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<https://orcid.org/0000-0002-7902-9652>

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, *ab initio*,

(. . . : Encyclopædia Britannica, <https://www.britannica.com/technology/bionics>)

«**Bionics**, science of constructing artificial systems that have some of the characteristics of living systems. Bionics is not a specialized science but an interscience discipline; it may be compared with cybernetics. Bionics and cybernetics have been called the two sides of the same coin. Both use models of living systems, bionics in order to find new ideas for useful artificial machines and systems, cybernetics to seek the explanation of living beings' behaviour».

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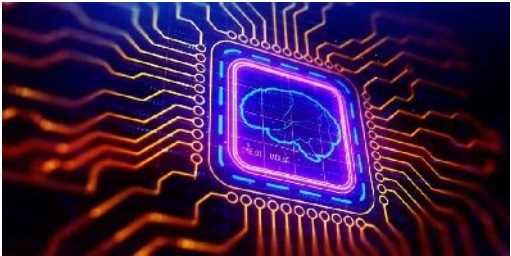
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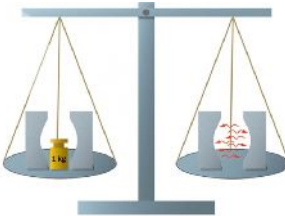
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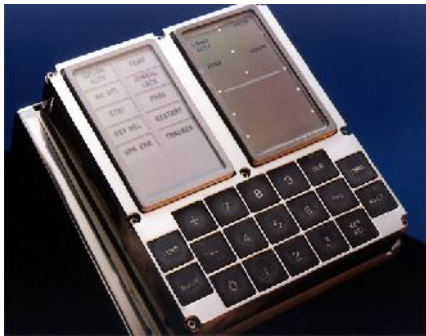
42	<p style="text-align: center;">2019, 27</p> <p>https://nv.ua/techno/innovations/skopirot-mozg-uchenye-iz-velikobritanii-gotovyat-revolucionnyy-kvantovyy-kompyuter-50018927.html</p>	
43	<p style="text-align: center;">2019, 03</p> <p>https://nv.ua/techno/innovations/biokarta-pamyati-v-microsoft-zashifovali-informaciyu-v-iskusstvennoy-molekule-dnk-50014391.html</p> <p>https://www.nature.com/articles/s41598-019-41228-8</p>	<p style="text-align: center;">Microsoft</p> <p>Demonstration of End-to-End Automation of DNA Data Storage (21 March 2019)</p>
44	<p style="text-align: center;">2011,</p> <p>https://www.nationalgeographic.com/magazine/2017/08/space-race-moon-google-lunar-xprize/</p>	<p>The Next Moon Landing Is Near – Thanks to These Pioneering Engineers. This story appears in the August 2017 issue of National Geographic magazine.</p>
45	<p style="text-align: center;">2019, 27</p> <p>https://nv.ua/techno/innovations/vletelo-vyletelo-uchenye-ispolzovali-lazer-dlya-peredachi-zvuka-pryamo-v-uho-50019003.html</p>	
46	<p style="text-align: center;">2019, 03</p> <p>https://nv.ua/techno/innovations/kosmos-ta-internet-chi-potriben-suputnikoviy-zv-yazok-50019521.html</p>	<p style="text-align: center;">: ' ?</p>


47	<p style="text-align: right;">2019, 20</p> <p>http://www.fao.org/pollination/ru/</p>	<p>20.05 – the World day of bees (annual date)</p> 
48	<p style="text-align: right;">2011, 10</p> <p>https://news.un.org/en/story/2011/03/368622-humans-must-change-behaviour-save-bees-vital-food-production-un-report</p> <p>The potentially disastrous decline in bees, a vital pollinating element in food production for the growing global population, is likely to continue unless humans profoundly change their ways, from the use of insecticides to air pollution, according to a United Nations report released today.</p>	<p>Humans must change behaviour to save bees, vital for food production – UN report (2011)</p> 
49	<p style="text-align: right;">2017, 4-6</p> <p>https://papersmart.unon.org/resolution/uploads/k1800381.russian.pdf</p>	 <p>3- (, 4-6 2017 .)</p>
50	<p style="text-align: right;">2013, 14</p> <p>https://news.un.org/ru/audio/2013/01/1016461</p>	<p>()</p>



