



**VILNIAUS UNIVERSITETO
FIZIKOS FAKULTETO TARYBA**

**NUTARIMAS
DĖL PROFESORIAUS REMIGIJAUŠ GAŠKOS KANDIDATŪROS Į VILNIAUS
UNIVERSITETO GARBĖS DAKTARUS TEIKIMO**

Vadovaudamasi Vilniaus universiteto Statutu, Vilniaus universiteto emeritūros, afiliacijos ir garbės vardų nuostatais ir Fizikos fakulteto nuostatais, Vilniaus universiteto Fizikos fakulteto taryba

n u t a r i a teikti Vilniaus universiteto Senatui prof. Remigijaus (Remio) Gaškos kandidatūrą Vilniaus universiteto garbės daktaro vardui.

Name: Dr. Remigijus (Remis) GASKA, Ph.D. (remis.gaska@gmail.com)

WORK EXPERIENCE:

04/2017 – Present UVTON, Inc., 432 Press Lindler Road, Columbia, SC 29212

President and CEO

02/2015 – 06/2017 Sensor Electronic Technology, Inc., 110 Atlas Court, Columbia, SC 29209

Chief Advisor to the President and CEO

07/00 – 01/2015 Sensor Electronic Technology, Inc. (SETi), 1195 Atlas Road, Columbia, SC

President and CEO

- Awards to Foreign Scientists, Republic of Lithuania 2015
- Tibbetts Award for contribution to small business development in the U.S. 2012
- National Science Award of Republic of Lithuania 2009;
- SPIE Prism Award for best innovation in Optics and Photonics in 2008;
- SETi, Inc. was named a success story by the Defence Advanced Research Project Agency (DARPA) in 2007 and by the Department of Defence in 2018;
- SETi, Inc. became a technology leader and first commercial supplier of semiconductor-based deep ultraviolet light emitting diodes and sources in 2004;

01/99 – 06/01 Department of ECSE, Rensselaer Polytechnic Institute, Troy, NY

Research Associate Professor

- Research of advanced Wide-Band-Gap III-Nitride semiconductor materials and devices;
- Development of a new technology platform for A_2B_6 and A_4B_6 compound semiconductors-based 2D and 3D electronic and optoelectronic devices on flexible substrates and threads

08/96 - 12/98 APA Optics, 2950 NE 84th Lane, Blaine, MN 55449

R & D Program Manager

- High power III-Nitride based Transistors, Piezoelectric and pyroelectric sensors for high temperature applications, GaN photodetectors, integrated AlGaIn/GaN Photodetector/Amplifier circuits, U.S. Office of Naval Research (ONR)
- Second best compound semiconductor device development worldwide in 1997: world's first high power GaN-based transistor on SiC

01/96 - 08/96 Department of Electrical Engineering, University of Virginia, Charlottesville, VA

Research Associate

- Design, fabrication and characterisation of first InGaAs/GaAs/AlGaAs quantum well lasers with lateral current injection. Authorised user of National Nanofabrication Network
- Modelling of interconnects in Active Matrix Liquid Crystal Displays

08/92 - 12/95 Department of ECE, Wayne State University, Detroit, MI

Graduate Teaching and Research Assistant, Thomas C. Rumble Fellow

1981 - 1992 Vilnius University, Vilnius, Lithuania
Junior Research Fellow, Senior Research Fellow

EDUCATION:

1996 Wayne State University, Detroit, MI
 Ph. D. in Electrical Engineering
1988 Vilnius University, Vilnius, Lithuania
 Ph. D. in Physics

PUBLICATIONS: Over 500 technical publications and conference presentations, first book on Solid State Lighting and more than 200 patents

