
PRIV.-DOZ. DR. MED. DENT. RALF SCHULZE



PERSONAL DATA

Date of Birth	13th of April 1966 in Munich, Germany
Marrietal Status	not married, in permanent relationship, two children
Home Address	Kiebitzweg 2 D-83024 Rosenheim, Germany Phone: +49 (0) 6131 373818, Work: +49 (0) 6131 173744 Mail: rschulze@mail.uni-mainz.de

UNIVERSITY STUDIES

UNDERGRADUATE STUDIES

1987 – 1993	Dentistry Ludwig-Maximilians-University of Munich, Germany
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POSTGRADUATE STUDIES

01/09/1994 - 31/10/1997	Postgraduate training in Oral Surgery at the Department of Oral and Maxillofacial Surgery, Otto-von-Guericke-University, Magdeburg, Germany (This postgraduate Education in Germany includes a training in Oral Radiology)
10/12/1997	Final exam in Oral Surgery (German Title: Zahnarzt-Oralchirurgie)

DISSERTATION THESIS

24/10/1995	Title: "Periimplant structures at Frialit-implants made from Al ₂ O ₃ -Ceramik"; Ludwig-Maximilians-University Munich
Grade:	"magna cum laude"

HABILITATION

04/05/2006	Title: "Projection analysis including novel developments to determine the imaging geometry in digital (dental) radiographs"; Johannes Gutenberg-University of Mainz, Germany
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WORK EXPERIENCE

2000 – today	Administrative Head of the Section for Oral Radiology, Johannes Gutenberg-University of Mainz, Germany
1997 – 2000	Senior Assistant, Dept. of Oral Surgery (and Oral Radiology), Johannes Gutenberg-University of Mainz, Germany
1994 – 1997	Junior Assistant (postgraduate Ed.), Dept. of Head and Neck Surgery, Otto-von-Guericke-University of Magdeburg, Germany
12/1993 – 05/1994	Elective period as dental surgeon in Kingston, Jamaica; Dental Health Programm of the Lions Club of St. Andrews, Kingston, Jamaica
06/1993 – 11/1994	Assistant Dental Surgeon, Private Dental Office, Fürstentfeldbruck, Germany

OTHER RESEARCH ACTIVITIES

PATENTS

2006	Schulze, R.: DE 101 45 861: Ein radiologisches Verfahren zur Ermittlung der Winkelbeziehung zwischen Objekt und Bildrezeptor in der Rechtwinkeltechnik
2009	Schulze, R, Roeder F. DE102 00 901 7905.4 (PCT/EP/2010/002387): International Patent Application by the Johannes Gutenberg-University: Holding-device and system for assessment of the angle between tooth- and receptor-axis in intraoral dental radiography.

REVIEWER ACTIVITIES

- The Angle Orthodontist
- American Journal of Orthodontics and Dentofacial Orthopedics
- Medical Science Monitor
- Dentomaxillofacial Radiology
- Clinical Oral Investigations
- Oral Surgery Oral Medicine Oral Pathology Oral Radiology and Endodontics
- Occasionally Associate Editor for Submissions for „Medical Physics“
- Journal of Dental Research

