




**SCHOOL OF MICROELECTRONIC ENGINEERING  
UNIVERSITI MALAYSIA PERLIS (UNIMAP)**

	<p><b>NAZUHUSNA BINTI KHALID</b> 26 NOVEMBER 1983 PhD – RF MEMS' M Eng MEMS, B Eng. (Honours) - Microelectronic Engineering</p>
<p>No. 24, Jalan Dua, Taman Repoh Ceria, 01000 Kangar, Perlis.</p>	<p>School of Microelectronic Engineering University Malaysia Perlis (UNIMAP)</p>
<p><b>Current Position: Lecturer</b></p>	
<p><b>Specialization Area: RF MEMS</b></p>	
<p><b>Memberships of Professional Bodies:</b></p> <ul style="list-style-type: none"> <li>• IEEE</li> <li>• BEM</li> </ul>	
<p><b>Administrative Posts Held</b></p>	<p>Former Programme Chairperson (Electronic Engineering) (2013-2015) Industrial Training Program Coordinator (Present)</p>
<p><b>Courses Taught</b></p>	<ol style="list-style-type: none"> <li>1. SEM 1 2018/2019: EMT116 Electronic Devices</li> <li>2. SEM 2 2017/2018: EMT 283 Analogue Electronic II</li> <li>3. SEM 1 2017/2018: EQT101 Engineering Mathematics I</li> <li>4. SEM 2 2016/2017: EMT 283 Analogue Electronic II</li> <li>5. SEM 1 2016/2017: EQT101 Engineering Mathematics I</li> <li>6. SEM 2 2015/2016: EMT 283 Analogue Electronic II</li> <li>7. SEM 1 2015/2016: EMT 282 Principle of Engineering Materials</li> <li>8. SEM 2 2014/2015: EMT 283 Analogue Electronic II</li> <li>9. SEM 1 2014/2015: EMT 478 Instrumentation</li> <li>10. SEM 2 2013/2014: Integrated Design Project</li> <li>11. SEM 1 2013/2014: Mathematic for Technology Engineering (PQT 111)</li> <li>12. SEM 2 2012/2013: EMT 292/293 (Signal Analysis)</li> <li>13. SEM 2 2012/2013: DMT 121 (Electronic devices)</li> <li>14. SEM 1 2012/2013: DMT 354 (Introduction to Control system)</li> <li>15. SEM 1 2012/2013 : EET 111 (Electric Circuits 1)</li> <li>16. SEM 2 2008/2009 : EKT 222 (Microprocessor System)</li> </ol>

<b>IC Design software used</b>	Mentor Graphic Cadence Coventor Comsol Multiphysic MATLAB AWR	
<b>FPGA Design software used</b>	Altera HFSS	
<b>Chip Designed and Fabricated</b>	Transistor	
<b>Research &amp; Development</b>	<b>Research Grant</b>	Research Acculturation Grant Scheme (RAGS) (RM41,000)
	<b>Publications</b>	<p><b>Books</b></p> <ol style="list-style-type: none"> <li>1. Book Chapter : <b>“Electronic Circuits and Systems: Design and Applications (Design of 10 GHz LC-Voltage Controller Oscillator), 2016”</b>.</li> </ol> <p><b>Papers</b></p> <ol style="list-style-type: none"> <li>1. Ramli M.M., Isa S.S.M., Jamlos M.F., Murad S.A.Z., Isa M.M., Kasjoo S.R., Ahmad N., Nor N.I.M., <u>Khalid N.</u> <b>“Few-layers graphene oxide for NO2 gas sensor on plastic”</b>, ”, AIP Conference Proceedings, 2017.</li> <li>2. Isa S.S.M., Ramli M.M., Jamlos M.F., Hambali N.A.M.A., Isa M.M., Kasjoo S.R., Ahmad N., Nor N.I.M., <u>Khalid N.</u>, <b>“Multi-walled carbon nanotubes plastic NH3 gas sensor”</b>, AIP Conference Proceedings, 2017.</li> <li>3. Ramli M.M., Isa S.S.M., Hambali N.A.M.A., Isa M.M., Kasjoo S.R., Nor N.I.M., Ahmad N., <u>Khalid N.</u>, Murad S.A.Z., Isa M.N., <b>“Carbon nanotubes based hydrogen sensor on paper using Langmuir-Blodgett technique”</b>, 3rd International Conference on Electronic Design, ICED 2016.