

東北大学 電気通信研究所
研究室外部評価 参考資料
(2013 年度-2018 年度)

**Research Laboratory Reference Data
for External Review**

April 2013 – March 2019
(FY. 2013–2018)

**Research Institute of Electrical Communication
Tohoku University**

応用量子光学研究室

Applied Quantum Optics

分野や研究室の事情に合わせて、エビデンスとなる資料を下の例に従ってまとめてください。

1. 研究成果 / Research Achievements

(1) 査読付学術論文 / Refereed journal papers

1. T. Yamamoto, T. Saikai, E. Yamada, and H. Yasaka, "Tailored Optical Frequency Comb Block Generation using InP-based Mach-Zehnder Modulator," *IEICE Transactions on Electronics*, vol. E97-C, No. 3, pp. 222-224, 2014. (Mar.)
2. S. Mieda, S. Shiratori, W. Kobayashi, and H. Yasaka, "High Bandwidth Operation of Optically Controlled Semiconductor Laser with External Cavity," *IEEE Photonics Technology Letters*, vol. 26, No. 23, pp. 2319-2322, 2014. (Dec.) / DOI 10.1109/LPT.2014.2354672
3. K. Aoyama, R. Yoshioka, N. Yokota, W. Kobayashi, and H. Yasaka, "Experimental Demonstration of Linewidth Reduction of Laser Diode by Compact Coherent Optical Negative Feedback System," *Applied Physics Express*, vol. 7, p. 122701, 2014. (Dec.) / DOI 10.7567/APEX.7.122701
4. K. Aoyama, R. Yoshioka, N. Yokota, W. Kobayashi, and H. Yasaka, "Optical Negative Feedback for Linewidth Reduction of Semiconductor Lasers," *IEEE Photonics Technology Letters*, vol. 27, No. 4, pp. 340-343, 2015. (Feb.) / DOI 10.1109/LPT.2014.2371074
5. S. Mieda, S. Shiratori, N. Yokota, W. Kobayashi, and H. Yasaka, "Ultra-high-speed Operation of Laser Diode by Cross-gain Modulation using External Cavity," *Applied Physics Express*, vol. 8, No. 2, 022701, 2015. (Feb.) / DOI 10.7567/APEX.8.022701
6. S. Mieda, S. Shiratori, N. Yokota, W. Kobayashi, and H. Yasaka, "Intra-cavity Loss Modulation for Ultra-High-Speed Direct Modulation Lasers Based on Photon-Photon Resonance," *Applied Physics Express*, vol. 8, No. 8, 082701, 2015. (Jul.) / DOI:10.7567/APEX.8.082701
7. N. Yokota, T. Miki, K. Abe, and H. Yasaka, "Nonlinearity of Semiconductor Mach-Zehnder Modulator for Flat Optical Frequency Comb," *IEEE Photonics Technology Letters*, vol. 27, No. 21, pp. 2219-2221, 2015. (Nov.) / DOI 10.1109/LPT.2015.2457429
8. N. Yokota, K. Abe, S. Mieda, and H. Yasaka, "Harmonic superposition for tailored optical frequency comb generation by Mach-Zehnder modulator," *Optics Letters*, vol. 41, No. 5, pp. 1026-1029, 2016. (Mar.) / DOI 10.1364/OL.41.001026
9. S. Mieda, N. Yokota, W. Kobayashi, and H. Yasaka, "Ultra-Wide-Bandwidth Optically-Controlled DFB Laser with External Cavity," *IEEE Journal of Quantum Electronics*, vol. 52, No. 6, p. 2200107, 2016. (June) / DOI 10.1109/JQE.2016.2557489
10. N. Yokota and H. Yasaka, "Operation Strategy of InP Mach-Zehnder Modulators for Flat Optical Frequency Comb Generation," *IEEE Journal of Quantum Electronics*, vol. 52, No. 8, p. 5200207, 2016. (August) / DOI 10.1109/JQE.2016.2583921
11. S. Mieda, N. Yokota, R. Isshiki, W. Kobayashi, and H. Yasaka, "Frequency response control of semiconductor laser by using hybrid modulation scheme," *Optics Express*, vol. 24, No. 22, pp. 25824-25831, 2016. (October) / DOI 10.1364/OE.24.025824
12. N. Yokota, R. Takeuchi, H. Yasaka, and K. Ikeda, "Lasing Polarization Characteristics in 1.55- μm Spin-Injected VCSELs," *IEEE Photonics Technology Letters*, vol. 29, No. 9, pp. 711-714, 2017. (May) / DOI 10.1109/LPT.2017.2681129
13. N. Yokota, R. Igarashi, and H. Yasaka, "Optical Nyquist pulse generation by using a dual-electrode Mach-Zehnder modulator," *Optics Letters*, vol. 42, No. 9, pp. 1856-1859, 2017. (May) / DOI 10.1364/OL.42.001856
14. K. Aoyama, N. Yokota, and H. Yasaka, "3-kHz Spectral Linewidth Laser Assembly with Coherent Optical Negative Feedback," *IEEE Photonics Technology Letters*, vol. 30, No. 3, pp. 277-280, 2018. (Feb.) / DOI 10.1109/LPT.2017.2783365
15. M. Kanno, S. Mieda, N. Yokota, W. Kobayashi, and H. Yasaka, "Chirp Control of Semiconductor Laser by using Hybrid Modulation (**invited**)," *IEICE Transactions on Electronics*, vol. E101-C, No. 7, pp. 561-565, 2018. (July) / DOI 10.1587/transle.E101.C.561
16. K. Aoyama, N. Yokota, and H. Yasaka, "Strategy of optical negative feedback for narrow linewidth semiconductor lasers," *Optics Express*, vol. 26, No. 16, pp. 21159-21169, 2018. (Aug.) / DOI 10.1364/OE.26.021159
17. N. Yokota, K. Nisaka, H. Yasaka, and K. Ikeda, "Spin polarization modulation for high-speed

vertical-cavity surface-emitting lasers," Applied Physics Letters, vol. 113, Issue 17, 171102, 2018. (Oct.) / DOI 10.1063/1.5040914

