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Coccyx terminate by artificial intelligence

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Abstract - *Being the most successful Artificial Intelligence automate mathematical used for human intelligence. This paper focuses on establishing the conceptual foundation of the structure and processes of human thinking systems. The conceptualization of component of the complexity-intelligence strategy. In this analysis, the human thinking system is perceived to be comprised of two components namely, the energy–matter subsystem and the physical symbol subsystem. The general procedure in which the human mind handles and exploits one or more physical symbol systems is analysed. Subsequently, the boundaries and objectives of human thinking systems as information processing systems, and the necessity of artificial information systems are conceived as four postulates. My research over on various Otsu algorithms and AI with Coccyx. Here i used information from the four human senses, vision, hearing, touch and think. Also some ways those sensory AI modalities mimic the senses, and offer benefits in both new and current applications.*

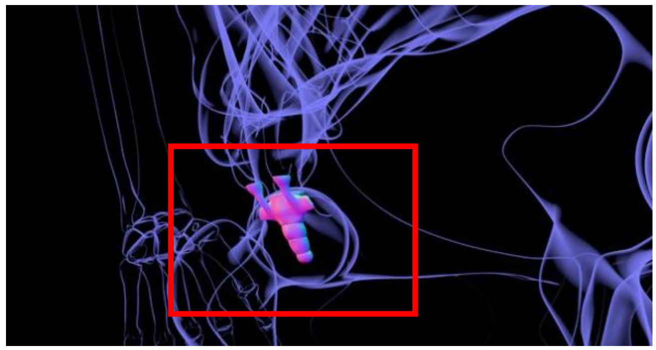
Key Words: Human Thinking system, intelligent microfluidic chip. Coccyx, Artificial Intelligence

1. INTRODUCTION

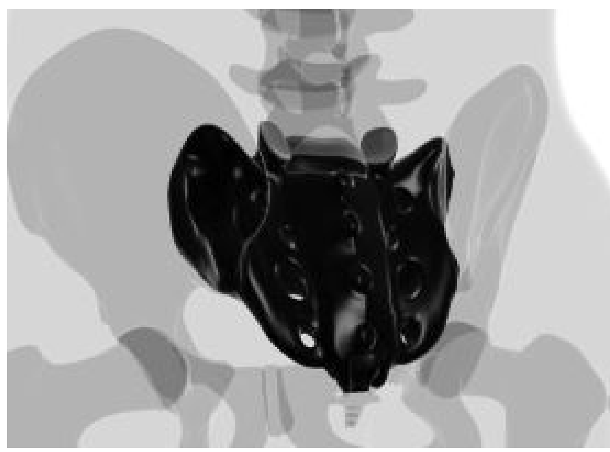
The joint effort of human, machine, and computer-based intelligence will be an essential tool for monitoring and countering the effects of multiple simultaneous speed increases in technology globalization by 2030. Fluid chip micro devices intending to zero in on human Coccyx. These microfluidic gadgets are more effective than traditional cell culture methods since they can copy microenvironments as well as their effect on mind capability. This permits to explore the human physiology for a particular where and when human make mistakes. This Intelligent microfluidic chip associated with human mind and global satellite station organizations. At the point when the human going unusual position or attempting to make criminal operations. His whole exercises convert to lighting signal and sent his/her information to specific region/country alongside ID. I trust this CoccyxAI, will assist with diminishing wrongdoing and criminal operations. Additionally, this procedure will aid in the gradual reduction of earth's atomic vibration and climate change.

1.1 Coccyx overview

The Coccyx is a triangular bone that consists of 3 to 5 fused segments, the largest of which articulates with the lowest sacral segment. In addition, the first coccygeal segment contains rudimentary articular processes called the coccygeal cornua that articulate with the sacral cornua.



Pic 1: Identification of Coccyx in Human Body



Pic 2: Full view picture of Coccyx

- External Epiblast contains the cytotrophoblasts that fix the embryo in the uterus wall and enable its nutrition from the blood and the secretions of the glands of the uterus wall.

- Internal Hypoblast On the day15 the primitive streak appears in the dorsal aspect of the embryo with a pointed end called the primitive node.

The side on which the primitive streak appears is known as the back of the embryonic disc. From the primitive streak and node all the foetus tissues and organs are formed as follows:

- The Ectoderm gives the skin and the central nervous system

- The Mesoderm gives the digestive tract smooth muscles the skeletal muscles, the circulation system, the heart, the bones the sexual and urinary systems (except the bladder), the subcutaneous tissues, the lymphatic system, the spleen and the cortex.

- The Endoderm: the linings of the digestive tract and the respiratory system, the organs related to the digestive tract (ex: liver and pancreas), the bladder, the thyroid gland, the hearing canal.

After that, the primitive streak and node become emaciated and reside in the sacral zone, in the last vertebrae, so that the Coccyx is formed.

1.2 The Coccyx does not get decayed

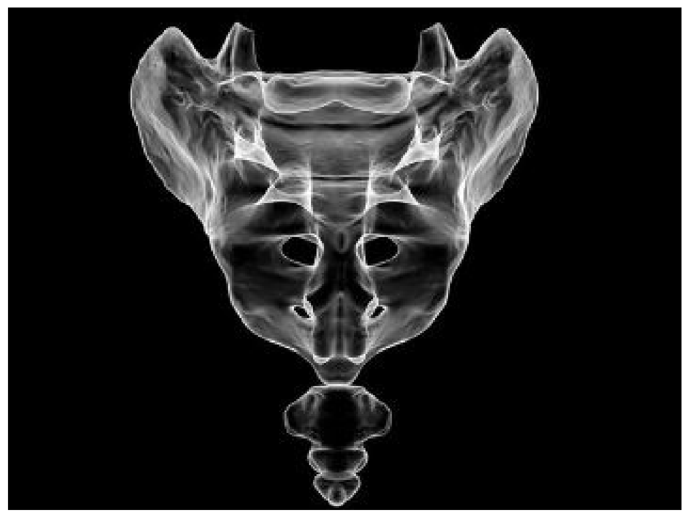
Researchers found that foetus cells' formation and organisation are exerted by the primitive streak and node and before their formation no cells' differentiation could have taken place. One of the most famous researchers who proved this was the German scientist Hans Spemann

.