</li> <li>4. Muda M.R., Ramli M.M., Isa S.S.M., Jamlos M.F., Murad S.A.Z., Norhanisah Z., Isa M.M., Kasjoo S.R., Ahmad N., Nor N.I.M., <u>Khalid N.</u>, <b>” Study of different 3-aminopropyl triethoxysilane (APTES) concentration on TiO2 particles based IDE for cervical cancer detection”</b>, AIP Conference Proceedings, 2017.</li> <li>5. Isa M.M., Ahmad N., Mat Isa S.S., Ramli M.M., <u>Khalid N.</u>, Nor N.I.M., Kasjoo S.R., Missous M., <b>“Gate recess study for high thermal stability pHEMT devices”</b>, EPJ Web of Conferences, 2017.</li> </ol>

		<ol style="list-style-type: none"> <li>6. Nor N.I.M., Osman R.A.M., Idris M.S., <u>Khalid N.</u>, Mohamad Isa M., Ahmad N., Mat Isa S.S., Ramli M.M., Kasjoo S.R.," <b>The influence of design parameters on the performance of FBAR in 10-14 GHz</b>", EPJ Web of Conferences, 2017.</li> <li>7. Wan Mohamed W.M., Maulat Osman R.A., Idris M.S., <u>Khalid N.</u>, Mohd Nor N.I.," <b>Structural and electrical properties of Li<sub>2</sub>AlMn<sub>3</sub>O<sub>8</sub></b>", EPJ Web of Conferences, 2017.</li> <li>8. <u>N. Khalid</u>, N.I.M Nor, Siti S. Mat Isa; Muhammad M. Ramli; M. Mohamad Isa; N. Ahmad; Shahrir R. Kasjoo, "<b>The Design and Optimisation of the Square and Circular Inductor using MEMS Technology</b>", ICED 2016.</li> <li>9. S. R. Kasjoo, A. K. Singh, S. S. Mat Isa, M. M. Ramli, M. Mohamad Isa, N. Ahmad, N. I. Mohd Nor, <u>N. Khalid</u>, and A. M. Song, "<b>Zero-bias microwave detectors based on array of nanorectifiers coupled with a dipole antenna</b>," <i>Solid-State Electronics</i>, vol. 118, pp. 36-40, 2016.</li> <li>10. S. R. Kasjoo, M. M. Ramli, M. M. Isa, S. S. M. Isa, <u>N. Khalid</u>, N. I. M. Noor, N. Ahmad, and A. K. Singh, "<b>Hysteresis in a field-effect device based on an exfoliated thin film of few-layer graphene</b>," in <i>International Conference on Microelectronics, Computing and Communication, MicroCom 2016</i>.</li> <li>11. S. S. M. Isa, M. M. Ramli, N. A. M. A. Hambali, S. R. Kasjoo, M. M. Isa, N. I. M. Nor, <u>N. Khalid</u>, and N. Ahmad, "<b>Adsorption Properties and Potential Applications of Bamboo Charcoal: A Review</b>," in <i>MATEC Web of Conferences, 2016</i>.</li> <li>12. S. R. Kasjoo, A. K. Singh, S. S. Mat Isa, M. M. Ramli, M. Mohamad Isa, N. Ahmad, N. I. Mohd Nor, N. Khalid, and A. M. Song, "<b>Zero-bias microwave detectors based on array of nanorectifiers coupled with a dipole antenna</b>," <i>Solid-State Electronics</i>, vol. 118, pp. 36-40.</li> <li>13. N. I. M. Nor, N. Khalid, R. A. M. Osman, and Z. Sauli, "<b>Estimation of material damping coefficients of AlN for film bulk acoustic wave resonator</b>," in <i>Materials Science Forum</i>. vol. 819, pp. 209-214.</li> <li>14. Vairavan, R., Sauli, Z., Retnasamy, V., <u>Khalid, N.</u>, Anwar, K., Abdullah, N. <b>Natural heat convection analysis on cylindrical Al slug of LED</b> (2014) <i>Applied Mechanics and Materials</i> 487 PP. 536 - 539 doi: 10.4028/www.scientific.net/AMM.487.536</li> <li>15. Sauli, Z., Retnasamy, V., Fuad, F.A.A., Ehkan, P., Rajendaran, V., <u>Nazuhusna, K.</u> <b>5mm × 5mm sized slug on high power LED</b></li> </ol>