18. K. Aoyama, S. Kobayashi, M. Wada, N. Yokota, T. Kita, and H. Yasaka, "Compact narrow linewidth optical negative feedback laser with Si optical filter," Applied Physics Express, vol. 11, No. 11, 112703, 2018. (Nov.) / DOI 10.7567/APEX.11.112703
- (2) 原著論文と同等に扱う査読付国際会議発表論文
Full papers in refereed conference proceedings equivalent to journal papers
none
- (3) 査読付国際会議 / Papers in refereed conference proceedings
1. T. Saikai, T. Yamamoto, E. Yamada, and H. Yasaka, "Flat-top Optical Frequency Comb Block Generation using InP-based Mach-Zehnder Modulator," The 25th International Conference on Indium Phosphide and Related Materials (IPRM2013), MoD3-3, May, 2013. (Kobe, Hyogo, 20-23 May)
 2. S. Mieda, S. Shiratori, N. Yokota, W. Kobayashi, and H. Yasaka, "High-speed Optically Controlled Semiconductor Light Source with an External Cavity," 2014 International Topical Meeting on Microwave Photonics (MWP) jointly held with the 2014 9th Asia-Pacific Microwave Photonics Conference (APMP), TueB-6, Oct., 2014. (Sapporo, Hokkaido, 20-23, Oct.)
 3. K. Aoyama, R. Yoshioka, N. Yokota, W. Kobayashi, and H. Yasaka, "Narrow-linewidth Laser Diode with Compact Optical-feedback System," 2014 International Topical Meeting on Microwave Photonics (MWP) jointly held with the 2014 9th Asia-Pacific Microwave Photonics Conference (APMP), TuEA-2, Oct., 2014. (Sapporo, Hokkaido, 20-23, Oct.)
 4. N. Yokota, T. Miki, K. Abe, E. Yamada, and H. Yasaka, "Numerical Analysis for Optical Frequency Comb Generated by Semiconductor Mach-Zehnder Modulator," The 20th OptoElectronics and Communications Conference (OECC 2015), JWeC.23, June/July, 2015. (Shanghai, China, 28 June – 2 July)
 5. S. Mieda, S. Shiratori, N. Yokota, W. Kobayashi, and H. Yasaka, "Gently-sloped Small Signal Response by Intra-cavity Loss Modulation," The 20th OptoElectronics and Communications Conference (OECC 2015), JTUA.24, June/July, 2015. (Shanghai, China, 28 June – 2 July)
 6. H. Yasaka, K. Aoyama, and N. Yokota, "Phase Noise Reduction in Semiconductor Lasers by Optical Negative Feedback (**Invited**)," SPIE Photonics Europe 2016, Semiconductor Lasers and Laser Dynamics, 9892-12, April, 2016. (Brussels, Belgium, 3-7, April)
 7. S. Mieda, N. Yokota, W. Kobayashi, and H. Yasaka, "Ultra-high-speed semiconductor light source for next-generation optical communication system (**Invited**)," The 2016 EMN Beijing Meeting, Optoelectronic Material and Devices I, April, 2016. (Beijing, China, 22-25, April)
 8. N. Yokota, K. Abe, S. Mieda, R. Igarashi, and H. Yasaka, "Tailoring of Optical Frequency Comb Shape by Harmonic Signal Superposition in Mach-Zehnder Modulator," Conference on Lasers and Electro-Optics (CLEO2016), SF1G.4, June, 2016. (San Jose, CA, 5-10, June)
 9. S. Mieda, N. Yokota, W. Kobayashi, and H. Yasaka, "Transmission Performance Improvement of Semiconductor Lasers by Hybrid Modulation Scheme," The 28th International Conference on Indium Phosphide and Related Materials (IPRM2016), ThD1-7, June, 2016. (Toyama, Japan, 26-30, June)
 10. S. Mieda, R. Isshiki, N. Yokota, W. Kobayashi, and H. Yasaka, "Tailoring of Semiconductor Laser's Frequency Response by Hybrid Modulation Scheme," The 25th International Semiconductor Laser Conference (ISLC2016), WE23, September, 2016. (Hyogo, Japan, 12-15, September)
 11. K. Aoyama, S. Kobayashi, M. Wada, N. Yokota, and H. Yasaka, "Stable and Narrow Linewidth Semiconductor Laser Assembly with Coherent Optical Negative Feedback," Conference on Lasers and Electro-Optics (CLEO2017), JTU5A.101, May, 2017. (San Jose, CA, 14-19, May)
 12. N. Yokota, K. Nisaka, H. Yasaka and K. Ikeda, "High-Speed Modulation of 1.55- μm VCSELs with Spin Polarization Modulation," Conference on Lasers and Electro-Optics (CLEO2018), STU3Q.2, May, 2018. (San Jose, CA, 13-18, May)
 13. N. Yokota, H. Yasaka, K. Sugiyasu, and H. Takahashi, "Motion Tolerance for Dynamic Object Recognition Using Visible Light IDs," 2018 IEEE 7th Global Conference on Consumer

Electronics (GCCE2018), PAW23, October, 2018. (Nara, Japan, 9-12, October)

(4) 査読なし国際会議・シンポジウム等 / Papers in conference proceedings

1. H. Yasaka, "Study on Integrated Semiconductor Laser Source (**Invited**)," 3rd RLE-RIEC Meeting on Research Collaboration in Photonics, pp. 31-40, Sep., 2013. (Boston, Massachusetts, 30 Sep.-1 Oct.)
2. H. Yasaka, K. Aoyama, R. Yoshioka, and N. Yokota, "Compact Narrow Linewidth Semiconductor Laser Source (**Invited**)," 4th RIEC-RLE Meeting on Research Collaboration in Photonics, pp. 206-213, July, 2014. (Sendai, Miyagi, 1-2, July)
3. K. Aoyama, R. Yoshioka, N. Yokota, and H. Yasaka, "Compact Narrow Linewidth Semiconductor Laser Source," 4th RIEC-RLE Meeting on Research Collaboration in Photonics, p. 245, July, 2014. (Sendai, Miyagi, 1-2, July)
4. S. Mieda, S. Shiratori, N. Yokota, and H. Yasaka, "High-speed Semiconductor Laser for Next Gen. Ethernet (**Invited**)," 2015 MIT-Tohoku Univ. Student Meeting on Research Collaboration in Photonics and Electronics, pp. 103-112, March, 2015. (Boston, Massachusetts, 17-18 Mar.)
5. N. Yokota and H. Yasaka, "Flat Optical Frequency Comb Generated by Semiconductor Mach-Zehnder Modulator (**Invited**)," 6th RIEC-RLE Meeting on Research Collaboration in Photonics, pp. 293-305, Oct., 2015. (Sendai, Miyagi, 26-27, Oct.)
6. H. Yasaka, M. Kanno, S. Mieda and N. Yokota, "Frequency Response Control of Semiconductor Laser toward Ultra-High-Speed Operation (**Invited**)," RIEC International Symposium on Photonics and Optical Communications (ISPOC2017), Presentation (2), pp. 57-66, October, 2017. (Sendai, Japan, 25-26, October)
7. N. Yokota and H. Yasaka, "Lasing polarization characteristics in spin-injected InAlGaAs VCSELs," RIEC International Symposium on Photonics and Optical Communications (ISPOC2017), C-5, p. 237, October, 2017. (Sendai, Japan, 25-26, October)
8. K. Aoyama, N. Yokota, and H. Yasaka, "Stable operation of narrow linewidth semiconductor lasers with coherent optical negative feedback," RIEC International Symposium on Photonics and Optical Communications (ISPOC2017), C-6, p. 238, October, 2017. (Sendai, Japan, 25-26, October)