51	<p style="text-align: center;">2011, 10</p> <p>https://www.reuters.com/article/us-bees/bee-deaths-may-signal-wider-pollination-threat-u-n-idUSTRE7293O820110310</p> <p>Bee deaths may signal wider pollination threat: U.N.</p>	
52	<p style="text-align: center;">2019, 18</p> <p>https://nv.ua/opinion/kak-na-zemle-poyavilas-voda-50022161.html</p> <p>https://theconversation.com/how-did-the-earth-get-its-water-asteroid-sample-gives-a-surprising-answer-116381</p> <p>How did the Earth get its water? Asteroid sample gives a surprising answer...</p>	<p style="text-align: center;">? ?</p> 
53	<p style="text-align: center;">2019, 20</p> <p>https://nv.ua/techno/innovations/merilom-kilogramma-stanet-elektromagnitnoe-pole-50022222.html</p> <p>https://www.engadget.com/2019-05-17-kilogram-definition-update-may-20.html</p> <p>On May 20th, the kilogram will no longer be defined by a lump in France.</p>	<p style="text-align: center;">: 20</p> 

54	<p style="text-align: center;">2019, 24</p> <p>https://nv.ua/techno/innovations/mehanicheskij-pes-sumel-sdvinut-s-mesta-samolet-50023287.html</p> <p>https://www.cnet.com/news/a-robot-dog-just-pulled-a-3-ton-plane-and-were-not-scared-at-all/</p>	<p style="text-align: right;">Istituto Italiano di Tecnologia (IIT)</p> <p style="text-align: right;">HyQReal</p> <p style="text-align: right;">Piaggio P180 Avanti 10</p> <p style="text-align: right;">Genova</p>  <p>A robot dog pulled a 3-ton plane, and we're not scared at all (Istituto Italiano di Tecnologia)</p>
55	<p style="text-align: center;">2019, 18</p> <p>https://www.sciencealert.com/this-footprint-found-on-gibraltar-could-have-been-made-by-one-of-the-last-neanderthals</p>	<p>This Footprint on Gibraltar Could Have Been Made by One of The Last Neanderthals.</p> <p>Thousands of years ago, an ancient hominin strode through a sand dune, leaving footprints behind. Most of these marks were lost to the ravages of the years, but one was preserved as the sand hardened to stone. (Universdad de Sevilla)</p>
56	<p style="text-align: center;">2019, 30</p> <p>https://zn.ua/TECHNOLOGIES/naydena-okamenelost-kotoraya-sohranila-celuyu-stayu-rybok-319198_.html</p>	<p style="text-align: right;">259</p> <p style="text-align: right;">50</p> 

57	<p style="text-align: center;">2019, 05</p> <p>https://zn.ua/TECHNOLOGIES/pchely-okazalis-sposobny-svyazyvat-simvoly-s-chislami-319875_.html</p>	
58	<p style="text-align: center;">2018, 15</p> <p>https://zn.ua/TECHNOLOGIES/pchely-i-osy-okazalis-sposobny-raspoznavat-lica-lyudey-291797_.html</p>	
59	<p style="text-align: center;">2019, 07</p> <p>https://zn.ua/TECHNOLOGIES/pchely-okazalis-sposobny-k-slozheniyu-i-vychitaniyu-uchenye-308187_.html</p>	
60	<p style="text-align: center;">2019, 05</p> <p>https://nv.ua/techno/innovations/v-niderlandah-gotovyat-neobychnyy-samolet-50025440.html</p> <p style="text-align: center;">KLM Royal Dutch Airlines</p>	