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		<p><b>stress and junction temperature analysis</b>  (2013) <i>Applied Mechanics and Materials</i> 404 PP. 460 - 464  doi: 10.4028/www.scientific.net/AMM.404.460</p> <p>16. Sauli, Z., Retnasamy, V., Vairavan, R., Ismail, R.C., <u>Khalid, N.</u>, Husin, M.F.C., Kamarudin, H.  <b>Stress and temperature simulation using copper-diamond composite slug</b>  (2013) <i>Proceedings - UKSim 15th International Conference on Computer Modelling and Simulation, UKSim 2013</i> PP. 299 - 303 Cited 3 times. doi: 10.1109/UKSim.2013.151</p> <p>17. Sauli, Z., Retnasamy, V., Vairavan, R., Haimi, W.M.W.N., Kamarudin, H., Yih, N.F., <u>Khalid, N.</u>  <b>Solid state lighting stress and junction temperature evaluation on operating power</b>  (2013) <i>Proceedings - UKSim 15th International Conference on Computer Modelling and Simulation, UKSim 2013</i> PP. 290 - 293 Cited 4 times. doi: 10.1109/UKSim.2013.127.</p> <p>18. <u>N. Khalid</u>, K. Shah, J. Singh, et al., "<b>Design and analysis of a 10GHz VCO using MEMS inductor</b>", accepted for publication in SPIE Symposium on SPIE Smart Structures and Materials + Non-destructive Evaluation and Health Monitoring (Active and Passive Smart Structures and Integrated Systems VI), March 2012.</p> <p>19. Nor, N.I.M., Shah, K., Singh, J., <u>Khalid, N.</u>, Sauli, Z.  <b>Design and analysis of film bulk acoustic wave resonator in Ku-band frequency for wireless communication</b>  (2012) <i>Proceedings of SPIE - The International Society for Optical Engineering</i> 8341 Cited 1 times.  doi: 10.1117/12.915042</p> <p>20. <u>Khalid, N.</u>, Shah, K., Singh, J., Le, H.P., Devlin, J., Sauli, Z.  <b>A very high Q-factor inductor using MEMS technology</b>  (2010) <i>Proceedings of SPIE - The International Society for Optical Engineering</i> 7646  doi: 10.1117/12.848686</p> <p>21. <u>Khalid, N.</u>, Singh, J., Le, H.P., Shah, K., Devlin, J., Sauli, Z.  <b>Very high Q, NEMS inductor for 12GHz wireless sensor applications</b>  (2010) <i>Proceedings - 5th IEEE International Symposium on Electronic Design, Test and Applications, DELTA 2010</i> PP. 319 - 324  doi: 10.1109/DELTA.2010.45</p> <p>22. <u>Khalid, N.</u>, Singh, J., Le, H.P., Devlin, J., Sauli, Z.  <b>A very high Q-factor inductor using MEMS</b></p>
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		<p><b>technology</b>  (2009) <i>1st Asia Pacific Conference on Postgraduate Research in Microelectronics and Electronics, PrimeAsia 2009</i> PP. 77 - 80 Cited 4 times.  doi: 10.1109/PRIMEASIA.2009.5397444</p> <p>23. Shah, K., <u>Khalid, N.</u>, Singh, J., Le, H.P., Devlin, J., Sauli, Z.  <b>Fully on-chip high Q inductors based on microtechnologies</b>  (2009) <i>Nanotechnology 2009: Fabrication, Particles, Characterization, MEMS, Electronics and Photonics - Technical Proceedings of the 2009 NSTI Nanotechnology Conference and Expo, NSTI-Nanotech 2009</i> 1 PP. 542 - 545</p>
	<p><b>Exhibitions &amp; Awards</b></p>	<p>1. N. Khalid, J. Singh, H. P. Le, et al., "A Very High Q-Factor Inductor Using MEMS Technology," in Asia Pacific Conference on Postgraduate Research in Microelectronics &amp; Electronics - <b>Bronze Leaf Certificate</b></p>