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Dr Phil Salmon is currently a Biomedical Application Scientist at the micro-CT manufacturer Bruker-microCT (formerly SkyScan), Belgium, responsible for the development and validation of systems and software for micro-CT morphometry, densitometry, model visualization and other biomedical applications. He received his B.Sc. degree at Southampton University, UK, two M.Sc. degrees from Plymouth Polytechnic and St Andrews University, Scotland, UK, and his Ph.D. at Bristol University, UK.

His research career began in the radiobiology and internal microdosimetry of bone, including radiation measurement methodology. The focus then turned in the direction of bone biology and the study of bone remodeling and architecture, with two years of research at the Royal Veterinary College, London in the Bone group of Prof. Lance Lanyon. In his subsequent post at AEA Technology Preclinical Sciences, Harwell, UK, he worked in bone histomorphometry and in vivo preclinical studies, and was responsible for preclinical regulatory osteoporosis drug trials and bone research projects.

In his current role at Bruker-microCT for over a decade, he has been directly involved in the practical implementation of the new technology of microCT imaging and 3D analysis in bone and dental biology, as well as in other life science and general research fields. He has played a leading role in the development of the "CT-Analyser" software which is a global standard for 3D quantitative morphometry and micro-densitometry. Dr. Salmon is a member of the application team for user support and training at Bruker-microCT, in biomedical applications, as well as research and product development, both hardware and software. He invented the "post-scan" method for movement correction in micro-tomography which is being applied world-wide in micro-tomographic and synchrotron imaging. Outside of the bone field, he has collaborated with scientists at the Massachusetts General Hospital, Boston, USA to investigate possible improvement of breast cancer surgery and pathology assessment by microCT as an alternative to histology. He remains active in research and has authored a comprehensive study of the beam hardening-associated context sensitivity of microCT densitometry, as well as host editing a research topic for the journal "Frontiers in Endocrinology / Bone Research". He makes frequent scientific presentations at international conferences and has published numerous peer-reviewed scientific papers.

HIGHER EDUCATION

BSc degree: Biology with Oceanography, Southampton University, UK, 1986.

MSc degree: Applied Fish Biology, Plymouth Polytechnic, UK, 1987.

MSc degree: Radiations in Industry, The Environment and Medicine, St. Andrews University, Scotland, UK, 1990.

PhD degree: Development of a biokinetic-dosimetric model for ²¹⁰Pb and ²¹⁰Po: methodological issues and biological implications, Bristol University, UK, 1998.

SELECTED PUBLICATIONS

1. Salmon, P. L., Henshaw, D. L., Keitch, P. A., Allen, J. E., & Fews, A. P. (1994). TASTRAK spectroscopy of polonium-210 alpha-particle activity at bone surfaces: evidence for a concentrated surface deposit less than 3 µm deep. *Radiation research*, 140(1), 63-71.
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11. Salmon, P. L., & Sasov, A. Y. (2007). Application of nano-CT and high-resolution micro-CT to study bone quality and ultrastructure, scaffold biomaterials and vascular networks. In *Advanced Bioimaging Technologies in Assessment of the Quality of Bone and Scaffold Materials* (pp. 323-331). Springer Berlin Heidelberg.
12. Salmon PL. Micro-CT 3D image analysis techniques for orthopedic applications: metal implant-to-bone contact surface and porosity of biomaterials. In: *A practical manual for musculoskeletal research*, Eds. Leung KS, Qin YX, Feng JQ, Qin L. World Scientific Publishing, 2008. ISBN-13 978-981-270-610-2.
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28. Editor of research topic in the journal *Frontiers in Endocrinology / Bone Research*, entitled: “Putting the ‘why’ back into bone ‘architecture’” (2014) <http://journal.frontiersin.org/researchtopic/2650/putting-the-why-back-into-bone-architecture>
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