



# HUMAN ENGINEER: PROF. MAHİR GÜLŞEN, M.D.

## İNSAN MÜHENDİSİ: PROF. DR. MAHİR GÜLŞEN

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### SUMMARY:

Prof. Mahir Gülşen was born in Muğla in 1956. He was graduated from Ege University Medical Faculty. Then, he continued his academic life in Çukurova University in Adana. He was mainly interested in Spinal Surgery and External Fixation after the residency program. Prof. Gulsen was president of the Turkish Spine Society during 2009-2011. He has reported many papers in the international journals. His studies about the anterior surgery of the scoliosis and osteotomies of the complex deformity of the spine are very important landmarks for the development Spine Surgery in Turkey.

**Key words:** Mahir Gülşen, Scoliosis, spine, external fixation

**Level of Evidence:** Biography, Level V

### ÖZET:

Prof. Dr. Mahir Gülşen 1956 yılında Muğla'da doğdu. Ege Üniversitesi Tıp Fakültesini bitirdi. Daha sonra, akademik hayatına Çukurova Üniversitesinde Adana'da devam etti. Uzman olduktan sonra temel olarak omurga cerrahi ve eksternal fiksasyonla ilgilendi. Prof. Gülşen 2009-2011 arası Türk Omurga Derneği başkanlığını yürüttü. Uluslararası dergilerde çok sayıda makale yayınladı. Özellikle onun skolyoz cerrahi tedavisindeki anterior cerrahi uygulamaları ve kompleks omurga deformitelerindeki osteotomi uygulamaları, Türk Omurga Cerrahisine büyük katkılar sağladı.

**Anahtar Kelimeler:** Mahir Gülşen, skolyoz, omurga, eksternal fiksator

**Kanıt Düzeyi:** Biyografi, Düzey V

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## INTRODUCTION:

Although I have known Prof. Mahir Gülşen for a long time, I have got acquainted with him during our stay in Madrid, Spain because of European Board educator and tester course and I began to admire him also in that time. During that trip, I discovered that we had a lot in common and more important than that he was a man of goodness and friendship and a very good scientist and surgeon in contrast to his humbleness. I have learned that he was regularly attending to Renewal courses in USA and is a good reader (Figure 1).



**Figure-1.** Prof. Mahir Gülşen and me in EBOT Course in Spain.

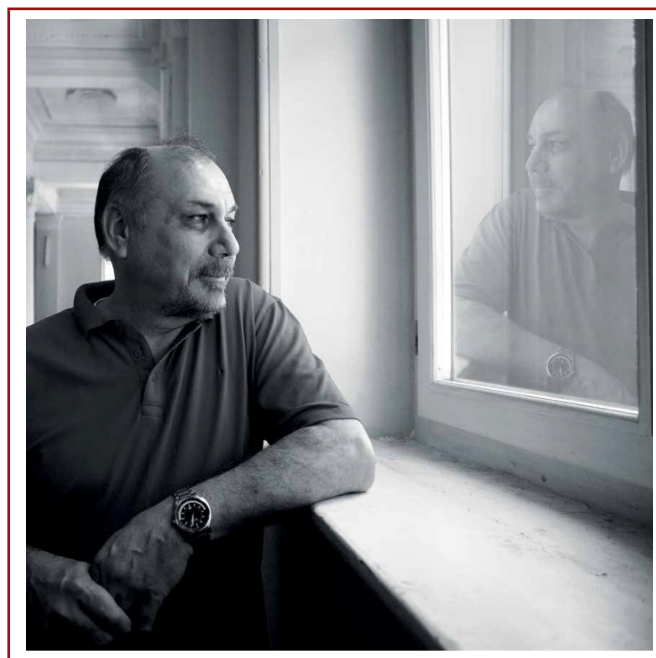
Before writing his biography I have realize that we were somewhat late on that. I was jealous of a book published about Mahir Hoca (master) under the title of “Human Engineer” before this biography was written; but, on the other hand this book was used by me as an important source in writing of his biography<sup>1</sup>.