After his experiments on the primitive streak and node he found that those organise the creation of the foetus and so he called them "The primary organiser". He cut this part from one foetus and implanted it in another one in the primary embryonic stage (third and fourth week). This lead to the formation of a secondary foetus in the guest body due to the influence and organisation exerted by the surrounding guest's cells on the implant.

The German scientist started his experiments on the amphibians by implanting the primary organiser in a second foetus, which led to the growth of a secondary embryo. The implantation of the cut primary organiser was in another foetus of the same age under the Epiblast layer and lead to the apparition of a secondary embryonic anlage.

In 1931, when Spemann crushed the primary organiser and implanted it again, the crushing did not affect the experiment as again, a secondary embryonic anlage grew.



Pic 3: Result of Coccyx after collision

In 1933, Spemann and other scientists conducted the same experiment but the primary organiser was boiled this time.
A secondary embryonic anlage grew in spite of the boiling showing that the cells were not affected. In 1935, Spemann was awarded the Nobel Prize for his discovery of the Primary Organiser.

One of the two vertebras of 5 Coccyx bones was burnt on stones using a gas gun for 10 minutes until their total combustion (the bones became red then black). They put the carbonised pieces in sterilised boxes and took them to the most famous analysis laboratory in Sanaa (Al Olaki laboratory). Dr al Olaki, the professor in histology and pathology in Sanaa University, analysed the pieces and found that the cells of the bone tissues of the Coccyx were not affected and they survived the burning (only the muscles the fatty tissues and the

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bone marrow cells were burnt while the Coccyx bone cells were not affected.

1.3 Artificial Intelligence

Digital life is augmenting human capacities and disrupting eons-old human activities. Code-driven systems have spread to more than half of the world's inhabitants in ambient information and connectivity, offering previously unimagined opportunities and unprecedented threats. As emerging algorithm-driven artificial intelligence (AI) continues to spread, will people be better off than they are today.

The experts predicted networked artificial intelligence will amplify human effectiveness but also threaten human autonomy, agency and capabilities. In future wide-ranging possibilities; that computers might match or even exceed human intelligence and capabilities on tasks such as complex decision-making, reasoning and learning, sophisticated analytics and pattern recognition, visual acuity, speech recognition and language translation. They said "smart" systems in communities, in vehicles, in buildings and utilities, on farms and in business processes will save time, money and lives and offer opportunities for individuals to enjoy a more-customized future.

Pic 4: A vehicle and person recognition system for use by law enforcement

Many focused their optimistic remarks on health care and the many possible applications of AI in diagnosing and treating patients or helping senior citizens live fuller and healthier lives. They were also enthusiastic about AI's role in contributing to broad public-health programs built around massive amounts of data that may be captured in the coming years about everything from personal genomes to nutrition. Additionally, a number of these experts predicted that AI would abet long-anticipated changes in formal and informal education systems.

Please think forward to the year 2030. Analysts expect that people will become even more dependent on networked artificial intelligence (AI) in complex digital systems. Some say we will continue on the historic arc of augmenting our lives with mostly positive results as we widely implement these networked tools. Some say our increasing dependence on these AI and related systems is likely to lead to widespread difficulties.

Overall, and despite the downsides they fear, 63% of respondents in this canvassing said they are hopeful that most individuals will be mostly better off in 2030, and 37% said people will not be better off.

1.4 Intelligent microfluidic chip

Microfluidics is both the science which studies the behaviour of fluids through micro-channels, and the technology of manufacturing microminiaturized devices containing chambers and tunnels through which fluids flow or are confined.

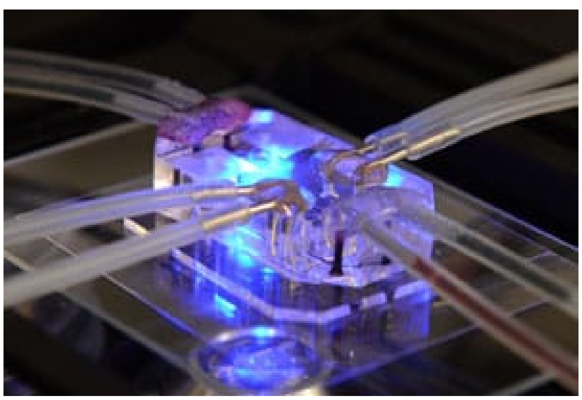
Microfluidics deal with very small volumes of fluids, down to femtoliters (fL) which is a quadrillionth of a litter. Fluids behave very differently on the micrometric scale than they do in everyday life: these unique features are the key for new scientific experiments and innovations.

The key concept related to microfluidics is to integrate in a simple micro-sized system operations that commonly solicit a whole laboratory.

A microfluidic chip is a pattern of micro channels, moulded or engraved. This network of micro channels incorporated into the microfluidic chip is linked to the macro-environment by several holes of different dimensions hollowed out through the chip. It is through these pathways that fluids are injected into and evacuated from the microfluidic chip. Fluids are directed, mixed, separated or manipulated to attain multiplexing, automation, and high-throughput systems. The micro channels network design must be precisely elaborated to achieve the desired features (lab-on-a-chip, detection of pathogens, electrophoresis, DNA analysis etc.).

To accurately manage fluids inside the micro channels, specific systems are required. These elements can either be found embedded inside the microfluidic chip, such as Quake valves, or outside of it, like in the case of pressure controllers.

Microfluidic devices exploit the physical and chemical properties of liquids and gases at a micro scale. Microfluidic devices offer several benefits over conventionally sized systems. Microfluidics allows the analysis and use of less volume of samples, chemicals and reagents reducing the global fees of applications. Many operations can be executed at the same time thanks to their compact size, shortening the time of experiment. They also offer an excellent data quality and substantial parameter control which allows process automation while preserving the performances. They have the capacity to both process and analyse samples with minor sample handling. The microfluidic chip is elaborated so that the incorporated automation allows the user to generate multi-step reactions requiring a low level of expertise and a lot of functionalities. The microsystems execute functions that extend from detecting toxins to analysing DNA sequences or creating inkjet printing devices. To learn more about microfluidics applications, visit our dedicated review here.



Pic 5: Organs on chips are 3D cell culture micro devices

Microfluidics has diverse assets: faster reaction time enhanced analytical sensitivity, enhanced temperature control, portability, easier automation and parallelization, integration of lab routines in one device (lab-on-a-chip). It is cheap as it does not involve the use of various costly equipment. To have a look at the many technologies in the field, you can check out the only distributor specialized in microfluidics, Darwin Microfluidics.