MEMBERSHIP: Senior Member IEEE, Life Member SPIE

Laudacija

siūlymui suteikti Vilniaus universiteto garbės daktaro vardą

dr. Remigijui Gaškai

Vilniaus universiteto Fizikos fakulteto absolventas, FiDi12 pirmininkas Remigijus Gaška Fizikos mokslų daktaro (PhD) laipsnį gavo 1988 m. Vilniaus universitete. Po doktorantūros JAV universitete *Wayne State University* jam buvo suteiktas elektronikos inžinerijos PhD laipsnis (1996 m.). 1998 m. jis sukūrė pirmus pasaulyje didelės galios GaN tranzistorius. Po sėkmingos akademinės karjeros JAV universitetuose *University of Virginia* ir *Rensselaer Polytechnic Institute* (RPI), jis tapo RPI atžalinės įmonės *Sensor Electronic Technology, Inc.*, pirmosios pasaulyje firmos, sukūrusios ir pramoniniu mastu pradėjusios gaminti gilaus ultravioleto šviestukus (LEDs) pramoniniams, kariniams ir komerciniams taikymams, bendrasteigėjas, prezidentas ir vykduojantis direktorius. JAV Gynybos Departamentas paskelbė *Sensor Electronic Technology, Inc.* sėkmės istorija technologinių inovacijų srityje 2008 m. ir 2019 m.. Su bendraautoriais paskelbė virš 360 mokslinių straipsnių (cituoti virš 11800 kartų, *Hirsh* rodiklis $H = 61$), gavo virš 200 JAV ir tarptautinių patentų. Jam suteiktos *International Society for Optics and Photonics* premija *The Best Innovation in Optics Award* (2008), *Tibbets Award* (2012, įteikta Baltuosiuose Rūmuose), Lietuvos mokslo premija (2009), Lietuvos mokslo premija užsienio lietuviams mokslininkams (2015). Šiuo metu jis yra JAV startuolio UVTON, Inc., steigėjas, prezidentas ir vykduojantis direktorius.

Nuo 2000 m. nominantas skatino Lietuvoje trečiosios grupės nitridinių puslaidininkinių tyrimus, tiems tyrimams teikė tuo metu priešakinius parametrus siekiančius bandinius. Tai sudarė sąlygas Lietuvoje plėtoti medžiagų, perspektyvių panaudoti regimojoje ir ultravioletinėje srityje emituojančių šviestukų kūrimui, tyrimus bei šios naujos apšvietimo technologijos taikymus daržininkystėje, meno kūrinių apšvietime ir kitose nišinėse prietaikose bei tobulinant šviestukinio apšvietimo sistemas didžiausioje šviestukų rinkoje – bendrajame apšvietime. Bendradarbiavimas su dr. R. Gaška Lietuvos mokslininkams padėjo gauti NATO ir JAV Gynybos departamento tyrimų programų projektus. Šis bendradarbiavimas stimulavo bent trijų startuolių atsiradimą Lietuvoje. Ši tematika atsispindėjo formuojant Saulėtekio slėnio tyrimų kryptis, dr. R. Gaška daug padėjo šiame slėnyje kuriant trečiosios grupės nitridinių puslaidininkinių auginimo technologinę bazę ir kuriant eksperimentinius kompleksus šių medžiagų bei jų darinių charakterizavimui.

Atliekant bendrus su dr. R. Gaška tyrimus, virš 15 Lietuvos mokslininkų ir studentų po keletą mėnesių ar ilgiau dirbo JAV RPI ir Pietų Karolinos universitetuose. Su bendraautoriais iš VU Fizikos fakulteto dr. R. Gaška yra paskelbęs daugiau nei 110 straipsnių, pacituotų daugiau nei 2100 kartų, ir pateikęs keletą patentų. Dr. R. Gaškai pakvietus į RPI VU prof. A. Žukauską buvo parašyta pirmoji pasaulyje jo, prof. A. Žukausko ir RPI profesoriaus M. Shur knyga apie šviestukinį apšvietimą *Solid-State Lighting*, kuri yra išversta ir į kinų kalbą.

Nuo 2013 m. dr. R. Gaška kasmet finansuoja premijas dviem VU Fizikos fakulteto studentams, parengusiems geriausius bakalauro studijų baigiamuosius darbus.

VILNIAUS UNIVERSITETAS

Remis Gaška
(*pareigos, vardas, pavardė*)

Visų mokslinių publikacijų
S A R A Š A S

STRAIPSNIAI

recenzuojamuose mokslo leidiniuose, referuojamuose ir
turinčiuose citavimo indeksą duomenų bazėje „Thomson Reuters Web of Knowledge“