Mahir Gülşen, is a surgeon that has dedicated himself to spine surgery and is a self- made man who improved himself by his own. In addition to his numerous international publications, he has contributed to training of many spinal surgeons in Çukurova Medical Faculty and then in the one and only private Orthopedics and Traumatology Hospital of Turkey which is established by himself.

## LIFE STORY:

Twins were born on 20<sup>th</sup> of July in 1956 in Karabortlen village of Mugla. Their names were Mahir and Sait. Their mother Hatice was a housewife and their father Mehmet Sabri was a farmer. They were the fourth and the fifth children of the

family as fraternal twins. Mrs. Saziye, the aunt of the twins still didn't have a child (even they were in the fourth year of their marriage). With the desire to have a child and her love for them, Mrs. Saziye insisted on taking care of Mahir of the twins and raise him herself, the family accepted helplessly. Mahir Gulsen called his auntie as mother and his uncle-in-law as father; his own mother as auntie-mom and his own father as big-dad. Mahir introduced to Izmir when his new family was assigned to this beautiful city. But since they kept in touch with the village, Mahir spent his summers with his real family (Figure-2)<sup>12</sup>.



**Figure-2.** Prof. Mahir Gülşen.

He started elementary school in Izmir but because of reassignment of his family to Mugla he continued his education in Mugla. After he attended 4<sup>th</sup> year of the school in Mugla, they were reassigned to Izmir and he completed 5<sup>th</sup> year of elementary school In Izmir Esrefpasa Elementary school. Prof. Mahir was left handed... One of those days, his teacher in Mugla tied his left hand and asked him to write with his right hand (Figure-3)<sup>12</sup>.

Esrefpasa where they lived in Izmir was one of the oldest neighborhoods of the city. He started middle school there in Bestepeler Middle School. He had a very good math teacher. Maybe he was one of the most important teachers who made him successful and love science department. His name was Kemal Hortacli.



**Figure-3.** Old İzmir, during 60s.

Teacher Kemal used to make students put away textbooks in the last fifteen minutes of the class and was saying “We will read a novel.” For three years, they read books of Yasar Kemal in the last minutes of the math classes. This had -affected Prof. Mahir a lot during his life and it also made him love the math lesson<sup>12</sup>.

During middle school years, Prof. Gülşen continued to go to the village every summer. He was working in Forest Administration time to time when he was there. So he was both on holiday and working. He had proved himself during the work in Forest Administration, even he was still a child, he worked in jobs that requires responsibility. For some reason, Mahir was interested in circus. He read some books that have parts describing circus. After he read these books, his entire dream was to work in a circus. He was a very good gymnast. He used to do somersault and do a handstand and walk on his hands. When he returns home for the summer, he used to tie a stretched rope between two trees and he tried to walk on it with a pole in his hands<sup>1</sup>.

Mahir had taken the exam for scholarship and had entered to İzmir Atatürk High School. It was one of the best schools and it was great to study in a boarding school. In the later years his math teacher had chosen him for the Math Team even his grade was three out of five. And in the end he was able to write his name in the entrance of İzmir Atatürk high school (Figure-4)<sup>12</sup>.



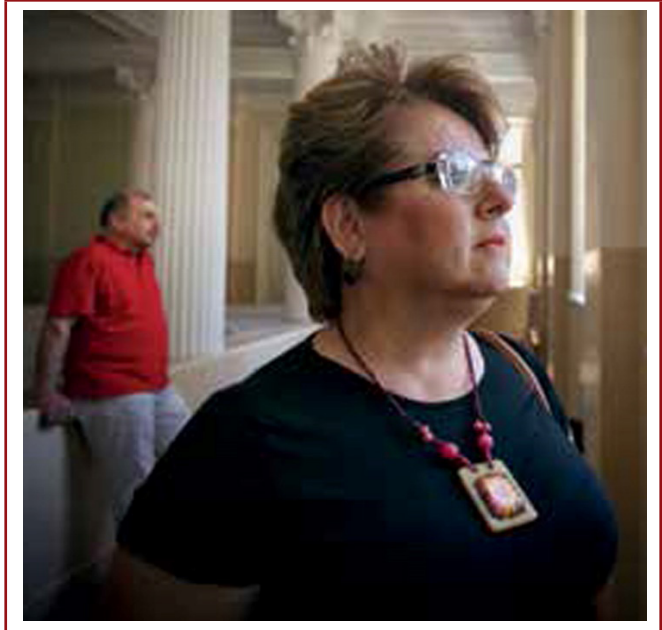
**Figure-4.** TUBITAK Math award.