Today, microfluidics provides efficient tools for multiple research areas, and more specifically for biological analysis:

- Whole biological process integrated and simplified for the end-users
- High-throughput, multiplexed and highly paralleled assays
- Faster analyses due to the shorter reactions and/or separation times
- Portable devices for point-of-care applications
- Low reagent consumptions
- Global cost reduction per analysis
- Accurate measurement, microfluidics allowing to increase the measurement resolution in given applications

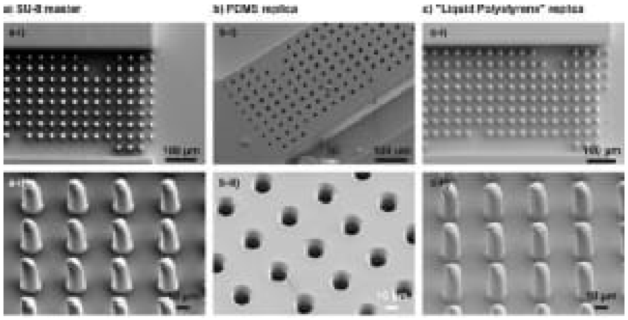
Soft lithography for microfluidics

In microfluidics, soft lithography is a diverse set of techniques that use a soft elastomer material (most of the time PDMS) to transfer patterns to a substrate material.

The basic process consists in building elastomeric micro channels. These micro channels are designed in a specific program and then printed onto a high-resolution transparency mask or remodelled into a conventional chrome mask to produce a master which will serve as a mould for the soft material.

Soft lithography presents various advantages over other forms of lithography, among which we can find its low cost and easy fabrication process; its rapidity, its tolerance over a wide variety of materials. In addition, soft lithography allows creating precisely delimited and manageable surface chemistries. It is also compatible with numerous applications that include cell biology, microfluidics, lab-on-a-chip or MEMS.

Soft lithography can be divided into 3 different major subcategories which are replica moulding, micro contact printing and embossing.



Pic 6: Soft lithography for microfluidics

Replica molding in microfluidics

Replica moulding in microfluidics allows transferring a pattern from a rigid or elastomeric mould called a master into another material, by way of a liquid polymeric mixture which starts to solidify when it gets in contact with the master.

A micro scale pattern is generated with computer-assisted design software before being transferred on a photo mask. A thin uniform film called photoresist is spin-coated on a silicon wafer, which is then covered with the photo mask. Liquid polymeric mixture is poured onto the silicon master before being baked or exposed to UV light. Thanks to heat, the replica solidifies, leaving the micro scale pattern etched into the photoresist. The desired feature it is then peeled away from the master mould and sealed.

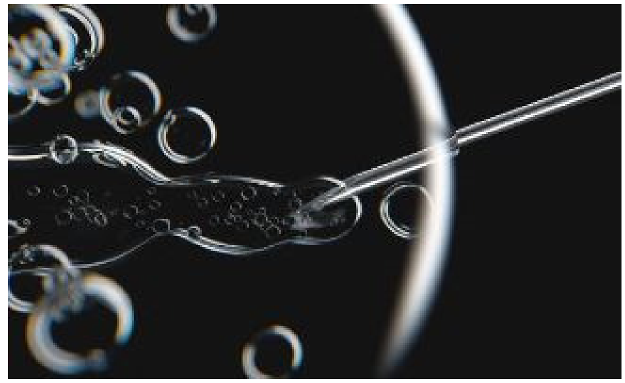
Replica moulding can be repeated multiple times and allows patterning a wide range of materials.

This chip has the potential to serve as a human identifier. Since until Coccyx annihilate this chip will be alive.

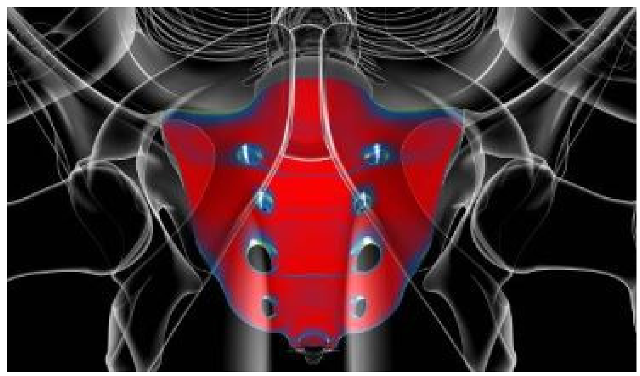
2. HEADING

2.1 Artificial Intelligence Utilizing Living Human Coccyx achieves self-Recognition.

Humans are still necessary for decision-making, creativity, and empathy. AI can assist humans in making decisions by providing data-driven insights; it can be replace human judgment. At Inclusion Cloud, we specialize in providing technological solutions to businesses that enable human-AI collaboration.



Pic 7: Microfluidics Chip Inject in to Coccyx



Pic 8: Flexible Microfluidics Chip inside Coccyx

2.2 Wearable and Implantable Soft Bioelectronics: Device Designs and Material Strategies.

Unlike conventional machines, such as cars or robots, those are continuously monitored by thousands of sensors, the human body as a soft machine is rarely monitored at present, except for special casesin patients, disabled persons, or military personnel. Infect, our body is constantly radiating highly personalized electrical, mechanical, thermal, and biochemical signals indicating our health, emotions, and actions. These signals are imperative for an objective evaluation of current body status, an accurate prediction of its future, and the safe merging and/or collaboration between living and non-living machines.