OTHER SCIENTIFIC ACTIVITIES

- June 2010 Elected as Vice President of the European Academy of Dentomaxillofacial Radiology (EADMFR)
- 2010 Symposium Organizer for the 88th General Session & Exhibition of the IADR, Barcelona, Spain. Title "Cone Beam CT: Radiation Doses, Current Indications and Future Clinical Applications"
- January 2010 Associate Editor of the Journal "Dentomaxillofacial Radiology";
- 2009 Nomination as candidate for Editor in Chief position from 2011 (Current Editor in Chief: Sharon L Brooks)
- 2009 Member of the Scientific Board of the 17th International Congress of Dentomaxillofacial Radiology, Amsterdam, The Netherlands
- 2009 President of the Diagnostic Sciences Group of the International Association for Dental Research (IADR)
- August 2009 Principal Author of the official AWMF-(Association of the Scientific Medical Societies in Germany) Guideline "Cone Beam Computed Tomography (CBCT)"; Dtsch Zahnärztl Z, Volume 64, pp 490 -496, 2009; (see also <http://www.sedentext.eu/> > National Guidance on CBCT > German Documentation)
- Since 2008 Expert Member of the Advisory Service for Oral Radiographic Diagnostics of the German Society of Dental, Oral and Craniomandibular Sciences (DGZMK)
- Since 2006 Chairman of the DIN Standardization Committee NA 014-00-08 AA „Technical Guidelines for the Acquisition of Dental Radiographs“
- Since 2004 Expert-Member in several Committees of the "Deutsches Institut für Normung" (German Organization for Standardization: DIN) in the subject Oral Radiology

OFFICIAL RESEARCH GRANTS

- 2009 – 2012 Research Grant (FHProfund) German Ministry of Education and Research (BMBF):
258000€
- 2006 University Research Fund (Johannes Gutenberg-University of Mainz).
18000€
- 2003 – 2005 Deutsche Forschungsgemeinschaft DFG (German Research Foundation). Grant No: SCHU1496/1-2:
38424,92€
- 2002 – 2003 Deutsche Forschungsgemeinschaft DFG (German Research Foundation). Grant No: SCHU1496/1-1:
19154,68€

Note: The two DFG research grants (SCHU1496/1-1 and SCHU1496/1-2) were granted to myself only (as indicated by the letters "SCHU" in the Grant numbers). They were used to found and build up an interdisciplinary research group (RSM3D, see www.rsm3d.de) together with the Institute for Computer Sciences (Prof. Dr. E. Schoemer) of the Johannes Gutenberg-University, which was later (2006) joined by the Institute for Computer Science (Prof. Dr. U. Schwanecke) of the University of Applied Sciences, Wiesbaden Rüsselsheim Geisenheim (new name since 1/10/2009). The projects thereafter were all collaborative projects initiated and applied for by the executive committee of RSM3D group (Prof. Dr. Schoemer, Prof. Dr. Schwanecke, myself).