He always wanted to be a mechanical engineer actually. That's where his relation with math was taking him towards. He wanted to take the exams of universities out of Izmir; however since his father didn't let him to leave for another city because of his financial constraints, his longing to him and the violent political skirmishes of the period, he started to consider a university in Izmir<sup>12</sup>.

In the end, he decided to enter the medical school of Ege University. Before he became an orthopedist, his dream was to be a psychiatrist. Actually he had this thought until third grade. In the following days Ege University Orthopedics Department President Prof. Merih Eroglu started to come to his classes. Mahir Gulsen was very impressed while he was giving lecture on treatment methods in orthopedics and he made his mind on being an orthopedist.

He started to volunteer in hospitals starting from the first grade. He learned practical things like medical dressing and giving an injection. Of course you can't deny the practical benefits of being in hospitals as a medical student. In the summer of third grade, he worked in Mugla Public Hospital. While he was there, he asked permission from surgeon Mr. Gultekin to attend the operations. He started to attend operations with the purpose of observation<sup>1,12</sup>.

Prof. Gülşen finished the medical faculty in 1979. He started to residency program of Orthopedics and Traumatology in Çukurova Medical Faculty 1980, and finished in 1985. He was married with Arzu Gülşen in 1983 (Figure-5).



**Figure-5.** Arzu Gülşen.

He studied in Kayseri voluntarily for a few years after becoming a surgeon of Orthopedics and Traumatology. In Kayseri, during his studies about the external fixation, he figured out and understood the technique of the Ilizarov external fixator and the idea behind it. Then he designed a new external fixator and took a patent of the that new fixator (Figure-6).



**Figure-6.** In Kayseri, during his studies about the external fixation, he figured out and understood the technique of the Ilizarov external fixator and the idea behind it. Then Prof. Gülşen designed a new external fixatour and took a patent of that new fixator.

Prof. Gülşen worked in the İzmir Soldier Hospital for military service. Then he was accepted as Assistant Professor of Orthopedics and Traumatology in the Çukurova University. He became an associate professor in 1989. Because of his interest in external fixator, he kept his studies on this field and he also focused on his studies about his other area of interest namely spinal diseases.

As he got more experienced he started to think that he needs go abroad for further improvement. Paul Harrington had made a breakthrough with the spinal instrumentation device he developed in Houston, USA which was coined by his name. Mahir Gulsen decided to go there and in the summer of 1991, he went to USA as an associate professor<sup>12</sup>.