As a result, digitizing our body is as important as keeping a car or a robot monitored and connected, with privacy preserved, of course. This rationale as sparked the recent surge in wearable's and implantable, the

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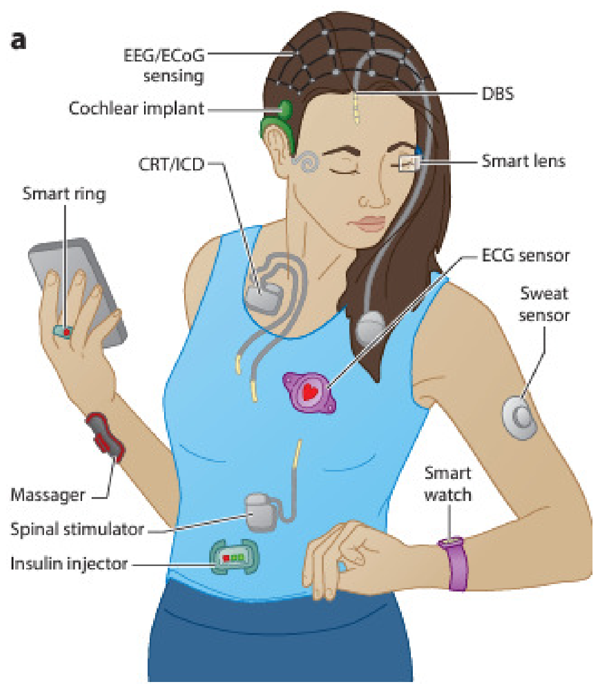
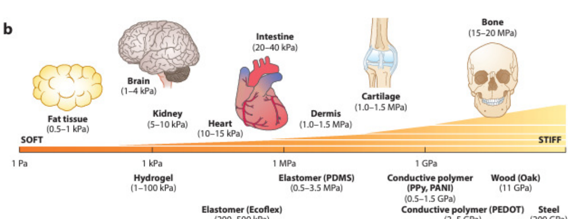
fore front of the Internet of things in, e.g. Health care, sports, and human machine interaction.

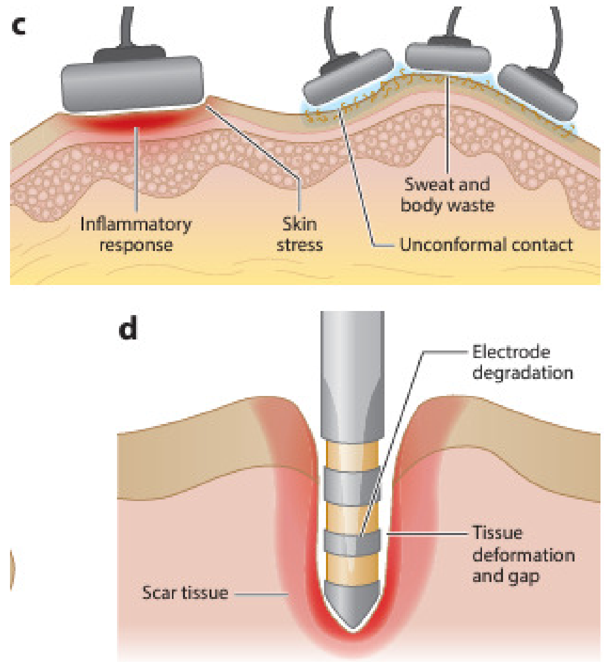


Pic 9: Conventional wearable/implantable bio electronics for healthcare, sports, and human–machine interface

Possible applications of wearables include medical and health care monitoring and diagnostics, transdermal drug delivery, fitness monitoring, military performance trackers and wearable robots, smart apparel and footwear in fashion and sports, work place safety and manufacturing, and electrical stimulation and thermo therapy.



Pic 10: Mechanical characteristic differences between soft biological tissues and device materials, in terms of Young's modulus. Draw backs of conventional



Pic 11: wearable and (d) implantable bio electronics for chronic application

In contrast, current implantable devices are used mainly for acute or chronic diseases, such as pace makers, cardiovascular stents, defibrillators, neural prosthetics, intraocular lenses, hearing aids, drug delivery systems, and so on.

Because the human body has a soft, curvilinear, and multimodal nature, safe, intimate, and long term integration of advice with the human body calls for soft, biocompatible, and multifunctional devices.

In this manner, the current rigid bioelectronics may induce inflammatory responses and exhibit unstable device functionalities, particularly under long-term integration on the target organ. This is due largely to the mis matches in the mechanical properties and chemical compositions between soft biological tissues and conventional rigid electronics. The mechanical miss match and chemical disparity affect chronic bio compatibility and decrease bio electronic performance.

The mechanical stiffness of conventional bioelectronics can induce side effects on the soft tissues in contact with them, in both wearable and implantable applications. For example, the rigidity of a wearable device mounted on the skin evokes discomfort and skin irritation. Because stiff and flat electronics cannot

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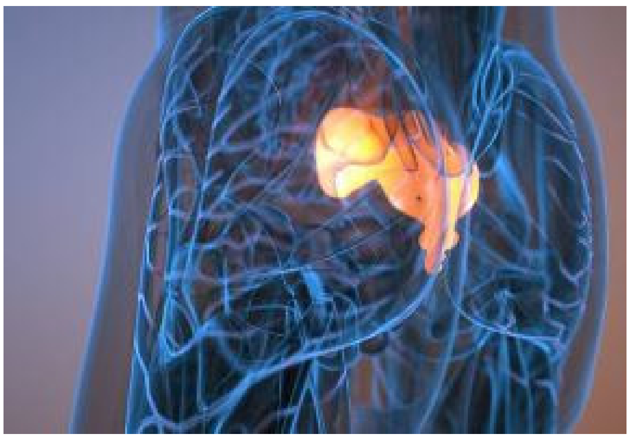
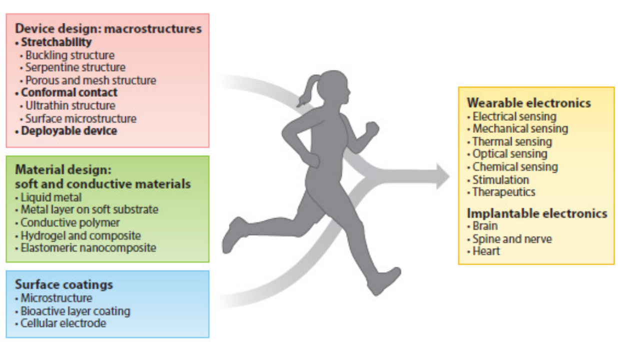
intimately follow the contour of soft and curvilinear skin, the pressure is concentrated in a localized area, and friction between the device and the skin may result in skin rashes and allergic reactions. Moreover, rigid and flat bio electronic scan not make conformal contact with soft and curvilinear skin, and such incomplete contact lowers bio electronic performance owing to high impedance and low signal to noise ratio.



