

## **IOLCON – The roadmap for reliable IOL calculation. New features of modern international internet data-base for updated and optimized IOL constants**

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Today it is impossible to imagine calculating Intraocular Lens (IOL) power without them, because they can significantly improve the refractive result after cataract surgery: Optimized IOL constants, ideally individually optimized for the specific surgeon. The Internet database IOLCon ([www.iolcon.org](http://www.iolcon.org)), founded in 2017 has meanwhile established itself as a reliable, worldwide available source for optimized IOL constants and specifications. Based on modern optimization strategies, IOLCon also offers, free of charge for Ophthalmic surgeons, individually optimized IOL constants.

**Methods:** The method used by IOLCon to optimize IOL constants is characterized as an "Intelligent IOL Constant Optimization", which uses e.g. statistical methods taking the measuring accuracy of the measuring instruments (e.g. the biometer) into account. Optimizations of the constants for the following published formulas can be found on IOLCon: Haigis, Hoffer-Q, Holladay 1, SRK/T - and now also for the new Castrop formula. The prerequisite is the use of current measurement techniques that precisely measure all distances of the eye. With this data in combination with modern formulae (such as the Castrop formula), even eyes which are outside the "norm" can be calculated more reliable compared to using classic formulae.

IOLCon fulfills all the requirements of a modern biometry database and established itself as an indispensable tool for Cataract surgeons by today and will also meet future demands of ongoing developing ophthalmosurgery. It can be accessed at <https://iolcon.org>.

The logo for IOL Con, featuring the text "IOL Con" in a blue, serif font.

Figure 1: IOLCON's logo



Figure 2: QR code to <https://iolcon.org/>

## Recent Publications

1. Scholtz SK, Schwemm M, Eppig T, Cayless A, Langenbucher A (2021), Benefits and New Features of a Modern International Internet Database “IOLCon” for Updated and Optimized IOL Constants and IOL Specifications. *Klinische Monatsblätter für Augenheilkunde* 2021; 238(09): 996 – 1003.
2. Scholtz SK, Langenbucher A (2021), Immer auf dem aktuellen Stand: IOLCon – optimierte Konstanten und Linsenspezifikationen für die moderne Kataraktchirurgie, *OphthalmologyCampus*, 02/2021, S. 90-93.
3. Scholtz SK, Cayless A, Langenbucher A (2021), Calculating the Human Eye, Basics on Biometry, in: Christopher Liu and Ahmed Shalaby Bardan (Eds): *Cataract Surgery, Pearls and Techniques*, 978-3-030-38233-9, 459250\_1\_En, (Chapter 7), Springer, 01/2021, S. 87 – 114.
4. Scholtz SK, Langenbucher A (2020), Die Berechnung des menschlichen Auges – zur Evolution der Biometrie in der Kataraktchirurgie, *Klinische Monatsblätter für Augenheilkunde*, 08/2020, 933-937.
5. Scholtz SK (2019), Internet database “IOLCon”, Biometry today, its challenges and the benefits, *EUROPEAN OPHTHAMOLOGY NEWS*, 9/2019, pg. 2.
6. Scholtz SK (2019), Datenbank mit zeitgemäßen Features, Biometrie heute: Herausforderungen und Leistungen des Biometrie-Portals IOLCon, *OPHTHALMOLOGISCHE NACHRICHTEN*, 05/2019, pg.17.
7. Scholtz SK, Langenbucher A, Ein unverzichtbares Tool für jeden Ophthalmo-Chirurgen: IOLCon, *CONCEPT Ophthalmologie*, September 7/2019, 18-20.

## Biography

Sibylle Scholtz, is a Biologist and a Chemist who has done PhD in Medicine, International Science Correspondent, Associated Senior Research Fellow (Institute of Experimental Ophthalmology, Saarland University Faculty of Medicine, Germany), longstanding experience in the Ophthalmic medical device industry and in national and international Medical Device Law.

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