(5) 総説・解説 / Review articles

1. 八坂洋、"CLEO2013 ショート速報[光デバイス]"、(財)光産業技術振興協会、国際会議速報、H25 - No. 15、2013年7月10日。

H. Yasaka, "Prompt report of CLEO2013 [Photonic Devices]," Optoelectronic Industry and Technology Promotion Association, H25 - No. 15, 2013.

(6) 査読付国内会議 / Refereed proceedings in domestic conferences

none

(7) 査読なし国内研究会・講演会 / Proceedings in domestic conferences

1. 吉岡龍一、古舘一樹、八坂洋、"光フィルタを用いた狭線幅半導体レーザ光源"、2013年電子情報通信学会ソサイエティ大会、C-4-36、2013。(福岡、9/17-9/20)

R. Yoshioka, K. Furutate and H. Yasaka, "Narrow linewidth semiconductor laser integrated with external optical filter," The 2013 IEICE Society Conference, C-4-36, 2013.

2. 三枝慈、齊藤陽介、石原啓樹、小林亘、八坂洋、"光制御型パッシブフィードバックレーザの周波数応答特性"、2013年電子情報通信学会ソサイエティ大会、C-4-37、2013。(福岡、9/17-9/20)

S. Mieda, Y. Saito, H. Ishihara, W. Kobayashi and H. Yasaka, "A study on frequency response of optically controlled passive feedback laser," The 2013 IEICE Society Conference, C-4-37, 2013.

3. 八坂洋、吉岡龍一、児玉直紀、青山康之祐、"超小型狭線幅半導体レーザ光源"、東北大学研究所連携プロジェクト 第4期平成25年度成果報告会、P-25、2014。(宮城、2/5)

H. Yasaka, R. Yoshioka, N. Kodama and K. Aoyama, "Ultra-compact narrow spectral linewidth semiconductor laser," Debrief meeting on joint project of laboratories at Tohoku university, p. 25, 2014.

4. 三枝慈、白鳥智史、小林亘、八坂洋、"光制御型 PFL の周波数応答特性 II"、2014 年電子情報通信学会総合大会、C-4-5、2014. (新潟、3/18-3/21)
S. Mieda, S. Shiratori, W. Kobayashi and H. Yasaka, "Frequency response of optically controlled passive feedback laser II," The 2014 IEICE General Conference, C-4-5, 2014.
5. 吉岡龍一、青山康之祐、小林亘、八坂洋、"光フィルタを用いた狭線幅半導体レーザ光源の実験的検証"、2014 年電子情報通信学会総合大会、C-4-17、2014. (新潟、3/18-3/21)
R. Yoshioka, K. Aoyama, W. Kobayashi and H. Yasaka, "Experimental validation of narrow linewidth semiconductor laser with optical filter," The 2014 IEICE General Conference, C-4-17, 2014.
6. 三枝慈、白鳥智史、小林亘、八坂洋、"光制御型パッシブフィードバックレーザの高速化"、IEICE 光エレクトロニクス研究会 (OPE)、2014. (静岡、4/24-4/25)
S. Mieda, S. Shiratori, W. Kobayashi and H. Yasaka, "Bandwidth enhancement of optically controlled passive feedback laser," IEICE OPE Conference, 2014.
7. 三枝慈、白鳥智史、横田信英、小林亘、八坂洋、"数値解析による光制御型 PFL の帯域拡大効果の検証"、2014 年電子情報通信学会ソサイエティ大会、C-4-5、2014. (徳島、9/23-9/26)
S. Mieda, S. Shiratori, N. Yokota, W. Kobayashi and H. Yasaka, "Numerical analysis on response bandwidth of optically controlled passive feedback laser," The 2014 IEICE Society Conference, C-4-5, 2014.
8. 青山康之祐、児玉直紀、横田信英、八坂洋、"光負帰還法を用いた半導体レーザ線幅狭窄化における正帰還の影響"、2014 年電子情報通信学会ソサイエティ大会、C-4-17、2014. (徳島、9/23-9/26)
K. Aoyama, N. Kodama, N. Yokota and H. Yasaka, "Effect of positive feedback on LD linewidth reduction using optical negative feedback," The 2014 IEICE Society Conference, C-4-17, 2014.
9. 八坂洋、"光負帰還による小型狭線幅半導体レーザ光源"、東北大学電気通信研究所-早稲田大学ナノ理工学研究機構 共同プロジェクト S 研究会、2014. (東京、12/3)
H. Yasaka, "Compact narrow spectral linewidth semiconductor laser by using optical negative feedback technology," Debrief meeting on joint project of RIEC-Tohoku Univ. with Research Organization for Nano & Life Innovation-Waseda Univ., 2014.
10. 三枝慈、白鳥智史、横田信英、八坂洋、"外部共振器付与による光制御型利得変調レーザの超高速動作"、東北大学電気通信研究所-早稲田大学ナノ理工学研究機構 共同プロジェクト S 研究会、2014. (東京、12/3)
S. Mieda, S. Shiratori, N. Yokota and H. Yasaka, "Ultra-high speed operation of optically controlled cross gain modulation laser with external cavity," Debrief meeting on joint project of RIEC-Tohoku Univ. with Research Organization for Nano & Life Innovation-Waseda Univ., 2014.
11. 小林宗平、青山康之祐、横田信英、八坂洋、"光負帰還原理を用いた半導体レーザの線幅狭窄化"、東北大学電気通信研究所-早稲田大学ナノ理工学研究機構 共同プロジェクト S 研究会、2014. (東京、12/3)
S. Kobayashi, K. Aoyama, N. Yokota and H. Yasaka, "Spectral linewidth reduction of semiconductor laser by introducing optical negative feedback scheme," Debrief meeting on joint project of RIEC-Tohoku Univ. with Research Organization for Nano & Life Innovation-Waseda Univ., 2014.
12. 三木貴裕、西海健明、阿部晃一郎、横田信英、八坂洋、"半導体マッハツェンダ変調器の非対称駆動による平坦な光周波数コムブロックの生成"、応用物理学会第 69 回東北支部学術講演会、4pA11、2014. (宮城、12/3-12/4)
T. Miki, T. Saikai, K. Abe, N. Yokota and H. Yasaka, "Flat optical comb block generation from semiconductor Mach-Zehnder modulator by introducing asymmetric driving," Tohoku Section Annual Meeting of The Japan Society of Applied Physics, 4pA11, 2014.
13. 三枝慈、白鳥智史、横田信英、小林亘、八坂洋、"外部共振器構造を導入した光制御型利得変調レーザの高速制御"、IEICE レーザ・量子エレクトロニクス研究会 (LQE)、