61	<p style="text-align: center;">2019, 02</p> <p>https://nv.ua/ukr/techno/innovations/v-oae-zapustili-sonyachnu-elektrostantsiyu-rekordnoji-potuzhnosti-50029790.html</p> <p>https://www.obozrevatel.com/green/solar-power/krupnejshaya-v-mire-solnechnaya-elektrostantsiya-noor-abu-dhabi-zapuschena-v-oae.htm</p> <p style="text-align: center;">(23.07.2019)</p>	<p style="text-align: center;">?</p> 
62	<p style="text-align: center;">2019, 01</p> <p>https://nv.ua/ukr/techno/innovations/mask-ochikuye-na-shvidku-poyavu-elektrolitaka-tesla-50029723.html</p>	<p style="text-align: center;">?</p> <p style="text-align: center;">Tesla.</p>
63	<p style="text-align: center;">2019, 03</p> <p>https://lb.ua/tech/2019/07/03/430998_spetsialnosti_baziruyutsya.html</p>	<p style="text-align: center;">,</p> <p style="text-align: center;">,</p>
64	<p style="text-align: center;">2020, 11</p> <p>https://www.zmescience.com/science/news-science/smartphone-power-compared-to-apollo-432/</p> <p>That's the year man first set foot on the moon. Our computer tech has shot even farther away, though.</p>	<p>Your smartphone is millions of times more powerful than the Apollo 11 guidance computers</p> 

65	<p style="text-align: center;">2019, 01</p> <p>https://theconversation.com/would-your-mobile-phone-be-powerful-enough-to-get-you-to-the-moon-115933</p> <p>Would your mobile phone be powerful enough to get you to the moon?</p>	<p>Many people who are old enough to have experienced the first moon landing will vividly remember what it was like watching Neil Armstrong utter his famous quote: “That’s one small step for a man, one giant leap for mankind.” Half a century later, the event is still one of the top achievements of humankind. Despite the rapid technological advances since then, astronauts haven’t actually been back to the moon since 1972.</p>
66	<p style="text-align: center;">2019, 17</p> <p>https://lb.ua/tech/2019/07/17/432330_cherez_pyat_let_pretendentam_9_10.html</p> <p style="text-align: center;">9 10</p>	<p style="text-align: center;">-</p>
67	<p>2019, 12</p> <p>https://zn.ua/ECOLOGY/mir-spasayut-biosfernye-rezervaty-323541_.html</p>	<p style="text-align: center;">8</p> 
68	<p style="text-align: center;">2019, 20</p> <p>https://nv.ua/ukr/techno/popsience/visadka-lyudini-na-misyac-misiya-apollon-cikavi-fakti-50033026.html</p> <p style="text-align: center;">NASA</p> <p>20 1969</p> <p style="text-align: center;">-11.</p>	<p style="text-align: center;">50</p> <p style="text-align: center;">NASA</p> <p>: 20 2019- 50</p>

69	<p style="text-align: center;">2019, 20</p> <p>https://nv.ua/ukr/world/countries/istoriji-zhinok-bez-yakih-choloviki-ne-potrapili-b-na-misyac-novini-ukrajini-50033023.html</p> <p style="text-align: center;">1960–1970- 400</p>	
70	<p style="text-align: center;">2019, 24</p> <p>https://www.liga.net/society/articles/pokolenie-z-sem-izobreteniy-yunyh-ukraintsev-kotorye-izmenyat-stranu-a-mojet-byt-i-mir</p>	
71	<p style="text-align: center;">2019, 28</p> <p>https://www.sciencealert.com/an-elusive-new-face-now-joins-the-growing-cast-of-early-human-ancestors</p> <p>Another face of our Australopithecus ancestors can now peer at us from further back in time than ever before, after its recovery from Earth’s clutches in Afar, Ethiopia. Previously, this hominin species had only been known from skull fragments, teeth, and limb bones. A local, Ali Bereino, discovered the first piece of this elusive skull while digging up an area to keep his goats.</p>	<p style="text-align: center;">We’ve Finally Uncovered The Face of One of Our Most Elusive Early Human Ancestors.</p> 