



Key words: Engineers, Engineering

<p>ESOCast 186: Engineers at ESO</p>	
<p>00:00 [Visual starts] 1. “We are typically working at the edge of what’s technologically possible.” “Certainly engineering is at the core of ESO’s activity.” “Engineering is kind of like the key that allows the organisation to access and explore the Universe.”</p>	<p>00:00 Statement Elizabeth George: Statement Aglaé Kellerer: Statement Pedro Toledo:</p>
<p>00:20 2. ESOCast intro</p>	<p>00:00 ESOCast introduction</p>
<p>00:35 [Narrator] 3. ESO, the European Southern Observatory, designs, builds and operates some of the most advanced telescopes and instruments in the world. To achieve this, ESO needs a host of talented engineers who design, develop and maintain these sensitive machines.</p>	
<p>00:56 4. “ESO is the driving force of European ground-based astronomy and it uses the most advanced technology to put it at the service of astronomy.” “So we need the best engineers to provide the astronomical community with the best telescopes.” “For me, the most important is what we</p>	<p>Statement Aglaé Kellerer: Name slate: Aglaé Kellerer Optical engineer Statement Sebastien Tordo:</p>

<p>actually do, provide the outcome of our work, our instruments are among the best, our telescopes are among the best and that we provide to the community the right tool to make science.”</p> <p>“The engineers have to create this technology that is unique in the world; the spares are not available on the market.”</p> <p>“Every time we have a failure we need to intervene as fast as we can and we need sometimes parts on the site to repair. So engineering is extremely important to ESO. Without engineers in the first place, we would not be able to build the telescopes.”</p>	<p>Name slate: Sebastien Tordo Optomechanical engineer</p> <p>Statement Patricia Guajardo: Name slate: Patricia Guajardo Instrumentation engineer</p> <p>Statement Maxime Boccas: Name slate: Maxime Boccas Industrial engineer</p>
<p>02:03 [Narrator] 5. Around half of the staff at ESO’s Headquarters in Garching are engineers, and they make up much of ESO’s staff in Chile. These highly skilled specialists cover many different fields, from traditional disciplines like mechanical, electrical and software engineering to more specific areas, such as optics, detector systems, and cryogenic engineering.</p> <p>These engineers have not only a variety of skills, but also a variety of experience — ESO’s diverse working environment attracts engineers of all nationalities, genders and backgrounds.</p>	
<p>02:47 6. “I’m a detector engineer and we design and deliver detector systems for the instruments on ESO’s telescopes”</p> <p>“At the moment I am working on the CCD of the instrument HARMONI. A CCD is basically the eye of the instrument.”</p>	<p>Statement Elizabeth George: Name slate: Elizabeth George Detector engineer</p> <p>Statement Matteo Accardo: Name slate Matteo Accardo Mechanical designer</p>

<p>“I’m a software engineer so my responsibility is to make the software that astronomers use for exploring the sky work perfectly during the whole operating night.”</p>	<p>Statement Pedro Toledo: Name slate: Pedro Toledo Software engineer</p>
<p>03:17 [Narrator] 7. In Garching, the telescope instrumentation and detectors are developed and manufactured. These are then transported to Chile where they are installed on ESO facilities.</p> <p>Here, they are operated, maintained and repaired by the highly skilled ESO engineers working in Chile.</p>	
<p>03:39 [Narrator] 8. There is also a huge amount of engineering taking place for the Extremely Large Telescope or ELT, which is currently under construction. The ELT will have a 39-metre main mirror and will be the largest optical telescope in the world.</p>	
<p>03:57 9. “What I’m doing at present at ESO is planning with a team the phase of assembly, integration and verification of the Extremely Large Telescope”</p> <p>“I work as an optical engineer on the ELT. So my role is to work on the optics of this Extremely Large Telescope that we are currently building.”</p>	<p>Statement Emanuela Ciattaglia: Name slate: Emanuela Ciattaglia Mechanical engineer</p> <p>Statement Aglaé Kellerer:</p>

<p>04:19 [Narrator] 10. There are several ways that you can get involved with world-leading engineering at ESO.</p> <p>ESO is regularly recruiting full-time engineering staff in both Garching and Chile. The work of professional International and Local Staff Members is vital to developing ESO’s world-class fleet of innovative telescopes and instruments.</p> <p>Throughout the year, competitive internships and fellowships are also offered to highly skilled individuals. These rewarding programmes provide participants with first-hand experience of working on state-of-the-art projects.</p>	<p>Text insert URL of website</p> <p>eso.org/jobs</p> <p>eso.org/engfellow-paranal</p> <p>eso.org/engfellow</p>
<p>04:55 [Narrator] 11. There is plenty of room for development during an engineering career at ESO. There will always be new technologies, instruments and detectors to work on.</p> <p>Ever more advanced technologies are required to improve ESO’s facilities and to keep ESO at the forefront of global astronomy — making sure the astronomical community is served in the best way possible.</p>	
<p>05:20 12. “It’s not so often one can work on building giant telescopes in a very special place like Chile. So this makes it amazingly special.”</p> <p>“Being an engineer at ESO is a great thing for not only the technical aspects but also the human point of view, one gets to work with professionals coming from all over the world”</p> <p>“It feels very special because you’re so much at the heart of what’s being done in astronomy at the moment.”</p>	<p>Statement Emanuela Ciattaglia:</p> <p>Statement Matteo Accardo</p> <p>Statement Aglaé Kellerer:</p>

<p>“Personally I enjoy very much being an engineer: this is a unique place for engineering because you are dealing with high technology, usually unique machines. So it’s a very exciting job to be an engineer.”</p>	<p>Statement Maxime Boccas:</p>
<p>06:06 [Narrator] 13. It certainly is true that ESO wouldn’t be the world-leading organisation that it is without the hard work of its engineers. With their help, ESO is able to push the boundaries of astronomical technology.</p>	
<p>06:24 14. “ESO is the place where we can create amazing things all together.”</p> <p>“When you are working at ESO you kind of participate in the history of astronomy.”</p>	<p>Statement Emanuela Ciattaglia:</p> <p>Statement Sebastien Tordo:</p>
<p>00:00 [Outro]</p>	<p><i>Produced by ESO, the European Southern Observatory.</i> <i>Reaching new heights in Astronomy.</i></p>