LQE2014-135, pp. 47-50, 2014. (神奈川、12/19)

S. Mieda, S. Shiratori, N. Yokota, W. Kobayashi and H. Yasaka, "High-speed operation of optically controlled cross-gain-modulation laser with external cavity," IEICE LQE Conference, LQE2014-135, pp. 47-50, 2014.

14. 八坂洋、三枝慈、白鳥智史、横田信英、"超高速光制御型利得変調半導体レーザ光源"、東北大学研究所連携プロジェクト 第4期 平成26年度成果報告会、D-2、2015。(宮城、2/2)

H. Yasaka, S. Mieda, S. Shiratori and N. Yokota, "Ultra-high speed optically controlled cross gain modulation semiconductor laser," Debrief meeting on joint project of laboratories at Tohoku university, D-2, 2015.

15. 横田信英、三木貴裕、阿部晃一郎、八坂洋、"半導体マッハツェンダ変調器の非線形性を用いた平坦な光周波数コムブロック生成"、2015年電子情報通信学会総合大会、C-3-44、2015。(滋賀、3/10-3/13)

N. Yokota, T. Miki, K. Abe and H. Yasaka, "Generation of flat optical frequency comb block using nonlinearity of Mach-Zehnder modulator," The 2015 IEICE General Conference, C-3-44, 2015.

16. 三枝慈、白鳥智史、横田信英、小林亘、八坂洋、"共振器損失直接変調による半導体レーザの高速動作"、2015年電子情報通信学会総合大会、C-4-3、2015。(滋賀、3/10-3/13)

S. Mieda, S. Shiratori, N. Yokota, W. Kobayashi and H. Yasaka, "High-speed operation of semiconductor lasers by direct cavity loss modulation," The 2015 IEICE General Conference, C-4-3, 2015.

17. 青山康之祐、小林宗平、横田信英、小林亘、八坂洋、"光負帰還原理を用いた超小型狭線幅半導体レーザ光源"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2015-2, pp. 7-12, 2015。(石川、5/21-5/22)

K. Aoyama, S. Kobayashi, N. Yokota, W. Kobayashi and H. Yasaka, "Ultra-compact narrow linewidth laser source with optical negative feedback," IEICE LQE Conference, LQE2015-2, pp. 7-12, 2015.

18. 横田信英、三木貴裕、阿部晃一郎、八坂洋、"半導体マッハツェンダ変調器の非線形性を用いた光周波数コム生成 (招待講演)"、電子情報通信学会 超高速光エレクトロニクス研究会 (UFO)、14:15-14:45, 2015。(東京、7/22)

N. Yokota, T. Miki, K. Abe and H. Yasaka, "Optical frequency comb generation by applying nonlinearity in semiconductor Mach Zehnder modulator, (Invited)" IEICE UFO Conference, 14:15-14:45, 2015.

19. 三枝慈、横田信英、小林亘、八坂洋、"共振器内部損失変調による半導体レーザの帯域拡大"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2015-46, pp. 77-80, 2015。(青森、8/27-8/28)

S. Mieda, N. Yokota, W. Kobayashi and H. Yasaka, "Bandwidth enhancement of semiconductor lasers by intra-cavity loss modulation," IEICE LQE Conference, LQE2015-46, pp. 77-80, 2015.

20. 三枝慈、横田信英、八坂洋、"混合変調による半導体レーザの周波数応答特性改善"、2015年電子情報通信学会ソサイエティ大会、C-4-6、2015。(宮城、9/8-9/11)

S. Mieda, N. Yokota and H. Yasaka, "Improvement of the frequency response of semiconductor lasers by hybrid modulation," The 2015 IEICE Society Conference, C-4-6, 2015.

21. 青山康之祐、小林宗平、横田信英、八坂洋、"光負帰還法を用いた狭線幅半導体レーザ光源の位相雑音特性"、2015年電子情報通信学会ソサイエティ大会、C-4-7、2015。(宮城、9/8-9/11)

K. Aoyama, S. Kobayashi, N. Yokota and H. Yasaka, "Phase noise characteristic of optically negative feedback narrow linewidth semiconductor laser," The 2015 IEICE Society Conference, C-4-7, 2015.

22. 横田信英、阿部晃一郎、八坂洋、"半導体マッハツェンダ変調器の非線形位相変調を用いた平坦な光周波数コム生成"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2015-87, pp. 137-140, 2015。(大分、10/29-10/30)