SCIENTIFIC PUBLICATIONS IN PEER-REVIEWED SCIENTIFIC JOURNALS

1. Roeder F, v Rechenberg I, d'Hoedt B, Schulze R K: Spatial relation between a rigid (digital) intraoral x-ray receptor and longitudinal axes of maxillary teeth. *Clin Oral Investig*. 2010 May 25. [Epub ahead of print]
2. Bruellmann DD, Seelge M, Schoemer E, Schulze R K, Schwanecke U. Alignment of cone beam computed tomography data using intra-oral fiducial markers. *Comp Med Imag Graph*, 2010 23rd April. [Epub ahead of print].
3. Schulze R K W, Grimm, S, Schulze D, Voss K, Keller H.-P., Wedel M. Diagnostic yield of ink-jet prints from digital radiographs for the assessment of approximal carious lesions: ROC-analysis. *Eur J Radiol*, 23rd February 2010. [Epub ahead of print]
4. Kühl S; Krummenauer F, Daggassan-Berndt, D, Lambrecht T J, d'Hoedt B, Schulze R K W. Ink-jet printout of radiographs on transparent film and glossy paper versus monitor display: a ROC-analysis. *Clin Oral Invest* 2010 März 20 [Epub ahead of print]
5. Roeder F, d'Hoedt B, Schulze R.: Ex Vivo Radiographic Tooth Length Measurements with the Reference Sphere Method (RSM). *Clin Oral Invest* 2009 15th October[Epub ahead of print].
6. Dranischnikow E, Schwanecke U, Schulze R., Bruellman D, Schoemer E.: A parallel approach for alignment of multi-modal grid-based data. *Proc IADS 2009*, in Print
7. Schulze R.K.W., Berndt D., d'Hoedt B. On Cone-Beam Computed Tomography artifacts induced by titanium implants. *Clin Oral Impl Res*, Volume 21, pp. 100-107, 2010
8. Groß D., Heil U., Schulze R., Schoemer E., Schwanecke U. GPU-based volume reconstruction from very few arbitrarily aligned x-ray images. *SIAM J Sci Comp*, Volume 31, pp. 4204-4221, 2009
9. Schulze R.: Pose determination of a cylindrical (dental) implant in 3D from a single 2D radiograph. *Dentomaxillofac Radiol*, Volume 39, pp. 33-41, 2009
10. Schulze, R.; Richter, A.; d'Hoedt B.: Wavelet and Discrete Cosine Transform-Compression of digital radiographs for the detection of subtle proximal caries: ROC-analysis; *Caries Res*, Volume 42, pp. 334-339, 2008
11. Schulze, R.; Heil, U.; Weinheimer, O.; Gross, D.; Bruellmann, D.; Thomas, E.; Schwanecke, U.; Schoemer, E.: Accurate registration of random radiographic projections based on three spherical references for the purpose of few-view 3D reconstruction; *Med Phys*, Volume 35, pp. 546-555, 2008
12. Schulze, R.; Schulze, D.; Voss, K.; Rottner, M.; Keller, H.-P.; Dollmann, K.; Maager, B.; Wedel, M.: Quality of individually calibrated customary printers for assessment of typical dental diagnoses on glossy paperprints: a multicenter pilot study; *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*, Volume 106, pp. 578-586, 2008
13. Grassl, U., Schulze, R. K. W.: In vitro perception of low-contrast features in digital, film, and digitized dental radiographs: A receiver operating characteristic analysis. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*, Volume 103, pp. 694-701, 2007
14. Schulze, R.; Weinheimer, O.; Bruellmann, D.D.; Röder, F.; d'Hoedt, B.; Schoemer, E.: Software for automated application of a reference-based method for a posteriori determination of the effective radiographic imaging geometry; *Dentomaxillofac Radiol*, Volume 34, pp. 205-211, 2005
15. Willershausen, B., Tekyatan, H., Schulze, R., Briseño, B.: Bestimmung und Bedeutung von Wurzelkanalkrümmungen und Längenverhältnissen von OK-Prämolaren. *Dtsch Zahnärztl Z*, Volume 60, pp. 87-90, 2005
16. Schulze, R.; Bruellmann, D.; Röder, F.; d'Hoedt, B.: Determination of projection geometry from quantitative assessment of the distortion of spherical references in single-view projection radiography; *Med Phys*, Volume 31, pp. 2849-2854, 2004
17. Schulze, R.; Nackat, D.; d'Hoedt, B.: In vitro caries detection on D-, E-, and F-speed radiographic films; *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*, Volume 97, pp. 529-534, 2004
18. Schulze, R.; d'Hoedt, B.: Wurzelwachstum nach Weisheitszahntransposition. Falldokumentation mit Vorschlag einer radiologischen Methode zur Wachstumsquantifizierung; *Mund Kiefer GesichtsChir*, Volume 7, pp. 279-282, 2003

SCIENTIFIC PUBLICATIONS (PEER-REVIEWED JOURNALS – CONTINUED)