Pic 12: Computerized reasoning with Microfluidics Chip over thoroughly search in Coccyx



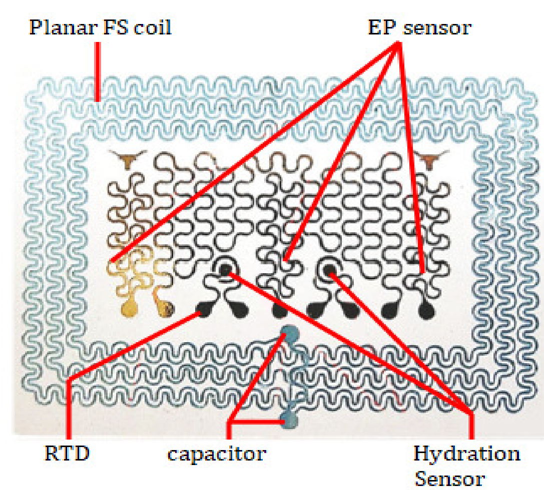
Pic 13: Strategies for long-term wearable and implantable bioelectronics, including device design, material design, and surface coatings.

3. Device Design Strategies

Conventional, intrinsically stiff electronic materials, such as silicon, III-V compound semiconductors, and metals, can be tuned for structural properties suitable for bio-integration through mechanics-guided geometric and configurationally designs. Such properties include bendability, stretch ability, conformability to curvilinear tissue surfaces, and 3D deplorability to couple with tissues or guide tissue growth. Although bendability and stretch ability are well covered in previous reviews, conformability and deplorability are not. In this section, we briefly Summarize the most recent progress on stretchable designs and then focus on conformable and deployable designs that have been directly employed in bio-integrated devices.

3.1 Designed Stretchability

Stretchability is crucial for bio-integrated electronics for the following two reasons. First, because most microelectronics is fabricated to be planar, stretchability is required to conform a planar device to undevelopable surfaces (i.e., surfaces with nonzeroGaussian curvature) of bio-tissues and organs. Second, because most bio-tissues are soft and stretchable, only stretchable devices that can deform together with the tissues are able to maintain functionality as well as form an intimate and low-stress bioelectronics interface.Therefore, many design strategies have been applied to achieve stretchable bioelectronics using high-modulus materials, including out-of-plane buckling, island plus- serpentine, or filamentary serpentine designs and fractal-, micro crack-, or kirigami-inspired designs. In the following, we review one example from each category.



Pic 14: Optical image of a multipara metric all-filamentary-serpentine.

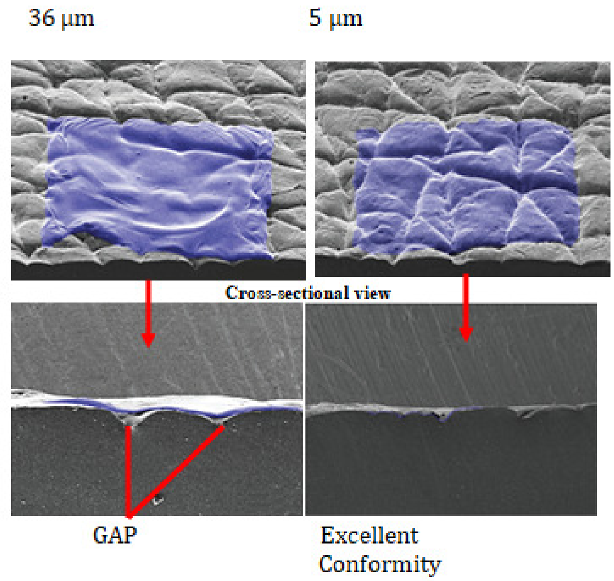
Compared with simple serpentine patterns, fractal serpentine designs gained larger areal filling factors and supported various deformation modes, including biaxial and radial deformation Stretchability could be enhanced as the hierarchy of self-similar serpentines increased. Fractal-enabled, highly stretchable epidermal electronics have been used for joule heating, Temperature sensing, and ECG measurement. Although serpentines provide sufficient stretchability, their mechanical properties do not precisely match the nonlinear behaviour of bio-tissues. As a result, a 2D triangular lattice with horseshoe serpentines has been designed, the stress/strain response of which can be tailored to fully overlap with that of human skin.

To further enhance the areal filling factor, microcrack- and kerygma-based stretchable patterns emerged as new designs to accommodate the applied stretch. Liu et al. Fabricated micro cracked gold electrodes that could be stretched up to 120% and applied them as soft electroencephalogram (EEG) and electrocardiogram (ECoG) sensors. However, the micro cracked electrodes suffered from large variations of resistance with stretch.

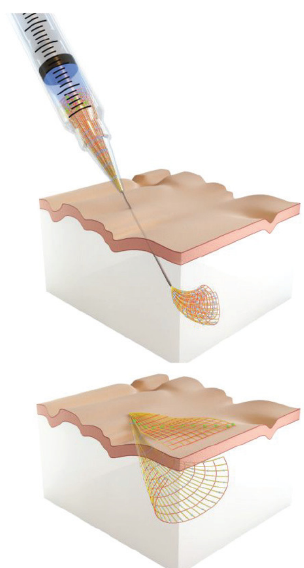
Moreover, owing to fatigue, micro cracks gradually develop into macro cracks, which fail the device after a limited number of cycles. To overcome these limitations, Vachicouras et al. Patterned Y-shaped motifs on films inspired by micro cracked gold films (Figure 3h). Notably, the blunt tips of each branch Helped suppress crack initiation and hence secured mechanical and electrical stability. This electrode was stretchable up to 60% and remained electrically conductive under 1,000,000 cycles of 10% stretching. When the cracks are long enough and the solid segments are narrow enough, the design can be called kirigami inspired; such designs can enable gigantic stretchability when the cracks (now called slits) open up. Slit number, length, location, and direction can modulate stretchability. For example, Jang et al. (78) made cuts on an elastomer with embedded aluminium Foil and achieved a stretchability of 400% and durability of 1,000 cycles at 300% strain.

Because tissue surfaces are never perfectly flat, conformable contact between bioelectronics and Tissue surfaces are crucial for low contact impedance; efficient mass, heat, or light transfer; suppressed relative motion; and hence reduced motion artefacts. Not all stretchable devices can adhere. Perfectly to curvilinear skin surfaces.