1. Podlipskas, Z., Aleksiejunas, R., Nargelas, S., Jurkevicius, J., Mickevicius, J., Kadys, A., Tamulaitis, G., Shur, M.S., Shatalov, M., Yang, J.W., Gaska, R., „Photomodification of carrier lifetime and diffusivity in AlGaIn epitaxial layers“, *Current Applied Physics*, V. 16, 2016. DOI: 10.1016/j.cap.2016.03.010
2. Podlipskas, Z., Aleksiejunas, R., Kadys, A., Mickevicius, J., Jurkevicius, J., Tamulaitis, G., Shur, M., Shatalov, M., Yang, J., Gaska, R., „Dependence of radiative and nonradiative recombination on carrier density and Al content in thick AlGaIn epilayers“, *Journal Of Physics D-Applied Physics*, V. 49, 2016, DOI: 10.1088/0022-3727/49/14/145110
3. Mickevicius, J., Tamulaitis, G., Jurkevicius, J., Shur, M.S., Shatalov, M., Yang, J., Gaska, R., „Efficiency droop and carrier transport in AlGaIn epilayers and heterostructures“, *Physica Status Solidi B-Basic Solid State Physics*, V. 252, 2015. DOI: 10.1002/pssb.201451542
4. R. Gaska, M. Gaevski, R. Jain, M. Islam, G. Simin, and M. Shur, Novel AlInN/GaN Integrated Circuits operating up to 500 °C, *SSE*, V. 113, 2015. DOI: <https://doi.org/10.1016/j.sse.2015.05.007>
5. Mickevicius, J., Podlipskas, Z., Aleksiejunas, R., Kadys, A., Jurkevicius, J., Tamulaitis, G., Shur, M.S., Shatalov, M., Yang, J., Gaska, R., „Nonradiative Recombination, Carrier Localization, and Emission Efficiency of AlGaIn Epilayers with Different Al Content“, *Journal Of Electronic Materials*, V. 44, 2015. DOI: 10.1007/s11664-015-4132-7
6. Mickevicius, J., Jurkevicius, J., Kadys, A., Tamulaitis, G., Shur, M., Shatalov, M., Yang, J., Gaska, R., „Low-temperature redistribution of non-thermalized carriers and its effect on efficiency droop in AlGaIn epilayers“, *Journal Of Physics D-Applied Physics*, V. 48, 2015. DOI: 10.1088/0022-3727/48/27/275105
7. Mickevicius, J., Jurkevicius, J., Kadys, A., Tamulaitis, G., Shur, M., Shatalov, M., Yang, J., Gaska, R., „Temperature-dependent efficiency droop in AlGaIn epitaxial layers and quantum wells“, *AIP Advances*, V. 6, 2016. 045212 DOI: 10.1063/1.4947574
8. T. Saxena and M. Shur, S. Nargelas, J. Mickevicius, O. Kravcov, and G. Tamulaitis, M. Shatalov, J. Yang, and R. Gaska, “Carrier lifetime spectra in high aluminum content AlGaIn epitaxial layers”, *Journal of Applied Physics*, V. 118, 2015. DOI: <https://doi.org/10.1063/1.4929499>
9. Ž. Podlipskas, R. Aleksiejūnas, A. Kadys, J. Mickevicius, J. Jurkevicius, G. Tamulaitis, M. Shur, M. Shatalov, J. Yang, and R. Gaska, “Dependence of

- radiative and non-radiative recombination on carrier density and Al content in thick AlGa_N epilayers”, *Journal of Physics D: Applied Physics*, V. 49, 2016. DOI: 10.1088/0022-3727/49/14/145110.
10. Saxena, T., Shur, M., Nargelas, S., Podlipskas, Z., Aleksiejunas, R., Tamulaitis, G., Shatalov, M., Yang, J.W., Gaska, R., „Dynamics of nonequilibrium carrier decay in AlGa_N epitaxial layers with high aluminum content“, *Optics Express*, V. 23, 2015. DOI: 10.1364/OE.23.019646.
 11. Saxena, T., Nargelas, S., Mickevicius, J., Kravcov, O., Tamulaitis, G., Shur, M., Shatalov, M., Yang, J., Gaska, R., „Spectral dependence of carrier lifetime in high aluminum content AlGa_N epitaxial layers“, *Journal Of Applied Physics*, V. 118, 2015. DOI: 10.1063/1.4929499
 12. S. Marcinkevičius, R. Jain, M. Shatalov, J. Yang, M. Shur, and R. Gaska, High spectral uniformity of AlGa_N with a high Al content evidenced by scanning near-field photoluminescence spectroscopy, *Appl. Phys. Lett.* 105, 241108 (2014); <http://dx.doi.org/10.1063/1.4904710>
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 21. M. Gaevski, Jianyu Deng, A. Dobrinsky, R. Gaska, M. Shur, and G. Simin, Static and transient characteristics of Ga_N power HFETs with low-conducting coating, *Phys. Status Solidi C* 11, No. 3–4, 866–870 (2014) / DOI 10.1002/pssc.201300541
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DETALŪS METADUOMENYS

Dokumento sudarytojas (-ai)	Fizikos fakultetas, tel. 2366000, faks. 2366003, Saulėtekio al. 9, III rūmai, LT-10222 Vilnius, el. p.: ff@ff.vu.lt
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