1) Look at a table of extra-solar planets either at:

http://vo.obspm.fr/exoplanetes/encyclo/catalog.php
or
http://exoplanets.org/planet_table.shtml

and pick the 3 planetary systems which you think would be the best candidates for supporting Earth-like life.

A surprising number of people feel a little flat with this and went for planets at exactly 1 AU. Now that is good for terrestrial planets to be situated at. But the planets listed in the above databases are almost exclusively gas giants and none of them even approach Earth’s size. Now gas giants at 1 AU are not very hospitable to Earth-like life. They may hold some other kind of life, but Earth-like life would not have a chance there. A few people commented on the possibility of gas giants at 1 AU having habitable moons and that was acceptable, although it is unclear that these moons are stable to the inwards migration the gas giants had to go through to get to 1 AU.

So the planetary systems you really want to be looking for are those in which the gas giants resemble our Jupiter.

The three systems I find most suitable (in no particular order and by no means the only answer here) are:

HD 70642: This planet is twice as massive as Jupiter and has an eccentricity of 0.1, but at least it is at 3.3 AU so it hasn’t migrated in too far from its formation point or possibly even formed there. Because it is relatively far out this would make it might make it possible for a terrestrial planet to form somewhere in the habitable zone.

HD 117207: Its semi-major axis is 3.86 AU so pretty far out and again it’s about 2 Jupiter masses. It’s a little on the high eccentricity side with 0.16, but not too high to eject all terrestrial planets.

HD 10647: Again it is at a somewhat reasonable distance of 2.1 AU, which is a little close for comfort, but considering the slim list we have sort of the best we can do. It has an eccentricity of 0.18 and is a little less massive than Jupiter. I think this planet has most likely had some migration, but perhaps it hasn’t migrated enough to sweep out all terrestrial planets.
Looking at all these planetary systems does this make you think our solar system is a common occurrence or rare? What limitations exist on our knowledge of extra-solar planetary systems that may not allow us to fully answer this question yet?

A lot of you pointed out that anything at this point is pure conjecture. And that is of course true as we have yet to detect a single Earth sized planet. That of course doesn’t mean that they’re not out there. It is however concerning how many “hot Jupiters”, massive planets that have been swept in close to their parent stars exist, and how many of the extrasolar gas giants that are further out have very high eccentricities. The biggest problem is that we lack a real idea of what the population looks like beyond 4 or so AU. That will allow us to approach this question much better. As it stands right now we have no single real analog of our solar system. The next big thing will of course be to actually start to detect some Earth size planets. Stay tuned for that in the next 20 years or so (Hold your thumbs!).