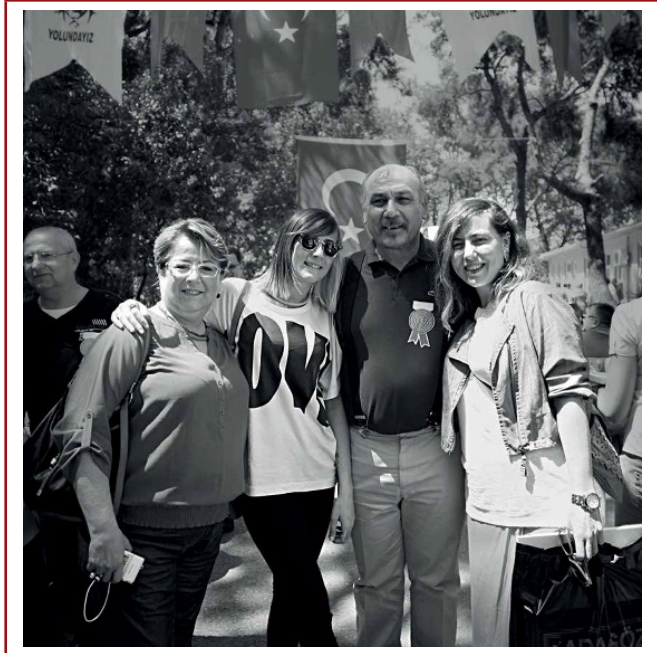
Mahir Gulsen had them bring these tools to Adana. This way he started to apply Ilizarov surgery. Mahir Gulsen became a professor in 1995 and he held Ilizarov Course for the first time in 1996 in Adana Cukurova University. Mahir Gulsen held the 17th of this course in 2013 and until now more than 2500 orthopedists have taken these courses. The starting point of Ilizarov surgery in Turkey is Adana. Because of Mahir Gulsen, Adana became the worldwide known center of a very important medical application. Because of him, nationally or internationally many patients visited our city. In 2004, World Ilizarov Conference was held in Turkey and Mahir Gulsen was the chairman of the conference (Figure-7)<sup>12</sup>.



**Figure-7.** In 2004, World Ilizarov Conference was held in Turkey and Mahir Gulsen was the chairman of the conference.

In 2008, he left from the University and founded the Orthopedia Hospital and Spine Center with his friends. Now he is working in the same hospital as a chairman of the spine center.

Mahir Gulsen; his wife Arzu, his two daughters Zeynep and Ege form a precious modern family portrait. Mahir Gulsen is a man who empowers Adana with everything he did and everything he will do. With the light of the science, he is a man who never stays in the dark (Figure-8)<sup>12</sup>.



**Figure-8.** Prof. Gülşen and his wife, Arzu Gülşen is seen with their daughters.

## CONTRIBUTIONS TO THE TURKISH SPINAL SURGERY:

He returned to Adana after working in spinal surgery department for four months in USA and he decided to focus on rheumatic spine disorders such as ankylosing spondylitis. The self-confidence of being an associate professor was pushing him to make brave decisions<sup>12</sup>.

Mahir Gulsen decided to use a technique which was never used in Turkey before. The name of this technique used in ankylosing spondylitis treatment was “Egg Shell” and it was a method that was started to be employed in the world only recently. In this technique, neurocentrum was being carved by entering from backside like carving the interior of an egg, it is emptied and bone is weakened. The bone is cracked easily like an egg shell and the desired shape is given. The two sides of the spine are left at different heights to correct the arch in the spine (Figure-9)<sup>1,4-5</sup>.

He became the executive board member of Turkish Spine Society during 2000-2005 period. He organized the 7<sup>th</sup> International Congress of Turkish Spine Society in 2005 as a chairman. He was elected for executive board member of Turkish Society of Orthopedics and Traumatology in 2004. He became the president of Turkish Spine Society during 2009-2011 period (Figure-9)<sup>1,12</sup>.



**Figure-9.** Prof. Gülşen is seen in the operating theatre.



**Figure-10.** He is one of the first surgeons in Turkey performing anterior instrumentation for the scoliosis and other spinal deformities and osteotomies in the rigid spinal deformities.

He is one of the first surgeons in Turkey performing anterior instrumentation for the scoliosis and other spinal deformities and osteotomies in the rigid spinal deformities. He also performed growing rods and similar techniques in the childhood spinal deformities (Figure-10).

In conclusion, Prof. Dr. Mahir Gülşen's flawless character, caring personality, knowledge and experience, and countless publications have made him an indispensable pioneer of modern spinal surgery, not just in Turkey, but worldwide. He is really a pioneer of the Turkish Spinal Surgery.

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He reported many articles in international journals and made presentations in international congresses<sup>2-11</sup>. His main topic was "eggshell procedure for the ankylosing spondylitis"<sup>4,5</sup>.

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