19. Schulze, R.; Gloede, M.; Doll, G.: Landmark identification on direct digital versus film-based cephalometric radiographs: A human skull study; *Am J Orthod Dentofac Orthop*, Volume 122, pp. 635-642, 2002
20. Schulze, R.; Rosing, S.; d'Hoedt, B.: Contrast perception in digitized panoramic radiographs compared to their film based origin; *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*, Volume 94, pp. 388-394, 2002
21. Schulze, R.; d'Hoedt, B.: A method to calculate angular disparities between object and receptor in „paralleling technique“; *Dentomaxillofac Radiol*, Volume 31, pp. 32-38, 2002
22. Schulze, R.; Curic, D.; d'Hoedt, B.: B-mode versus A-mode ultrasonographic measurements of mucosal thickness in vivo; *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*, Volume 93, pp. 110-117, 2002
23. Schulze, R.; Curic, D.; d'Hoedt, B.: Entwicklung eines Vorlaufstrecken-Prototyps zur intraoralen Anwendung von B-Scan Sonographie; *Dtsch. Zahnärztl. Z* Volume 56, pp. 379-381, 2001
24. 1.Schulze, R., Ćurić, D., d'Hoedt, B.: Untersuchungen am Schweinekiefermodell zur Präzision von Schleimhautdickenmessung mittels B-Scan-Sonographie. *Dtsch Zahnärztl Z*, Volume 56, pp. 485 -489, 2001
25. Schulze, R.; d'Hoedt, B.: Mathematical analysis of projection errors in „paralleling technique“ with respect to implant geometry; *Clin Oral Implant Res*, Volume 12, pp. 364-371, 2001
26. Schulze, R.; Schalldach, F.; d'Hoedt, B.: Auswirkung von Positionierungsfehlern auf Vergrößerungsfaktoren im Unterkiefer bei der digitalen Panoramaschichtaufnahme; *Mund Kiefer GesichtsChir*, Volume 4, pp. 164-170, 2001
27. Gnoth, S.-H., Schulze, R., Pitton, M. B., Malkusch, W.: Dreidimensionale Rekonstruktion von Kieferabschnitten durch B-Scan-Ultraschallbilder im In-vitro-Modell. *Dtsch. Zahnärztl Z*, Volume 56, pp 126-128, 2001
28. Buff, S., Al-Nawas, B., Hohlfelder, M., Schulze, R., Grötz, K. A., Maurer, M., d'Hoedt, B., Wagner, W.: Therapie-relevante mikrobiologische Unterschiede bei der Antibiotikatherapie von submukösen und Logenabszessen. *Dtsch Zahnärztl Z*, Volume 56, pp. 335-338, 2001
29. Schulze, R.; Krummenauer, F.; Schalldach, F.; d'Hoedt, B.: Precision and accuracy of measurements in digital panoramic radiography; *Dentomaxillofac Radiol*, Volume 29, pp. 52-56, 2000
30. Willershausen, B., Briseño Marroquin, B., Schäfer, D., Schulze, R.: Cytotoxicity of Root Canal Filling Materials to Three Different Human Cell Lines. *J Endod*, Volume 26, pp. 703-707, 2000
31. Kreisler, M., Schulze, R., Schalldach, F., d'Hoedt, B., Behneke, A., Behneke, N.: A new method for the radiological investigation of residual ridge resorption in the maxilla. *Dentomaxillofac Radiol*, Volume 29, pp. 368-375, (2000)
32. Willershausen, B., Schäfer, D., Pistorius, A., Schulze, R., Mann, W.: Influence of Resin-Based Restoration Materials on Cytotoxicity in Gingival Fibroblasts. *Eur J Med Res*, Volume 4, pp. 149-155, 1999
33. Muesebeck, J., Schulze, R., Steinbicker, V., Wieacker, P.: Juvenile Parodontopathie bei Ehlers-Danlos-Syndrom Typ VIII. *Monatsschr Kinderheilk*, Volume 146, pp. 20-22, 1998
34. Schulze, R., Gerlach, K. L.: Kiefergelenkbeschwerden -Überweisung in eine Fachklinik? *Dtsch Zahnärztl Z*, Volume 52, pp. 196-198, 1997

BOOK
CHAPTERS

- 2009 Chapter VII: 3D Reconstructions from Few Projections in Oral Radiology. In: Dental Computing and Applications. Advanced Techniques for Clinical Dentistry. Ed: Daskalaki, A.; IGI Global, Hershey, New York, USA
- 2008 Chapter 30: Digital Radiography. In: Textbook of Oral Radiology. Ed: Anil Govindrao Ghom, ELSEVIER, Reed Elsevier India Private Ltd, New Dehli, India
- 2003 Spitta DentVisuell - Die Foliensammlung für die optimale Patientenaufklärung (in German). Spitta Verlag, Balingen