- N. Yokota, K. Abe and H. Yasaka, "Flat optical frequency comb generated by semiconductor Mach-Zehnder modulator assisted by nonlinear phase modulation," IEICE LQE Conference, LQE2015-87, pp. 137-140, 2015.
23. 横田信英、阿部晃一郎、五十嵐稜、八坂洋、"LiNbO₃ マッハツェンダ変調器の高調波重畳変調による超平坦光周波数コム生成"、2016年電子情報通信学会総合大会、C-3-3、2016。(福岡、3/15-3/18)
- N. Yokota, K. Abe, R. Igarashi and H. Yasaka, "Ultra-flat optical frequency comb generated by LiNbO₃ Mach-Zehnder modulator with harmonic superposition," The 2016 IEICE General Conference, C-3-3, 2016.
24. 三枝慈、横田信英、小林亘、八坂洋、"混合変調による直接変調レーザの変調特性制御実験"、2016年電子情報通信学会総合大会、C-4-17、2016。(福岡、3/15-3/18)
- S. Mieda, N. Yokota, W. Kobayashi and H. Yasaka, "Experiment on modulation characteristic control of direct modulation lasers by hybrid modulation," The 2016 IEICE General Conference, C-4-17, 2016.
25. 八坂洋、青山康之祐、横田信英、"光負帰還による単一モード半導体レーザの位相ノイズ低減(招待講演)"、電子情報通信学会 レーザ・量子エレクトロニクス研究会(LQE)、LQE2016-24, pp. 25-30, 2016。(東京、6/17)
- H. Yasaka, K. Aoyama and N. Yokota, "Phase noise reduction of single mode semiconductor laser by optical negative feedback, (Invited)" IEICE LQE Conference, LQE2016-24, pp. 25-30, 2016.
26. 三枝慈、横田信英、小林亘、八坂洋、"共振器損失変調領域を集積した分布帰還型半導体レーザの変調特性制御"、電子情報通信学会 レーザ・量子エレクトロニクス研究会(LQE)、LQE2016-26, pp. 35-39, 2016。(東京、6/17)
- S. Mieda, N. Yokota, W. Kobayashi and H. Yasaka, "Modulation characteristics control of distributed feedback laser with intra-cavity loss modulation," IEICE LQE Conference, LQE2016-26, pp. 35-39, 2016.
27. 五十嵐稜、横田信英、八坂洋、"マッハツェンダ変調器の高調波重畳変調による光ナイキストパルス生成"、電気関係学会東北支部連合大会、2B01, 2016。(宮城、8/30-8/31)
- R. Igarashi, N. Yokota and H. Yasaka, "Optical Nyquist pulse generation by harmonic superposition of Mach Zehnder modulator," 2016 Tohoku-Section Joint Convention of Institutes of Electrical and Information Engineers, Japan, 2B01, 2016.
28. 横田信英、竹内隆太郎、八坂洋、池田和浩、"InAlGaAs 量子井戸面発光レーザにおける発振円偏光度の複屈折依存性"、応用物理学会秋季講演会、14p-C41-6、2016。(新潟、9/13-9/16)
- N. Yokota, R. Takeuchi, H. Yasaka and K. Ikeda, "Birefringence dependence of lasing circular polarization in InAlGaAs QW VCSEL," Autumn Meeting of JSAP, 14p-C41-6, 2016.
29. 横田信英、五十嵐稜、八坂洋、"マッハツェンダ変調器を用いた Raised-cosine 型光周波数コム生成"、2016年電子情報通信学会ソサイエティ大会、C-3-40、2016。(北海道、9/20-9/23)
- N. Yokota, R. Igarashi and H. Yasaka, "Raised-cosine-shaped optical frequency comb generated by Mach-Zehnder modulator," The 2016 IEICE Society Conference, C-3-40, 2016.
30. 青山康之祐、小林宗平、和田理志、横田信英、北智洋、八坂洋、"光負帰還半導体レーザ光源用反射型 Si リングフィルタ"、2016年電子情報通信学会ソサイエティ大会、C-4-6、2016。(北海道、9/20-9/23)
- K. Aoyama, S. Kobayashi, M. Wada, N. Yokota, T. Kita and H. Yasaka, "Design of Si ring filter for optical negative feedback semiconductor laser source," The 2016 IEICE Society Conference, C-4-6, 2016.
31. 横田信英、竹内隆太郎、八坂洋、池田和浩、"スピン制御面発光レーザにおける発振円偏光度の複屈折依存性"、電子情報通信学会 レーザ・量子エレクトロニクス研究会(LQE)、LQE2016-127, pp. 127-130, 2017。(三重、1/18-1/19)
- N. Yokota, R. Takeuchi, H. Yasaka and K. Ikeda, "Effect of birefringence on lasing circular polarization in spin-controlled vertical-cavity surface-emitting lasers," IEICE LQE Conference,

- LQE2016-127, pp. 127-130, 2017.
32. 横田信英、五十嵐稜、八坂洋、"マッハツェンダ変調器を用いた光ナイキストパルス発生における制御性と直交性の数値解析評価"、2017年電子情報通信学会総合大会、C-3-5、2017。(名古屋、3/22-3/25)
N. Yokota, R. Igarashi and H. Yasaka, "Controllability and orthogonality analysis of optical Nyquist pulse generated by a Mach-Zehnder modulator," The 2017 IEICE General Conference, C-3-5, 2017.
 33. 三枝慈、横田信英、早崎嘉高、一色竜杜、小林亘、八坂洋、"混合変調法による半導体レーザーの変調特性制御 (依頼講演)"、2017年電子情報通信学会総合大会、C-4-1、2017。(名古屋、3/22-3/25)
S. Mieda, N. Yokota, Y. Hayasaki, R. Issiki, W. Kobayashi and H. Yasaka, "Modulation characteristic control for semiconductor lasers by hybrid modulation scheme, (Invited)" The 2017 IEICE General Conference, C-4-1, 2017.
 34. 青山康之祐、小林宗平、横田信英、八坂洋、"光源系一体化による光負帰還狭線幅レーザーの長期安定化"、2017年電子情報通信学会総合大会、C-4-2、2017。(名古屋、3/22-3/25)
K. Aoyama, S. Kobayashi, N. Yokota and H. Yasaka, "Stability enhancement by assembled optical negative feedback laser," The 2017 IEICE General Conference, C-4-2, 2017.
 35. 横田信英、小向知也、八坂洋、"EA変調器による符号化方式を用いたナイキスト型時分割多重光源の検討"、2017年電子情報通信学会ソサイエティ大会、C-3-26、2017。(東京、9/12-9/15)
N. Yokota, K. Komukai and H. Yasaka, "Nyquist optical time division multiplexing laser source coded by using EA modulator," The 2017 IEICE Society Conference, C-3-26, 2017.
 36. 青山康之祐、伊藤千真、横田信英、北智洋、八坂洋、"反射型Siリングフィルタを用いた光負帰還狭線幅半導体レーザー光源の実験的検証"、2017年電子情報通信学会ソサイエティ大会、C-4-4、2017。(東京、9/12-9/15)
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 37. 菅野光成、三枝滋、横田信英、八坂洋、"混合変調を用いた半導体レーザーのチャープ制御"、2017年電子情報通信学会ソサイエティ大会、C-4-9、2017。(東京、9/12-9/15)
M. Kanno, S. Mieda, N. Yokota and H. Yasaka, "Chirp control using hybrid modulation in semiconductor laser," The 2017 IEICE Society Conference, C-4-9, 2017.
 38. 横田信英、小向知也、八坂洋、"半導体レーザーを用いた光ナイキストパルス符号化方式の検討"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2017-59, pp. 93-96, 2017。(熊本、10/26-10/27)
N. Yokota, K. Komukai and H. Yasaka, "Coded optical Nyquist pulse generation using modulated semiconductor lasers," IEICE LQE Conference, LQE2017-59, pp. 93-96, 2017.
 39. 三枝慈、横田信英、小林亘、八坂洋、"[奨励講演] 混合変調法による分布帰還型半導体レーザーの変調特性制御"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2017-85, pp. 1-4, 2017。(東京、12/15)
S. Mieda, N. Yokota, W. Kobayashi and H. Yasaka, "Hybrid modulation scheme for modulation characteristics control of distributed feedback laser," IEICE LQE Conference, LQE2017-85, pp. 1-4, 2017.
 40. 青山康之祐、横田信英、北智洋、八坂洋、"Siリングフィルタをハイブリット集積した小型光負帰還狭線幅半導体レーザー光源"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2017-118, pp. 111-114, 2018。(兵庫、1/25-1/26)
K. Aoyama, N. Yokota, T. Kita and H. Yasaka, "Coherent optical negative feedback narrow linewidth semiconductor laser integrated with Si ring filter," IEICE LQE Conference, LQE2017-118, pp. 111-114, 2018.
 41. 八坂洋、青山康之祐、横田信英、"光負帰還狭線幅半導体レーザー光源 (招待講演)"、レーザー学会学術講演会 第38回年次大会、G526pIX06, 2018。(京都、1/24-1/26)