3.2 Designed Stretchability



Pic 15: Angled and cross-sectional SEM images showing the contact between a silicone replica of the human skin and different thicknesses of Eco flex membranes



Pic 16: Illustration of syringe-injectable deep-Coccyx monitoring electronics

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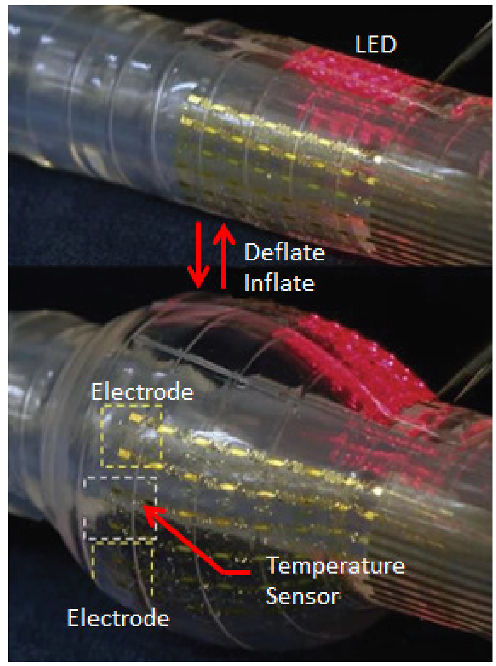
3.3 Connecting Brain and Coccyx

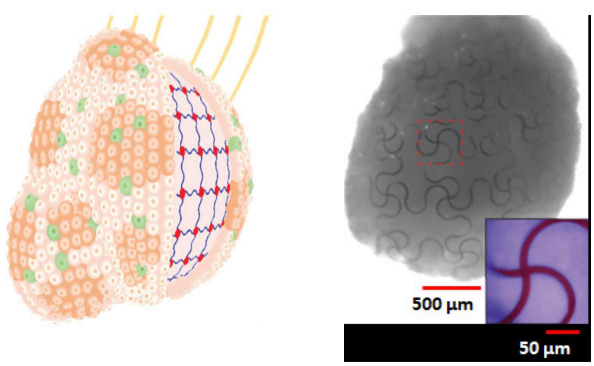
There are approximately 86 billion neurons in the human brain. Deep-brain recording or stimulation With minimally invasive means calls for deployable electrodes for minimally invasive delivery but expanded volumetric recording. One pioneering method involves syringe-injectable electronics. Silicon nanowire transistors and metal electrodes on an ultrathin epoxy layer (300–400 nm) were patterned into an open mesh layout. The device was folded And crumpled to fit inside a syringe, which could be easily inserted into the deep brain and then eject the device.

After ejection from the syringe, the device could naturally deploy owing to mesh self-recovery, resulting in 3D coupling with neurons in the deep brain. In later work, Xieet al. demonstrated a 3D-macroporous device, which could spontaneously curve into a cylindrical surface. On this porous cylinder, an array of microelectrode arms were able to bend outward inside the brain owing to no uniform residual stresses in the arm layers, effectively enhancing the measuring volume. The modulated elasticity and high deformability enabled intimate contact between the device and brain tissue. Moreover, the macro porous structure allowed neurons to penetrate into the device. Five weeks after implantation, regenerated neural tissues fully encapsulated the 3D electrode without notable inflammatory reactions or vacancies, implying That high-quality, long-term contact had been achieved between the electrode and the neuron cells.

Another strategy to couple electronics and soft tissue in 3D is through cell growth. A 3D pop-up microelectronic structure could form in a deterministic fashion through the controlled mechanical buckling of the predesigned 2D precursor . After embedding the 3D microelectronics in a hydrogel matrix, cardiac tissue cells could be cultivated into a 3D scaffold that was fully integrated with the 3D microelectronics. The device could then perform sensing, stimulation, and regulation of tissue function during tissue growth. Owing to their thinness and softness, the pop-up electronics posed almost no effect on cardiac cell viability. In follow-up research, Yan et al. fabricated freestanding 3D pop-up electrodes without elastomeric substrates to eliminate their constraints on operating temperatures and dimensional stability. The 3D bilayer–nested cages of epoxy were applied as growth platforms for neural networks of dorsal root ganglion cells dissociated from explants of rats. The cells were Organized into networks following the 3D microstructure and formed shortcuts between ribbons. By using the microelectrodes fabricated on the epoxy, the electrophysiological (EP) activities of the 3D growing neural cell networks could be monitored successfully.



Pic 17: Optical images of a multifunctional balloon catheter in deflated (top) and inflated (bottom) states.



Pic 18: Further differentiation of stem cells/progenitor cells

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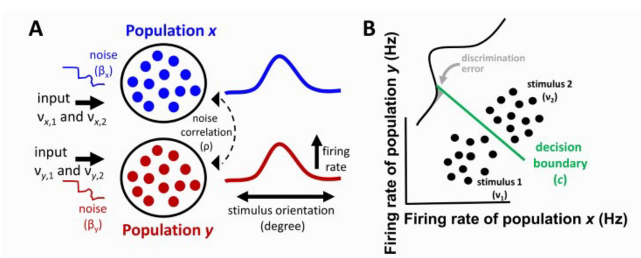
4. Linear population model – Neural System

As a starting point, we assume two independent neuronal populations, each projecting in a feed forward manner to a readout discriminating amongst two inputs ν_1 and ν_2, that are constant over time. Each population's mean firing rate in response to stimuli is conceptualized by a tuning curve where a stimulus feature, for instance visual orientation, generates a graded response. This scenario is analogous to analyses that examine population responses after performing a dimensionality reduction to generate a "population tuning curve". While a more complex model could account for heterogeneity of responses within each population, we choose to limit our model to two homogeneous populations in order for the classification problem to remain tractable.



Pic 19: The activity of each population is described by a linear neural integrator.

$$\tau_x \frac{dx_i}{dt} = -\alpha_x x_i + \nu_{i,x} + \beta_x \xi_x(t),$$
$$\tau_y \frac{dy_i}{dt} = -\alpha_y y_i + \nu_{i,y} + \beta_y \xi_y(t),$$

4.1 Impact of noise gain on classification error

To explore the effect of network parameters on error, we first modify as follows:

$$\rho_* = \frac{\min(r_x^2, r_y^2)}{r_x r_y} = \begin{cases} \frac{r_x}{r_y} & \text{if } |r_x| < |r_y|, \\ \frac{r_y}{r_x} & \text{if } |r_x| > |r_y|, \end{cases}$$

Where the ratio r_x / r_y can be expressed using network parameters.

