-466.	3.9	21
133	Nonlinear Control for Battery Energy Storage Systems in Power Grids. , 2018, , .		12
134	Distribution Systems Operation Considering Energy Storage Devices and Distributed Generation. IEEE Latin America Transactions, 2017, 15, 890-900.	1.2	37
135	IDA-Passivity-Based Control for Superconducting Magnetic Energy Storage with PWM-CSC. , 2017, , .		15
136	Uniqueness of the power flow solutions in low voltage direct current grids. Electric Power Systems Research, 2017, 151, 149-153.	2.1	92
137	Supervisory LMI-Based State-Feedback Control for Current Source Power Conditioning of SMES. , 2017,		9
138	A Generalized Model and Control forSupermagnetic and Supercapacitor EnergyStorage. IngenierÃa Y Ciencia, 2017, 13, 147-171.	0.3	18
139	Optimal power flow in multiterminal HVDC systems considering DC/DC converters. , 2016, , .		22
140	A Linear Three-Phase Load Flow for Power Distribution Systems. IEEE Transactions on Power Systems, 2016, 31, 827-828.	4.6	213
141	A quadratic approximation for the optimal power flow in power distribution systems. Electric Power Systems Research, 2016, 130, 222-229.	2.1	42
142	Sensitivity analysis of a single phase fault locator based on support vector machines. , 2014, , .		0
143	A Generalized Power Control Approach in ABC Frame for Modular Multilevel Converter HVDC Links Based on Mathematical Optimization. IEEE Transactions on Power Delivery, 2014, 29, 386-394.	2.9	61
144	An Adaptive Control Strategy for a Wind Energy Conversion System Based on PWM-CSC and PMSC. IEEE Transactions on Power Systems, 2014, 29, 1446-1453.	4.6	54

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145	Analysis of the effects of load model on a single phase fault locator based on support vector machines. , 2014, , .		1
146	Análisis del procesamiento de los datos de entrada para un localizador de fallas en sistemas de distribución. Tecnura, 2014, 18, 64.	0.1	1
147	Integration of Offshore Wind Farm Using a Hybrid HVDC Transmission Composed by the PWM Current-Source Converter and Line-Commutated Converter. IEEE Transactions on Energy Conversion, 2013, 28, 125-134.	3.7	87
148	A generalized compensation theory for active filters based on mathematical optimization in ABC frame. Electric Power Systems Research, 2012, 90, 1-10.	2.1	35
149	A quadratic convex approximation for optimal operation of battery energy storage systems in DC distribution networks. Energy Systems, 0, , 1.	1.8	1
150	Optimal Integration of Distributed Generators into DC Microgrids Using a Hybrid Methodology: Genetic and Vortex Search Algorithms. Arabian Journal for Science and Engineering, 0, , .	1.7	3