- H. Yasaka, K. Aoyama and N. Yokota, "Narrow linewidth semiconductor laser with optical negative feedback (Invited)," The Laser Society of Japan 38th Annual Meeting, G526pIX06, 2018.
42. 横田信英、二坂薫平、八坂洋、池田和浩、"電子スピン偏極変調による InAlGaAs 面発光半導体レーザの高速動作 (注目公演)"、応用物理学会春季学術講演会、18a-B203-5, 2018. (東京、3/17-3/20)
- N. Yokota, K. Nisaka, H. Yasaka and K. Ikeda, "Response of electron spin polarization modulation in InAlGaAs VCSELs," Spring Meeting of JSAP, 18a-B203-5, 2018.
43. 横田信英、八坂洋、"過渡イメージングに向けた光ファイバ型等時間間隔多波長パルス光源の検討"、応用物理学会春季学術講演会、20a-P2-13, 2018. (東京、3/17-3/20)
- N. Yokota and H. Yasaka, "Fiber-based equal time interval multi-wavelength pulsed laser for transient imaging," Spring Meeting of JSAP, 20a-P2-13, 2018.
44. 菅野光成、三枝慈、横田信英、石井啓之、八坂洋、"混合変調レーザにおける高速変調時のチャープ特性"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2018-15, pp. 21-24, 2018. (福井、5/24-5/25)
- M. Kanno, S. Mieda, N. Yokota, H. Ishii and H. Yasaka, "Chirp characteristics of hybrid modulation laser under high speed modulation," IEICE LQE Conference, LQE2018-15, pp. 21-24, 2018.
45. 横田信英、小向知也、八坂洋、"注入同期による SSB 変調光周波数コム of 広帯域・高 S/N 化"、2018 年電子情報通信学会ソサイエティ大会、C-3-53, 2018. (金沢、9/11-9/14)
- N. Yokota, K. Komukai and H. Yasaka, "Wideband, high-S/N optical frequency comb generation based on SSB modulation using injection locking of semiconductor laser," The 2018 IEICE Society Conference, C-3-53, 2018.
46. 横田信英、二坂薫平、池田和浩、八坂洋、"高速化に向けた面発光レーザの電子スピン偏極変調特性"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2018-61, pp. 47-50, 2018. (佐賀、10/18-10/19)
- N. Yokota, K. Nisaka, K. Ikeda and H. Yasaka, "Characteristics of spin polarization modulation in VCSELs for high-speed operation," IEICE LQE Conference, LQE2018-61, pp. 47-50, 2018.
47. 横田信英、小向知也、吉田真人、八坂洋、"相互注入同期半導体レーザを用いた IQ 信号生成法の検討"、2019 年電子情報通信学会総合大会、C-4-5, 2019. (東京、3/19-3/22)
- N. Yokota, K. Komukai, M. Yoshida and H. Yasaka, "IQ signal generation using mutually injection-locked semiconductor lasers," The 2019 IEICE General Conference, C-4-5, 2019.
- (8) 著書 / Books
1. Hiroshi Yasaka and Yasuo Shibata, "Fiber Optic Communication: Key Devices," 2nd Edition Chapter 8, "Semiconductor-Based Modulators," DOI 10.1007/978-3-319-42367-8, ISBN 978-3-319-42367-8 (eBook), ISBN 978-3-319-42365-4 (Hard Cover) pp. 359-416, Springer-Verlag (Berlin, Heidelberg), 2017. (2017/3/1)
- (9) 特許 / Patents
1. 狩野文良、八坂洋、「波長切り替え半導体光源」、特許第 5305412 号 (登録日 2013.07.05)
F. Kano and H. Yasaka, "Wavelength switching semiconductor light source," Patent No. 5305412 (Japan)
2. 狩野文良、八坂洋、「半導体光変調器」、特許第 5704646 号 (登録日 2015.03.06)
F. Kano and H. Yasaka, "Semiconductor optical modulator," Patent No. 5704646 (Japan)
3. 山崎裕幸、八坂洋、「半導体レーザ光源」、特許出願 2015-189410、出願日 2015 年 9 月 28 日 / PCT 出願、PCT/JP2016/004339、国際出願日 2016 年 9 月 26 日、特願 2017-542740 (平成 29 年 9 月 22 日)