Pic 20: linear neural System

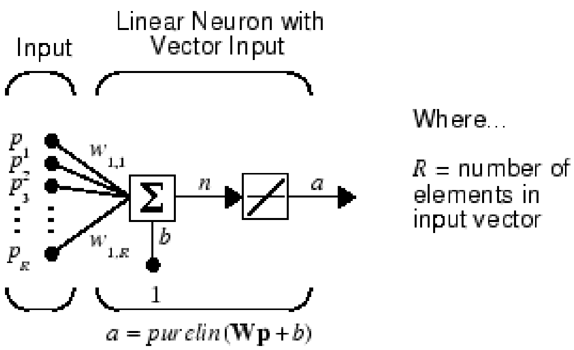
4.2 Linear Neural Networks

The linear networks discussed in this section are similar to the perceptron, but their transfer function is linear rather than hard-limiting. This allows their outputs to take on any value, whereas the perceptron output is limited to either 0 or 1. Linear networks, like the perceptron, can only solve linearly separable problems. Here you design a linear network that, when presented with a set of given input vectors, produces outputs of corresponding target vectors. For each input vector, you can calculate the network's output vector. The difference between an output vector and its target vector is the error. You would like to find values for the network weights and biases such that the sum of the squares of the errors is minimized or below a specific value. This problem is manageable because linear systems have a single error minimum. In most cases, you can calculate a linear network directly, such that its error is a minimum for the given input vectors and target vectors. In other cases, numerical problems prohibit direct calculation. Fortunately, you can always train the network to have a minimum error by using the least mean squares (Widrow-Hoff) algorithm.

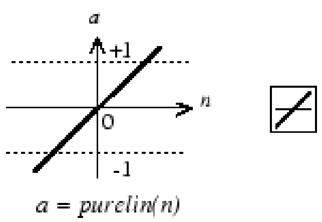
This section introduces linear layer, a function that creates a linear layer, and newline, a function that designs a linear layer for a specific purpose.

4.3 Neuron Model

A linear neuron with R inputs is shown below.



This network has the same basic structure as the perceptron. The only difference is that the linear neuron uses a linear transfer function purelin.



Linear Transfer Function

The linear transfer function calculates the neuron's output by simply returning the value passed to it.

$$a = purelin(n) = purelin(\mathbf{Wp} + b) = \mathbf{Wp} + b$$

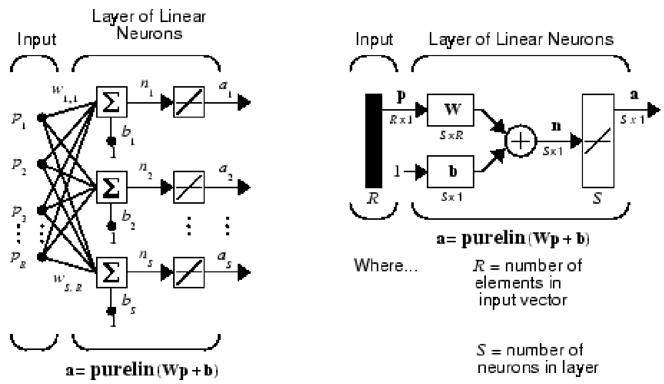
This neuron can be trained to learn an affine function of its inputs, or to find a linear approximation to a nonlinear function. A linear network cannot, of course, be made to perform a nonlinear computation.

4.4 Network architecture

The linear network shown below has one layer of *S* neurons connected to *R* inputs through a matrix of weights **W**.

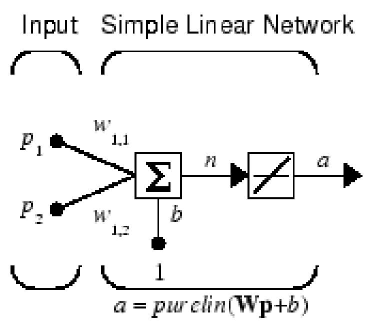
Note that the figure on the right defines an *S*-length output vector **a**.

A single-layer linear network is shown. However, this network is just as capable as multilayer linear networks. For every multilayer linear network, there is an equivalent single-layer linear network.



4.5 Create a Linear Neuron (linearlayer)

Consider a single linear neuron with two inputs. The following figure shows the diagram for this network.



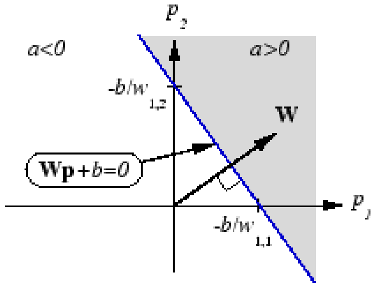
The weight matrix **W** in this case has only one row. The network output is

$$a = purelin(n) = purelin(\mathbf{Wp} + b) = \mathbf{Wp} + b$$

or

$$a = w_{1,1}p_1 + w_{1,2}p_2 + b$$

Like the perceptron, the linear network has a *decision boundary* that is determined by the input vectors for which the net input *n* is zero. For *n* = 0 the equation **Wp** + *b* = 0 specifies such a decision boundary, as shown below.



Input vectors in the upper right gray area lead to an output greater than 0. Input vectors in the lower left white area lead to an output less than 0. Thus, the linear network can be used to classify objects into two categories. However, it can classify in this way only if the objects are linearly separable. Thus, the linear network has the same limitation as the perceptron.

You can create this network using linear layer, and configure its dimensions with two values so the input has two elements and the output has one.

```
Net = linear layer;

Net = configure (net, [0; 0], 0);
```

The network weights and biases are set to zero by default. You can see the current values with the commands

```
W = net.IW {1, 1}

W =

     0     0
```

And

```
b= net.b{1}

b =

     0
```

However, you can give the weights any values that you want, such as 2 and 3, respectively, with

```
net.IW{1,1} = [2 3];

W = net.IW{1,1}

W =

     2     3
```

You can set and check the bias in the same way.
net.b{1} = [-4];

```
b = net.b{1}

b =

     -4
```

You can simulate the linear network for a particular input vector. Try

```
p = [5;6];
```

You can find the network output with the function sim.

```
a = net(p)

a =

     24
```

To summarize, you can create a linear network with linear layer, adjust its elements as you want, and simulate it with sim.

