

Cover runners-up of 2021

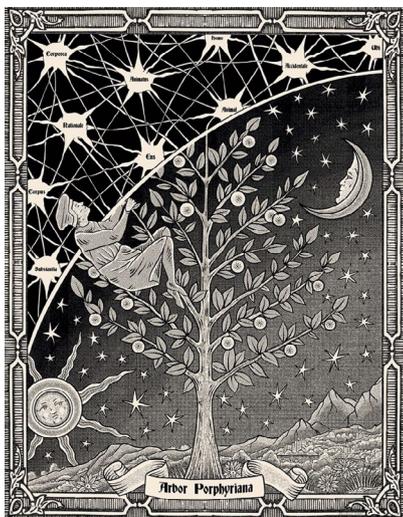
We highlight some of our favorite cover suggestions, submitted by authors last year, that were not ultimately selected for the journal.

When a manuscript is accepted for publication at *Nature Computational Science*, we welcome the authors to submit potential cover materials related to that manuscript. This is a great opportunity for their research to be considered to be featured on the cover of our journal, and we certainly enjoy seeing all the creative ways that our authors visually bring their papers to life.

Unfortunately, among the many cover submissions that we receive, only one can make it to a particular issue of the journal. The final decision is made by us, the editors, together with our art editorial team. While the scientific content that the image portrays is certainly taken into account in our decision, the aesthetic appeal is also very important, including, but not limited to, the visuals, the colors, and the cover design with the journal logo. More often than not, as we get many excellent cover suggestions, the decision is not clear-cut, but eventually, a final cover must be chosen.

In this Editorial, we would like to highlight some of our favorite image submissions from last year that unfortunately did not make the cut, in order to ensure that these images do not go unappreciated by our research community and that the authors' efforts do not come to naught.

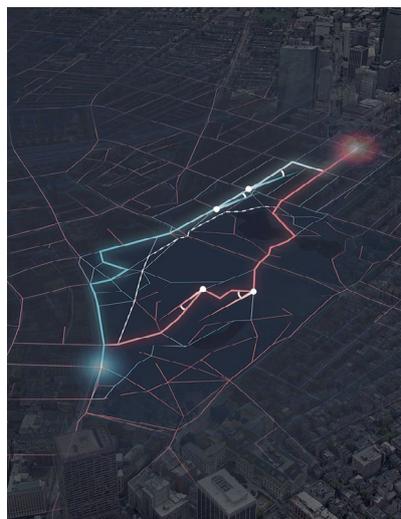
The first image was submitted by Paul J. Blazek and Milo M. Lin to highlight their



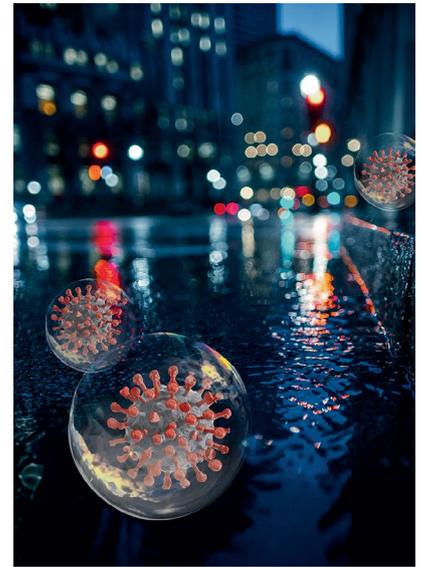
Cover submitted for the paper by Paul J. Blazek and Milo M. Lin. Credit: Mark C. Merchant

research on [using a neural network model to encode cognitive capabilities](#). “The graphic conveys the idea that symbolic cognitive processes, represented by the tree of knowledge, can emerge interpretably and naturally from an underlying connectionist neural network, which is the main result of our paper,” says Lin. “In designing this piece, we (and the artist) were inspired by the iconic wood engraving called the ‘[Flammarion engraving](#)’. We were suggesting an analogy with this iconic work from the 19th century, which represents the idea that terrestrial and celestial behavior emerge from an underlying set of Newtonian mechanics.” It is worth noticing that the original wood engraving is widely studied and interpreted as man’s quest for the knowledge of the Universe.

Another cover runner-up was submitted by Paolo Santi et al., related to their research on [modeling how pedestrians navigate within cities](#). According to the authors, the image represents the hidden complexities of pedestrian navigation. “Two specific origin and destination points are highlighted in the map (blue and red glowing points). The shortest path connecting the two points is represented by the dashed trajectory, which partly overlaps with other trajectories. The most recurrent paths in each direction are highlighted: the glowing blue path goes from the blue to the red point, while the red



Cover submitted for the paper by Paolo Santi et al. Credit: Eunsu Kim, Rui Wang, Fabio Duarte/MIT Senseable City Lab



Cover submitted for the paper by Xavier Rodó et al. Credit: Lluc Rodó De Yebra

glowing path goes in the opposite direction. These paths are different, highlighting an asymmetry in human pedestrian navigation choices that can be explained by a mechanism called vector-based navigation,” says Santi. The vectors pointing towards the destination are depicted in the most recurrent path in each direction to illustrate this mechanism, according to which humans are assumed to minimize the angular deviation towards the destination at each road intersection.

Finally, another favorite cover suggestion is related to a paper by Xavier Rodó et al. where they study [the association of temperature and humidity with COVID-19](#). According to the authors, seasonality of wintertime respiratory infections in temperate regions and airborne transmission can be seen as two sides of the same coin: winter circulation in those regions coincides with lower temperatures and lower absolute humidity, a feature that relates to smaller aerosol sizes and, therefore, facilitates persistence and enhances short-distance viral propagation. “In this cover, we highlight this link of SARS-CoV-2 to aerosols in a cold wintertime portrait typical of Europe,” says Rodó. □

Published online: 23 February 2022
<https://doi.org/10.1038/s43588-022-00212-5>