- H. Yamazaki and H. Yasaka, "Semiconductor laser source," Apply No. 2015-189410 (Japan), PCT Application No. PCT/JP2016/004339.
4. 小林亘、八坂洋、「集積型半導体光源」、特許第 6083644 号 (登録日 2017.02.03)
W. Kobayashi and H. Yasaka, "Integrated semiconductor light source," Patent No. 6083644 (Japan)
 5. 石井啓之、大磯義孝、八坂洋、「半導体レーザ光源」、特許出願 2018-119530、出願日 2018 年 6 月 25 日
H. Ishii, Y. Ooiso and H. Yasaka, "Semiconductor laser source," Apply No. 2018-119530 (Japan)
 6. 小林亘、八坂洋、「半導体レーザ光源」、特許第 6452198 号 (登録日 2018.12.21)
W. Kobayashi and H. Yasaka, "Semiconductor laser source," Patent No. 6452198 (Japan)

(10) 招待講演 / Invited Talks

1. H. Yasaka, "Study on Integrated Semiconductor Laser Source (**Invited**)," 3rd RLE-RIEC Meeting on Research Collaboration in Photonics, pp. 31-40, Sep., 2013. (Boston, Massachusetts, 30 Sep.-1 Oct.)
2. H. Yasaka, K. Aoyama, R. Yoshioka, and N. Yokota, "Compact Narrow Linewidth Semiconductor Laser Source (**Invited**)," 4th RIEC-RLE Meeting on Research Collaboration in Photonics, pp. 206-213, July, 2014. (Sendai, Miyagi, 1-2, July)
3. S. Mieda, S. Shiratori, N. Yokota, and H. Yasaka, "High-speed Semiconductor Laser for Next Gen. Ethernet (**Invited**)," 2015 MIT-Tohoku Univ. Student Meeting on Research Collaboration in Photonics and Electronics, pp. 103-112, March, 2015. (Boston, Massachusetts, 17-18 Mar.)
4. 横田信英、三木貴裕、阿部晃一郎、八坂洋、「半導体マッハツェンダ変調器の非線形性を用いた光周波数コム生成 (**招待講演**)」、電子情報通信学会 超高速光エレクトロニクス研究会 (UFO)、14:15-14:45, 2015. (東京、7/22)
N. Yokota, T. Miki, K. Abe and H. Yasaka, "Optical frequency comb generation by applying nonlinearity in semiconductor Mach Zehnder modulator, (**Invited**)" IEICE UFO Conference, 14:15-14:45, 2015.
5. N. Yokota and H. Yasaka, "Flat Optical Frequency Comb Generated by Semiconductor Mach-Zehnder Modulator (**Invited**)," 6th RIEC-RLE Meeting on Research Collaboration in Photonics, pp. 293-305, Oct., 2015. (Sendai, Miyagi, 26-27, Oct.)
6. H. Yasaka, K. Aoyama, and N. Yokota, "Phase Noise Reduction in Semiconductor Lasers by Optical Negative Feedback (**Invited**)," SPIE Photonics Europe 2016, Semiconductor Lasers and Laser Dynamics, 9892-12, April, 2016. (Brussels, Belgium, 3-7, April)
7. S. Mieda, N. Yokota, W. Kobayashi, and H. Yasaka, "Ultra-high-speed semiconductor light source for next-generation optical communication system (**Invited**)," The 2016 EMN Beijing Meeting, Optoelectronic Material and Devices I, April, 2016. (Beijing, China, 22-25, April)
8. 八坂洋、青山康之祐、横田信英、「光負帰還による単一モード半導体レーザの位相ノイズ低減 (**招待講演**)」、電子情報通信学会 レーザ・量子エレクトロニクス研究会(LQE)、LQE2016-24, pp. 25-30, 2016. (東京、6/17)
H. Yasaka, K. Aoyama and N. Yokota, "Phase noise reduction of single mode semiconductor laser by optical negative feedback, (**Invited**)" IEICE LQE Conference, LQE2016-24, pp. 25-30, 2016.
9. 三枝慈、横田信英、早崎嘉高、一色竜杜、小林亘、八坂洋、「混合変調法による半導体レーザの変調特性制御 (**依頼講演**)」、2017 年電子情報通信学会総合大会、C-4-1、2017. (名古屋、3/22-3/25)
S. Mieda, N. Yokota, Y. Hayasaki, R. Issiki, W. Kobayashi and H. Yasaka, "Modulation characteristic control for semiconductor lasers by hybrid modulation scheme, (**Invited**)" The 2017 IEICE General Conference, C-4-1, 2017.
10. H. Yasaka, M. Kanno, S. Mieda and N. Yokota, "Frequency Response Control of Semiconductor Laser toward Ultra-High-Speed Operation (**Invited**)," RIEC International Symposium on Photonics and Optical Communications (ISPOC2017), Presentation (2), pp. 57-66, October, 2017. (Sendai, Japan, 25-26, October)

11. 三枝慈、横田信英、小林亘、八坂洋、"[奨励講演] 混合変調法による分布帰還型半導体レーザーの変調特性制御"、電子情報通信学会 レーザ・量子エレクトロニクス研究会 (LQE)、LQE2017-85, pp. 1-4, 2017. (東京、12/15)
S. Mieda, N. Yokota, W. Kobayashi and H. Yasaka, "Hybrid modulation scheme for modulation characteristics control of distributed feedback laser," IEICE LQE Conference, LQE2017-85, pp. 1-4, 2017.
12. 八坂洋、青山康之祐、横田信英、"光負帰還狭線幅半導体レーザー光源 (招待講演)"、レーザー学会学術講演会 第38回年次大会、G526pIX06, 2018. (京都、1/24-1/26)
H. Yasaka, K. Aoyama and N. Yokota, "Narrow linewidth semiconductor laser with optical negative feedback (Invited)," The Laser Society of Japan 38th Annual Meeting, G526pIX06, 2018.

2. 学会活動 / Activities in academic societies

(1) 学会役員等の活動 / Activities on committees of academic societies

1. 電子情報通信学会エレクトロニクスソサイエティ 副会長 (編集出版担当)
IEICE Electronics Society Vice-president (publishing)
2011/05/23 - 2013/5/30

(2) 学術的国際会議の企画・運営

Planning and organizing academic international conferences.