4.6 Least Mean Square Error

Like the perceptron learning rule, the least mean square error (LMS) algorithm is an example of supervised training, in which the learning rule is provided with a set of examples of desired network behavior:

$$\{\mathbf{p}_1,\mathbf{t}_1\},\{\mathbf{p}_2,\mathbf{t}_2\},\ldots\{\mathbf{p}_Q,\mathbf{t}_Q\}$$

Here pq is an input to the network, and tq is the corresponding target output. As each input is applied to the network, the network output is compared to the target. The error is calculated as the difference between the target output and the network output. The goal is to minimize the average of the sum of these errors.

$$mse=\frac{1}{Q}\sum_{k=1}^{Q}e(k)^2=\frac{1}{Q}\sum_{k=1}^{Q}(t(k)-\alpha(k))^2$$

The LMS algorithm adjusts the weights and biases of the linear network so as to minimize this mean square error.

Fortunately, the mean square error performance index for the linear network is a quadratic function. Thus, the performance index will either have one global minimum, a weak minimum, or no minimum, depending on the characteristics of the input vectors. Specifically, the characteristics of the input vectors determine whether or not a unique solution exists.

4.7 Linear System Design (newlind)

Unlike most other network architectures, linear networks can be designed directly if input/target vector pairs are known. You can obtain specific network values for weights and biases to minimize the mean square error by using the function newline.

Suppose that the inputs and targets are

```
P = [1 2 3];

T= [2.0 4.1 5.9];
```

Now you can design a network.

```
net = newlind(P,T);
```

You can simulate the network behavior to check that the design was done properly.

```
Y = net(P)

Y =

    2.0500    4.0000    5.9500
```

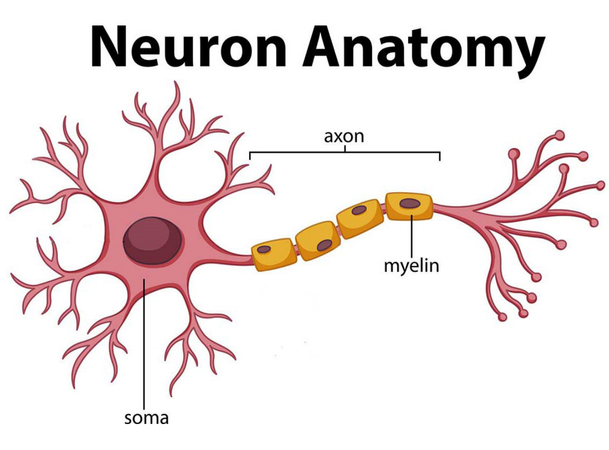
Note that the network outputs are quite close to the desired targets.

You might try Pattern Association Showing Error Surface. It shows error surfaces for a particular problem, illustrates the design, and plots the designed solution.

You can also use the function newline to design linear networks having delays in the input. Such networks are discussed in Linear Networks with Delays. First, however, delays must be discussed.

Diagram of a linear neuron showing R inputs being multiplied by individual weights, a bias value being added, and a linear transfer function being applied to the result.

This network has the same basic structure as the perceptron. The only difference is that the linear neuron uses a linear transfer function purelin.



Pic 21: Neuron Anatomy System

5. EXPERIMENTAL RESULT

Soon as 2030 we will see all of Universal citizens beginning to be tagged with IMFC (Intelligent Micro Fluid Chip) embedded inside our Coccyx, effectively using AI technology to answer the question, "Am I who I say I am?"

IMFC, embedded inside Coccyx with a procedure that's provide a digital interface to the real world cantered about the holder's identity: and many other sources of information currently carry with ID can instead be stored on an IMFC inside Coccyx.

Realistic benefits

Identification. Our Passport as of now have microchips, and air terminals, train stations, and transport stations progressing from examining our identification to filtering our arm would be a negligible foundation change. The same is true for IMFC, which no longer requires a scanner or hard copy. Through a lightning sensor connected to Coccyx, IMFC will monitor each individual from space and transmit a signal to boarding or another specific location with a connected device within milliseconds.

No more body mix-ups. Unfortunately, about 2, 28,000 babies get mixed up in hospitals every year, ultimately leaving with the wrong parents. On the other end of the spectrum, bodies occasionally get mixed up at funeral homes as well, making for some very awkward situations. A chip implanted at birth completely negates less-capable persons' inability to identify them. Infant and elder safety. It's not uncommon for elders to "escape" from rest homes. More than 12,000 children are kidnapped around world each day (amounting to over 900,000 kidnapped children per year). Between 1.6–2.8 million youth run away from home each year. Being able to track anyone (that gives you permission to do so, of course!) at any time means peace of mind for millions of parents and caregivers across the country.

Realistic disadvantages:

Uncertainty. We don't know what effects microchips will have on the body long-term. We don't know the societal effects of widespread chipping. We don't know what problems will arise across every facet of the idea, and we likely won't know until we try it.

CONCLUSIONS

Using an IMCF between a person and other objects, this device can monitor and control the Crime, Kidnapping, Forensic department, army force, county border crossing, flight hijack, and air crash and find unidentified dead body information around the world with universal standard code.

All the data's stored in unidetification location with highly secured password. Send these data to a faraway location around the world to create an information graph report.

It is a requirement for everyone, and when it reaches everyone, it will almost certainly take the world environment back to 1960.

This will be a complete success if the crime and punishments are abolished within five years.

ACKNOWLEDGEMENT

Despite the fact that the Earth has provided us with all of the necessary resources for our existence. The numerous levels and domains of life, as well as the biosphere, lithosphere, atmosphere, and hydrosphere, are in perfect harmony. As a result of this coordination and synchronization, we might be able to live a long and healthy life here on Earth.

Numerous factors, including increasing number of crime, reliance sound, vibration, heat, and climate change, are depleting Earth's resources. The depletion of our Earth's resources is evident in all of these signs, and it is time to save our planet: The ice is going away; woodlands are consuming; the fields are dry and empty; oceans are unsteady; the water is imperfect and vibrates at a higher frequency. We can help ourselves by reducing the earth's vibration.

Fig -22: Only human can save Earth

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