1. 25th International Conference on Indium Phosphide and Related Materials (IPRM2013)
2013/05/20-2013/05/23 @Kobe, Japan
Technical Program Committee Member on Optoelectronics and Related Processing Technologies
2012/04/02-2013/05/31
2. 2013 Conference on Lasers and Electro-Optics (CLEO2013)
2013/06/09-2013/06/14 @San Jose, California, USA
Technical Program Committee Member on Components, Integration, Interconnects and Signal Processing (S&I 09)
2012/06/01-2013/06/30
3. 2014 International Topical Meeting on Microwave Photonics / The 9th Asia-Pacific Microwave Photonics Conference (MWP/APMP2014)
2014/10/20-2014/10/23 @Sapporo, Japan
Committee Member, Local Arrangements
2013/03/12-2014/12/30
4. 28th International Conference on Indium Phosphide and Related Materials (IPRM2016)
2016/06/26-2016/06/30 @Toyama, Japan
Technical Program Committee Member on Optoelectronics and Related Processing Technologies
2015/10/01-2016/09/30
5. 2016 International Semiconductor Laser Conference (ISLC2016)
2016/09/12-2016/09/15 @Kobe, Japan
国内実行委員会委員 Domestic Executive Committee member
2015/05/19-2016/12/30

(3) 学術論文誌の編集・査読 / Editor and reviewer for academic journals.

1. IEEE Photonics Journal / Review (2013.05.24)

2. Optics Express / Review (2013.05.24)
3. Journal of Vacuum Science & Technology / Review (2013.06.28)
4. IEEE Photonics Technology Letters / Review (2013.07.22)
5. Optics Express / Review (2013.10.16)
6. Applied Physics Express / Review (2013.10.28)
7. IEICE Transaction C / Review (2013.11.19)
8. Applied Physics Express / Review (2013.12.05)
9. Japanese Journal of Applied Physics / Review (2013.12.09)
10. Optics Express / Review (2014.01.27)
11. IEICE Transaction C / Review (2015.01.31)
12. Optics Express / Review (2015.02.19)
13. Optics Express / Review (2015.05.08)
14. IEEE Photonics Technology Letters / Review (2015.05.21)
15. Optics Letters / Review (2016.04.19)
16. Optics Express / Review (2016.07.06)
17. IEEE Journal of Selected Topics in Quantum Electronics / Review (2017.02.22)
18. Japanese Journal of Applied Physics / Review (2017.08.21)
19. IEICE Transaction C (in Japanese) / Review (2017.08.22)
20. Japanese Journal of Applied Physics / Review (2017.12.18)
21. Electronics Letters / Review (2018.02.07)
22. Japanese Journal of Applied Physics / Review (2018.02.08)
23. Optics Express / Review (2018.05.09)
24. IEICE Transaction C / Review (2018.08.21)

3. 社会貢献 / Contributions to society

(1) 教育活動 / Educational activities outside university

1. 非常勤講師 / Part-time Lecturer, 大分大学 / Oita University, 2013.09.05-06

(2) 産業界における指導・啓蒙 / Instruction and education for industry

none

(3) 国・地方自治体・公共団体における活動

Activities for national and local governments, and public organizations

none

(4) アウトリーチ活動 / Outreach activities

none

4. 競争的資金の獲得状況 / Research funds/grants received

(1) 科学研究費補助金 / Grant-in-Aid for Scientific Research (KAKENHI)

1. 挑戦的萌芽研究 / Challenging Exploratory Research

代表 representative

(2015-2016)

交付金総額 total amount ¥3,000,000

(2) 受託研究費 / Other grants and subsidies

1. JST・研究成果最適展開支援プログラム (Adaptable and Seamless Technology Transfer Program through Target-driven R&D: A-STEP)
分担 sharing / 代表者 representative 山崎裕幸 Hiroyuki Yamazaki (NEC)
(2015-2016)
交付金総額 total amount ¥33,150,000 (分担分 shared amount ¥4,850,000)
2. 共同研究 joint research / 日本電信電話株式会社 Nippon Telegram and Telephone Corporation (2017) 研究費総額 total amount ¥2,700,000

5. 国際共同研究・連携研究・連携教育活動の実績

International joint research, collaborative research, and collaborative education
none

6. 共同利用・共同研究拠点活動の実績

Achievements of work done under the framework of Joint Usage/Research Center

1. マイクロ波およびレーザ応用合成開口レーダの開発と民生応用 Development and Consumer Applications of Synthetic Aperture Radar using Microwave and Laser (福岡工業大学 collaboration with Fukuoka Institute of Technology) 2013-2015
2. 未来のコヒーレント波科学技術基盤構築プロジェクト Project for Establishing Fundamental Technologies toward Future Coherent Wave Science (静岡大学 collaboration with Shizuoka University) 2014-2016
3. マイクロ波およびレーザ応用合成開口レーダの実用化研究 Practical Application Research of Synthetic Aperture Radar using Microwave and Laser (福岡工業大学 collaboration with Fukuoka Institute of Technology) 2016-2018
4. コヒーレント波に基づく学際的先端科学技術の創成 Creation of Interdisciplinary Advanced Science and Technology based on Coherent Wave (静岡大学 collaboration with Shizuoka University) 2017-2019

7. 研究教育指導 / Research supervision

(1) 担当講義リスト / List of lectures

1. 電子デバイス基礎 Fundamentals for Electron Devices / 学部専門 Bachelor course 2013-2016
2. 電子物性 B Electronic Properties B / 学部専門 Bachelor course 2017-2018
3. 光エレクトロニクス Opto-electronics / 学部専門 Bachelor course 2013-2018
4. 光量子工学 Quantum Photonic Engineering / 大学院 Master course 2014, 2016, 2018
5. 電子デバイス工学特論 Advanced Electron Devices / 後期課程 Doctor Course 2013-2018
6. 先端超高周波情報工学 Advanced High-Speed Communication Engineering / 後期課程 Doctor Course (留学生特別コース for foreign students) 2015, 2018

(2) 学位取得者リスト

List of bachelor's, master's and doctoral degree students supervised
2013 / 4 Master course students
3 Bachelor course students
2014 / 3 Master course students

2 Bachelor course students
2015 / 2 Master course students
2 Bachelor course students
2016 / 1 Doctor course student
4 Master course students
2 Bachelor course students
2017 / 2 Master course students
2 Bachelor course students
2018 / 1 Doctor course student
3 Master course students
2 Bachelor course students

8. 叙勲・受賞・表彰 / Honors, awards, and prizes

1. 三枝慈、電子情報通信学会エレクトロニクスソサイエティ レーザ・量子エレクトロニクス研究会奨励賞 (2016年度)
Shigeru Mieda, Incentive award from LQE (IEICE ES), 2016
2. 三枝慈、電子情報通信学会エレクトロニクスソサイエティ 学生奨励賞 (2017年度)
Shigeru Mieda, Incentive award for student from IEICE ES, 2017

9. その他 / Others

none